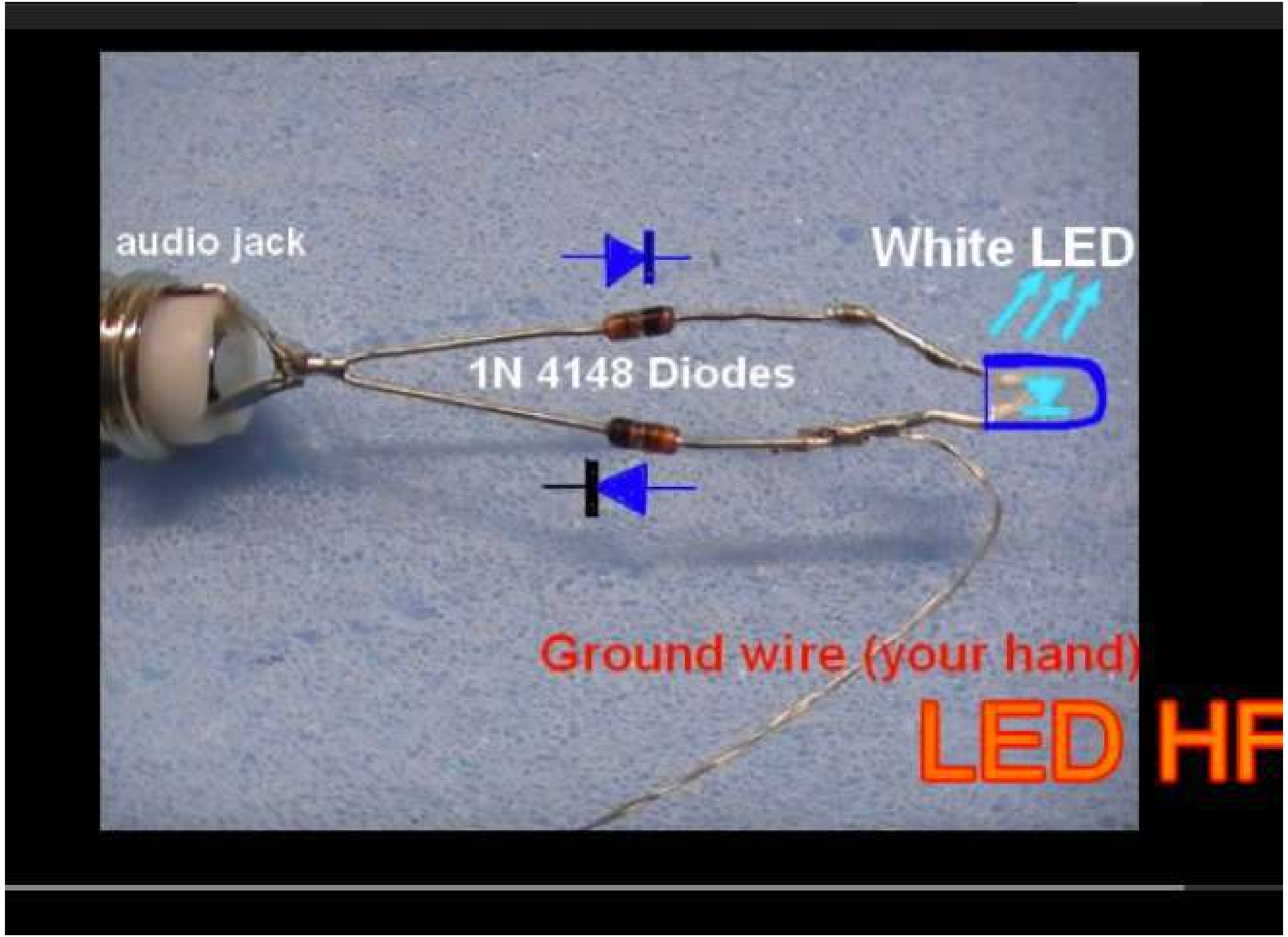
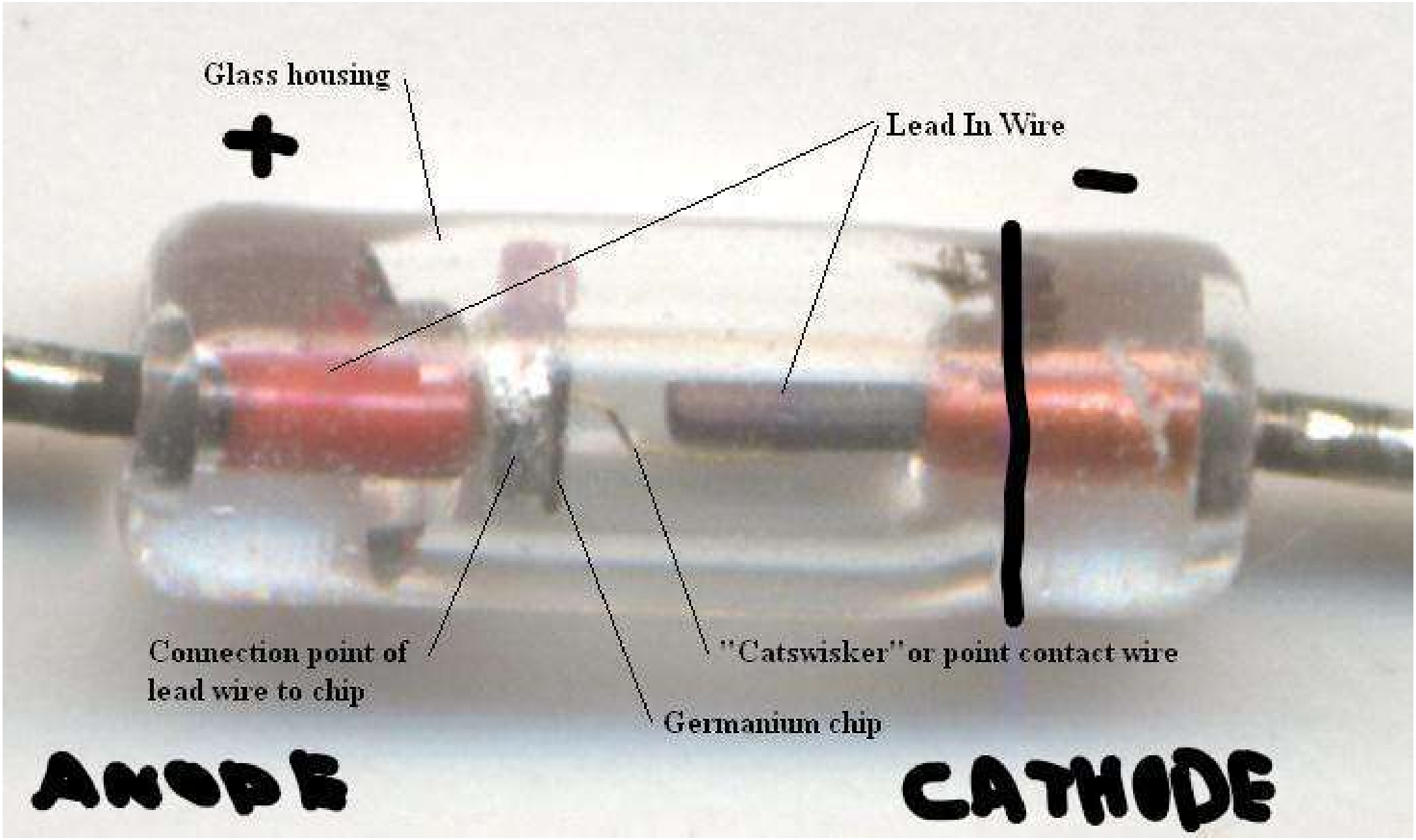
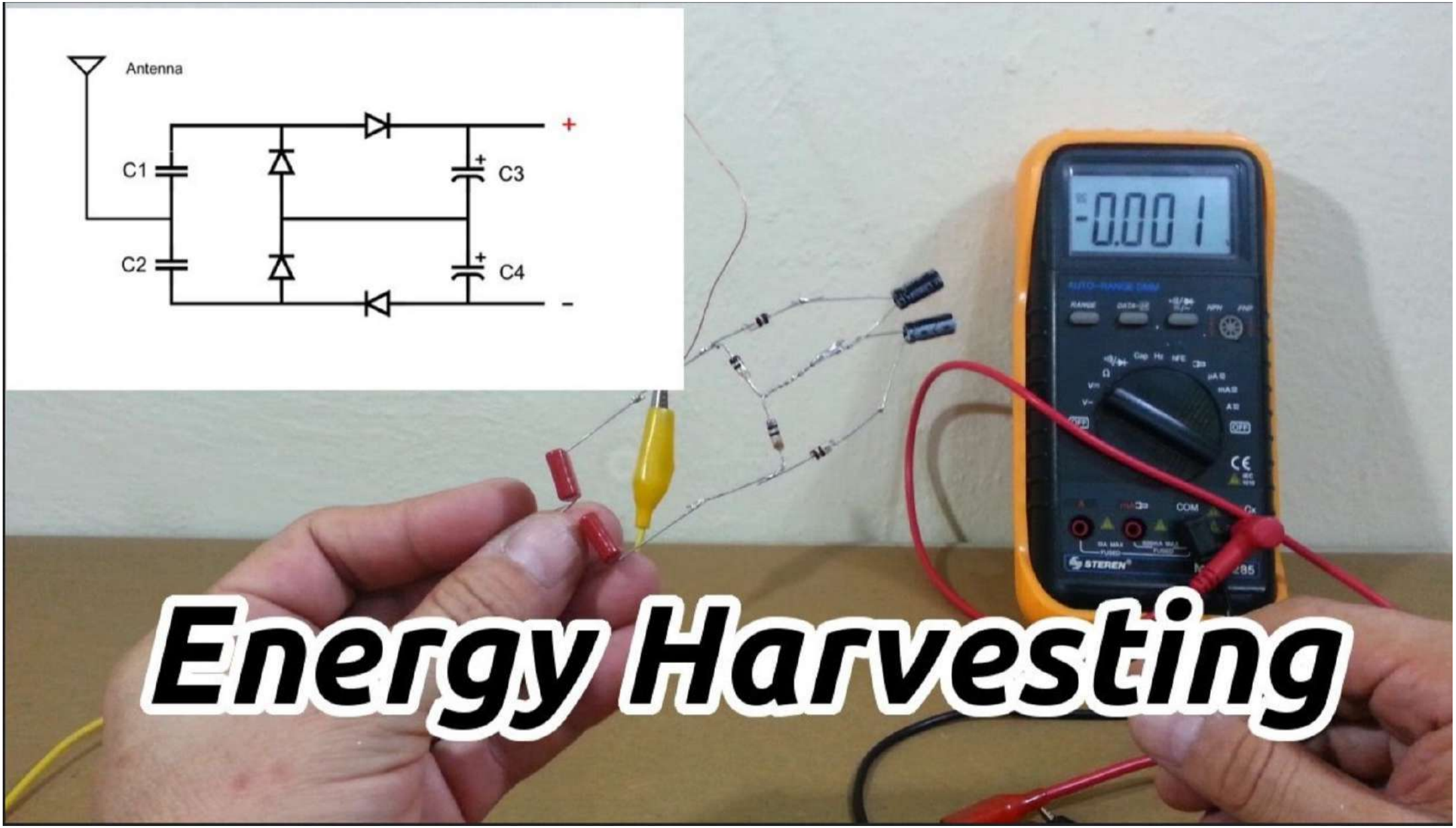


electricity from radiowaves 3


audio jack
White LED
1N 4148 Diodes
Ground wire (your hand)
LED HF

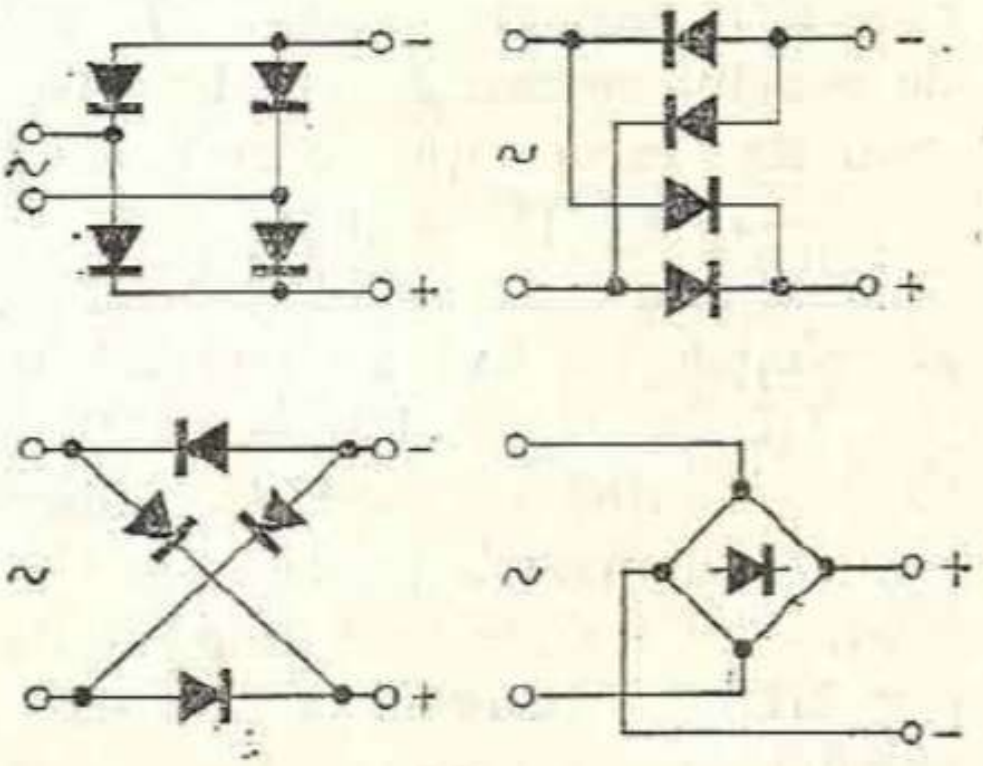

Glass housing
+
Lead In Wire
-
Connection point of lead wire to chip
"Catswisker" or point contact wire
Germanium chip
ANODE
CATHODE


Antenna
C1
C2
C3
C4
+
-
-0.001
Energy Harvesting

feluri (fig. III.9), schemele fiind echivalente cu reprezentarea de bază din fig. III.8. Diodele sînt legate în serie, în formă de patrulater, două avînd comun anodul (punctul *2*), iar celelalte două catodul (punctul *4*). Tensiunea alternativă de intrare se aplică pe diagonala *1—3*, iar consumatorul se conectează pe diagonala *2—4*.

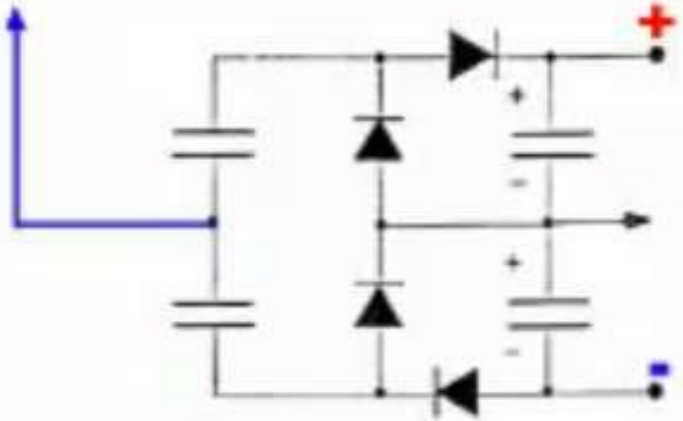
Pentru a urmări funcționarea punții, să presupunem că prima alternanță sosită în nodul *1* este pozitivă. Ea blochează dioda D_2 și o deschide pe D_1, debitînd prin R_S un curent I_1 (săgețile pline), care se întoarce la

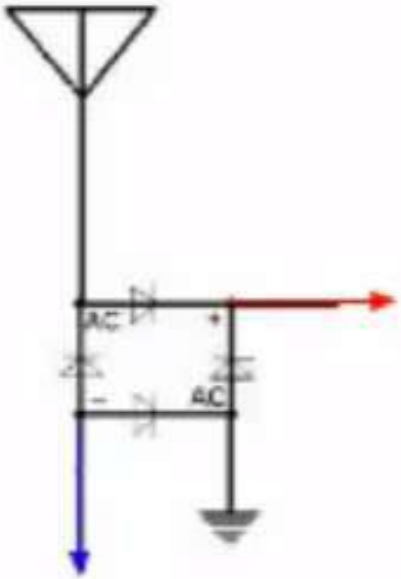
tice sau cu parametri cît mai apro-

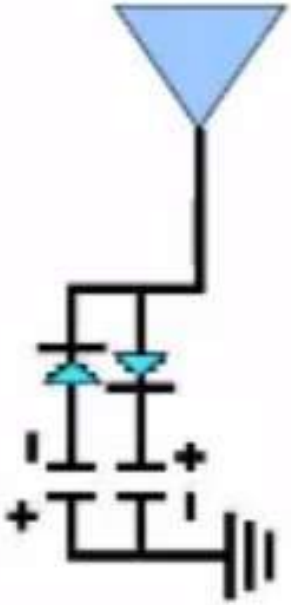


III.9. Puntea redresoare în diferite reprezentări.

circuits used on LC "RadioWaves"







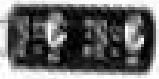
Insulated Aluminium Plate



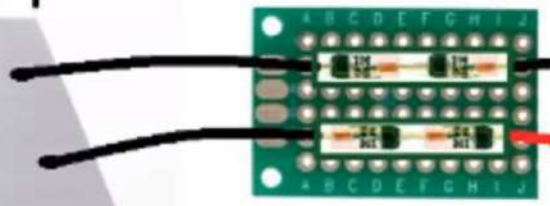
Plate dimensions 58x43cm
Plate insulated with tape
2.5mm solid copper wire
Earth is 1.5m copper pipe

4 IN4007 Diodes (As a Full Wave Rectifier)

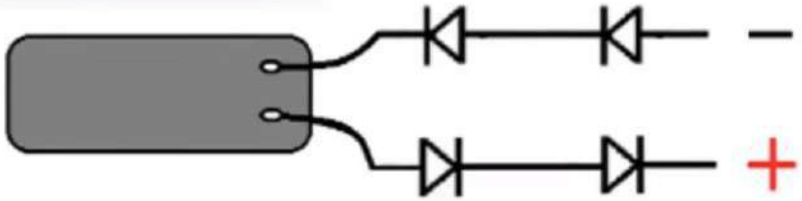
47uF 250v capacitor











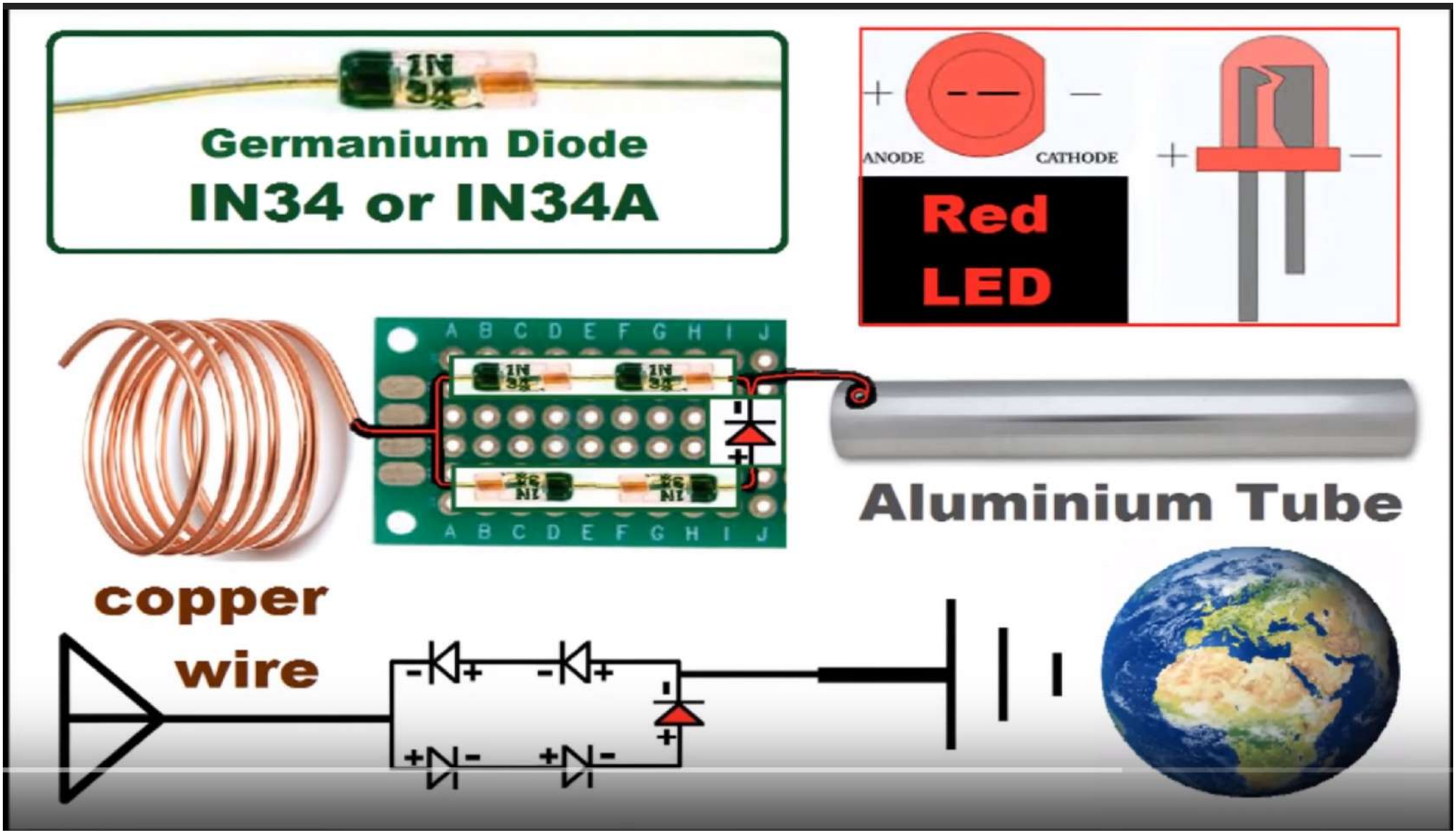
You can use electrolytic capacitor!

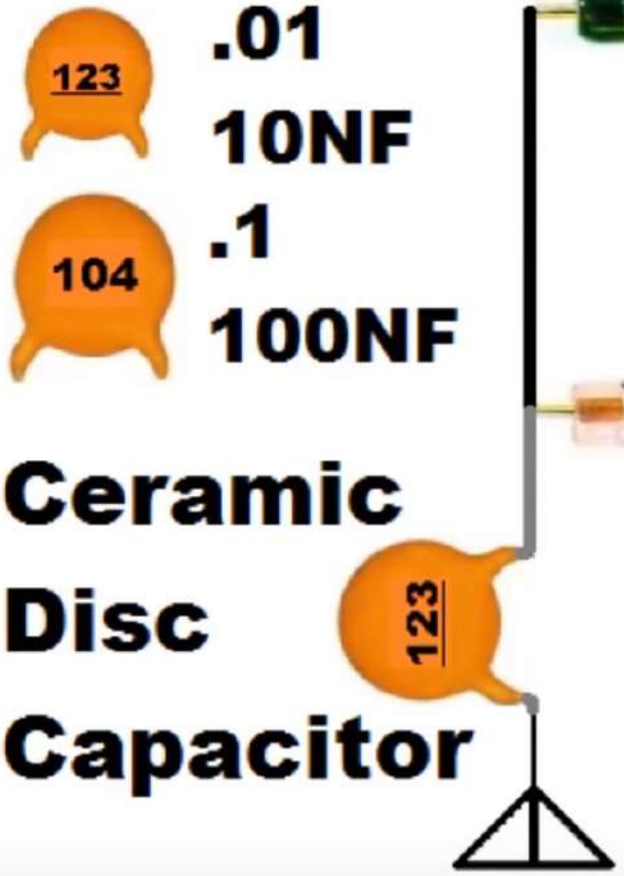


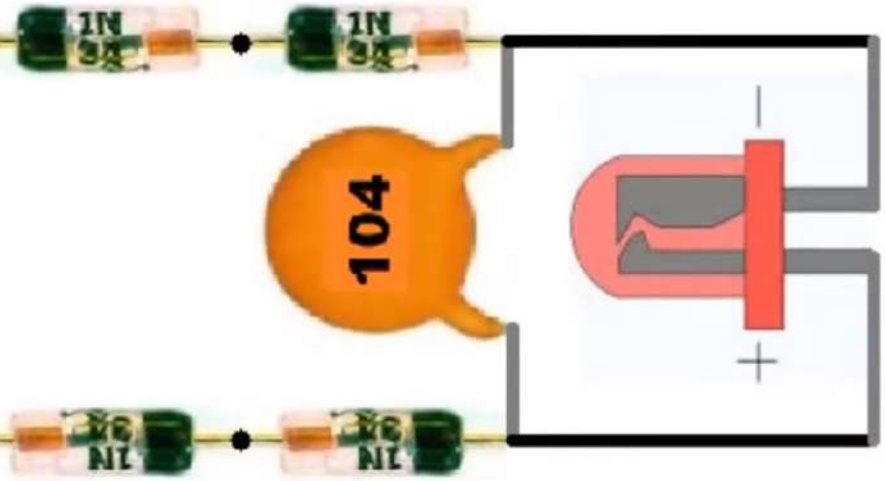
Germanium Diode

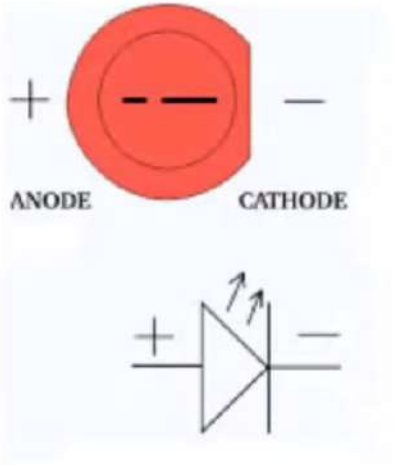
IN34 or IN34A



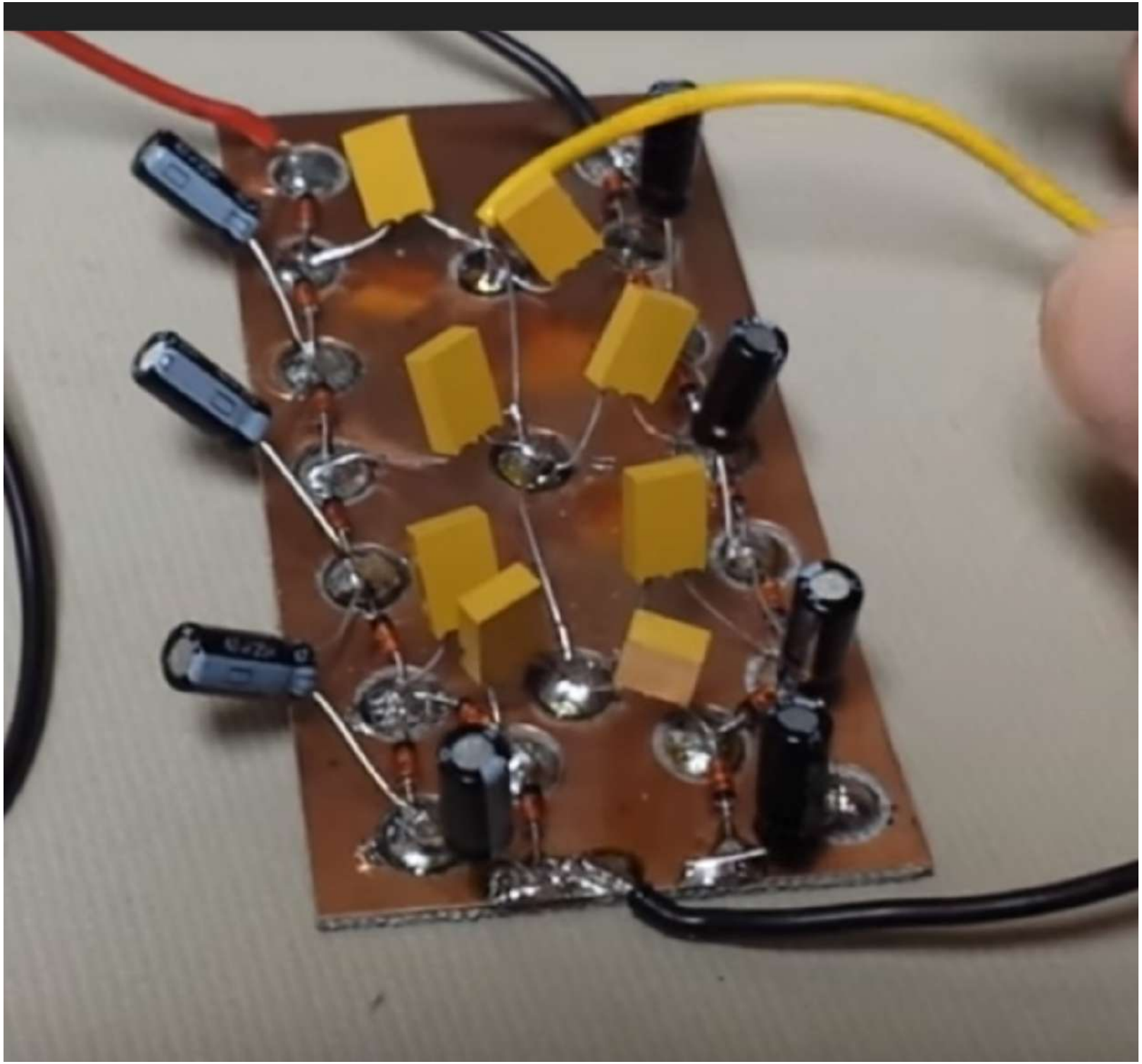

Germanium Diode
IN34 or IN34A
ANODE
CATHODE
Red
LED
Aluminium Tube
copper
wire

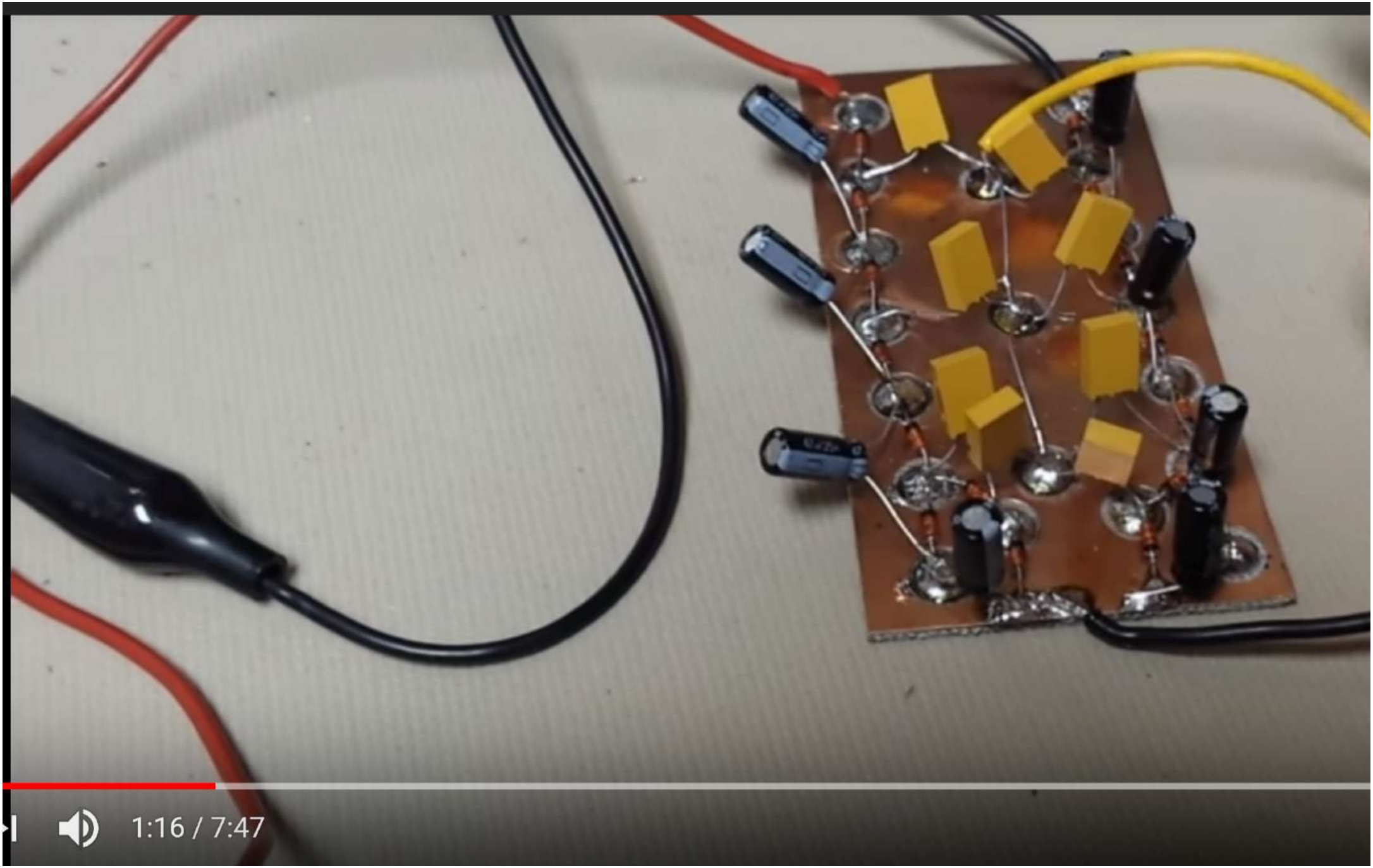

123
.01
10NF
104
.1
100NF
Ceramic
Disc
Capacitor
123

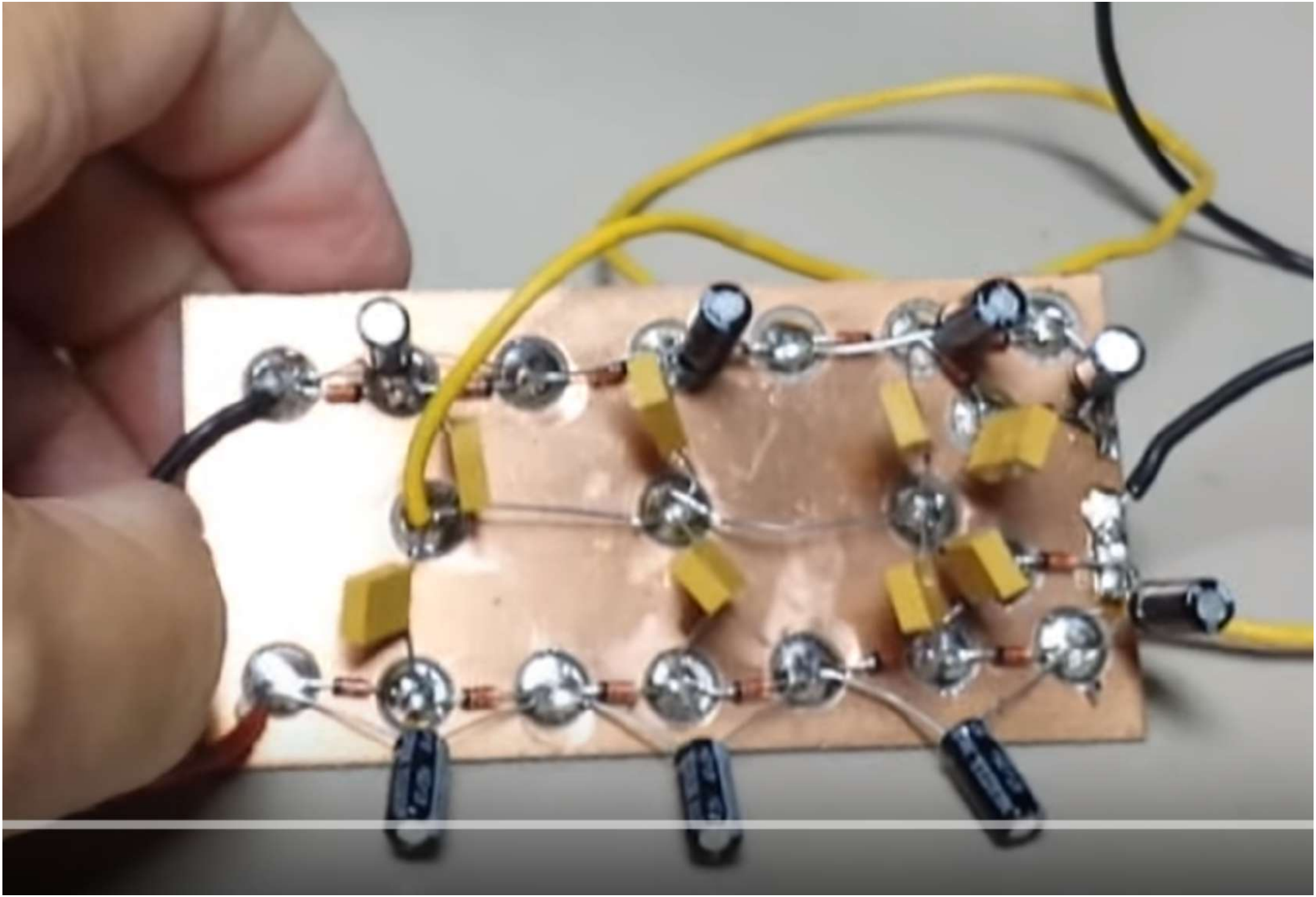

1N
34
104

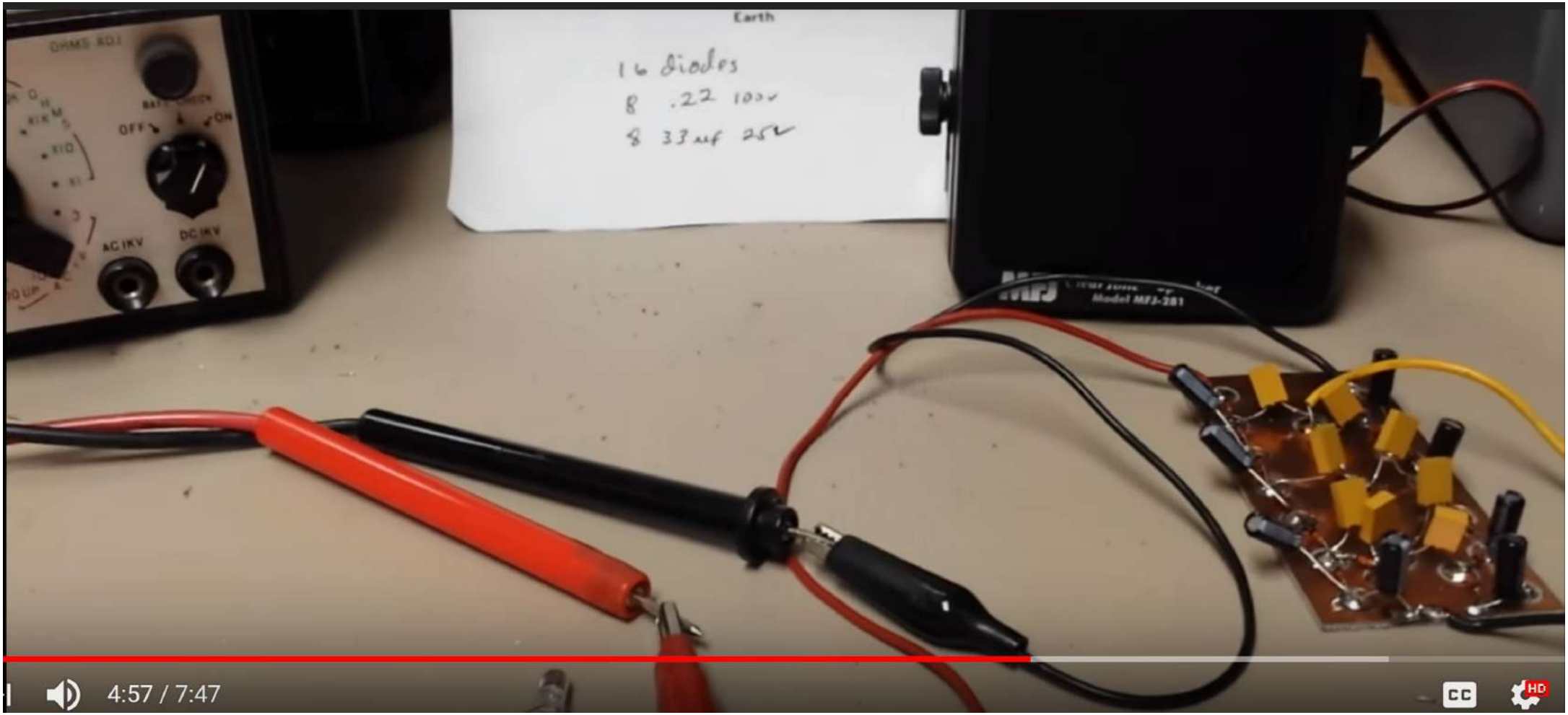

ANODE
CATHODE

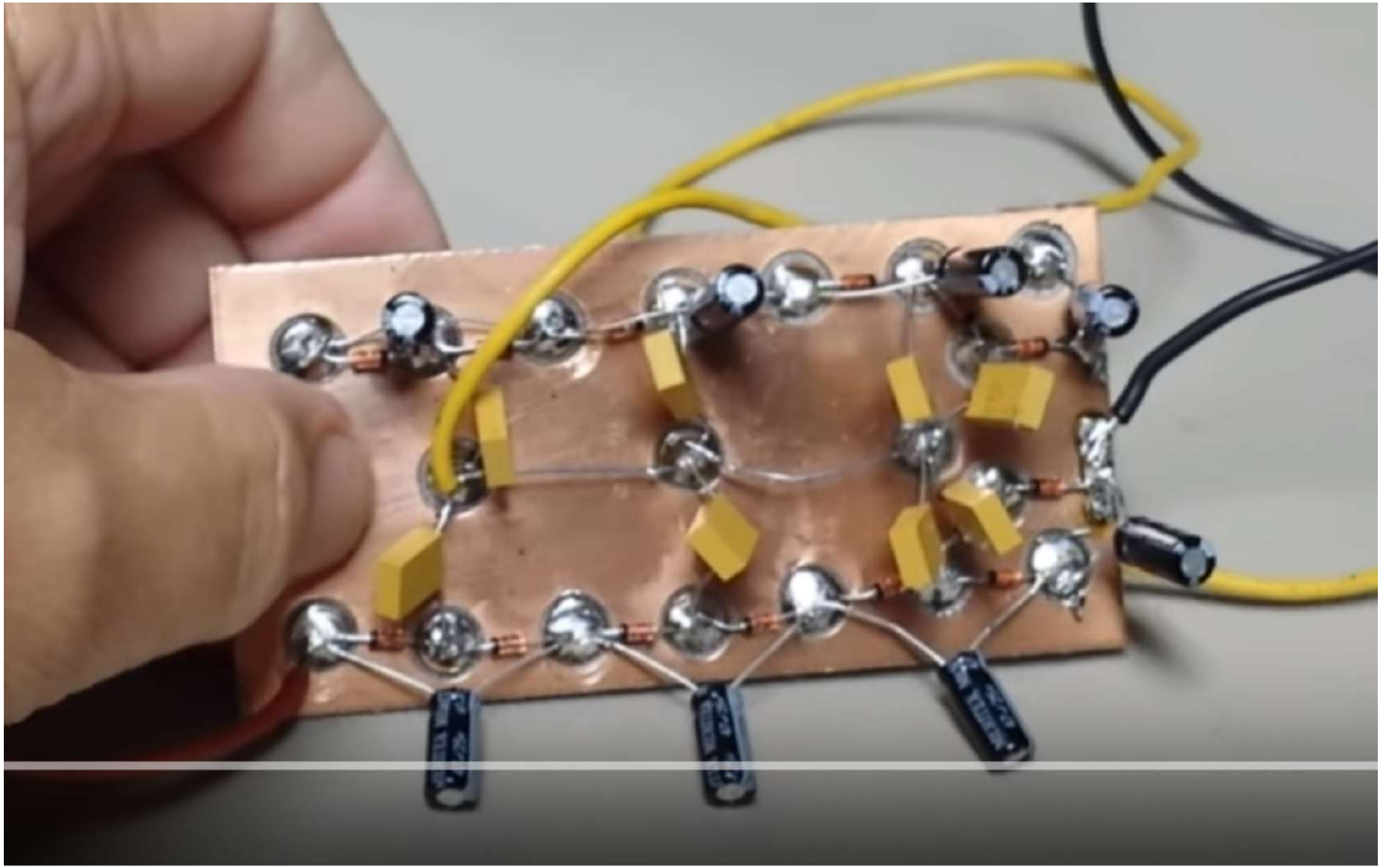

1N
34
Germanium Diode
IN34 or IN34A

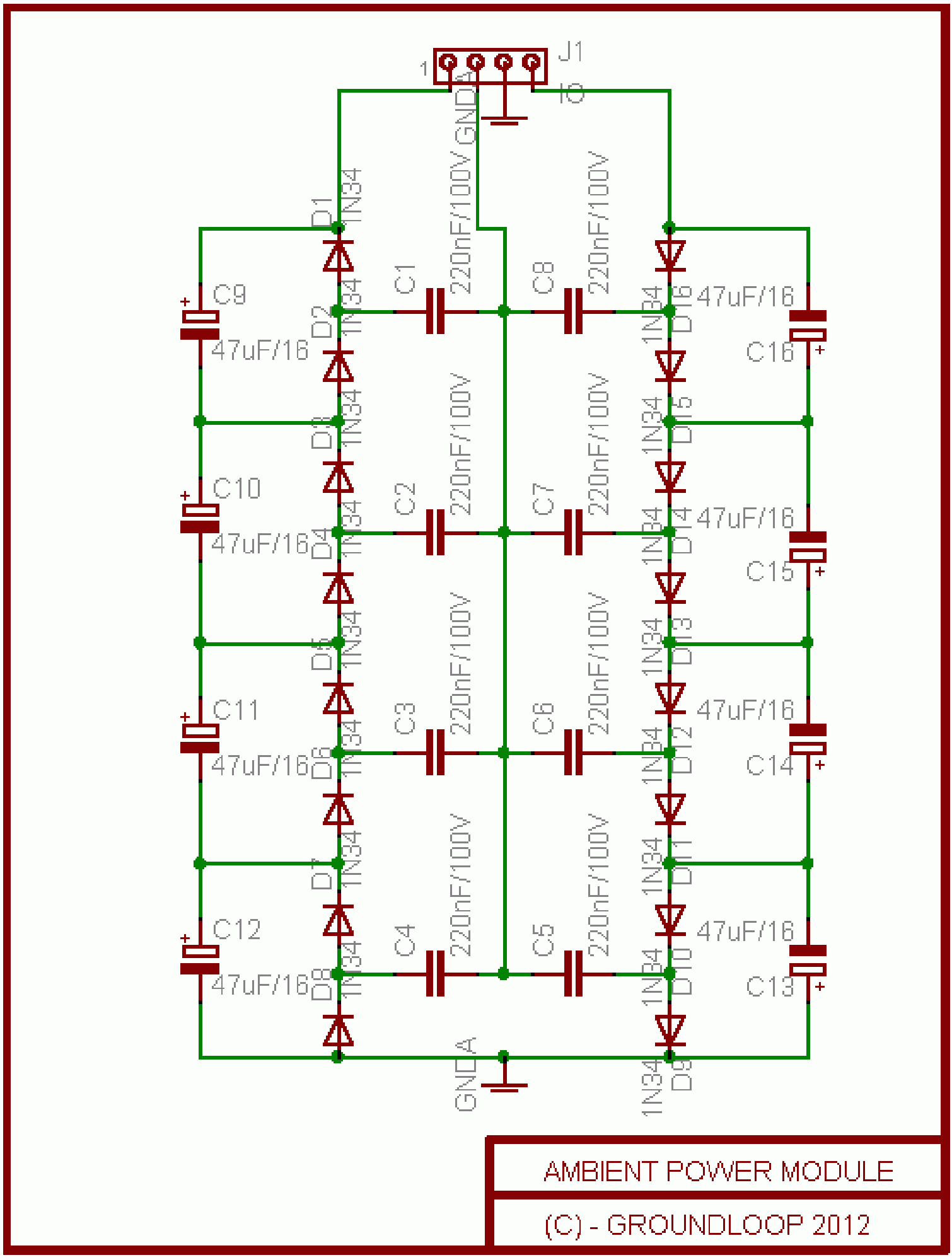



1:16 / 7:47

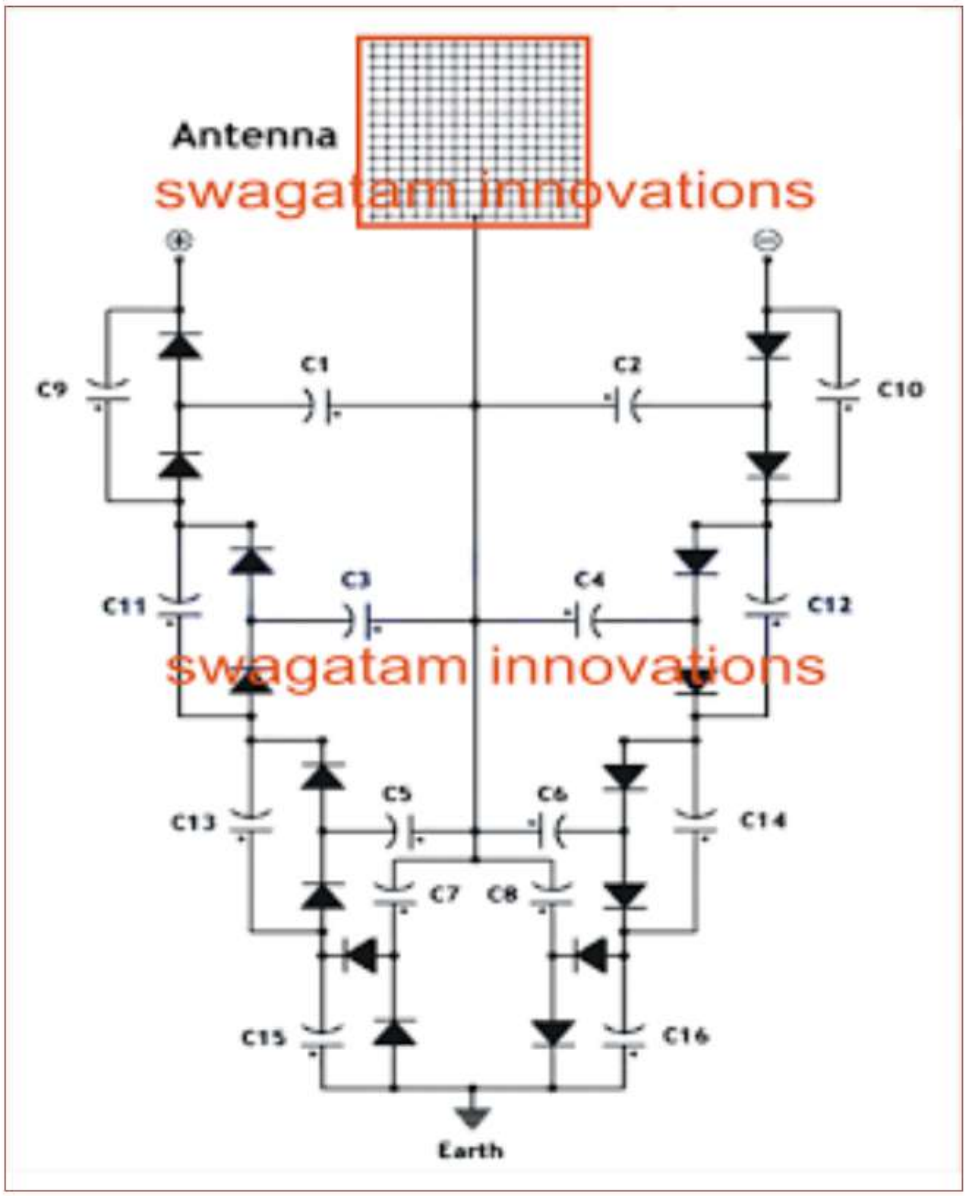



Earth
16 diodes
8 .22 100v
8 33uf 25v
OHMS ADJ
BATT CHECK
OFF
ON
AC 1KV
DC 1KV
MFJ
Model MFJ-281
4:57 / 7:47
CC
HD




J1
1
4
IO
GND
D1
1N34
C1
220nF/100V
C8
220nF/100V
C9
47uF/16
D2
1N34
D16
1N34
47uF/16
C16
D3
1N34
D15
1N34
C2
220nF/100V
C7
220nF/100V
C10
47uF/16
D4
1N34
D14
1N34
47uF/16
C15
D5
1N34
D13
1N34
C3
220nF/100V
C6
220nF/100V
C11
47uF/16
D6
1N34
D12
1N34
47uF/16
C14
D7
1N34
D11
1N34
C4
220nF/100V
C5
220nF/100V
C12
47uF/16
D8
1N34
D10
1N34
47uF/16
C13
GND
A
D9
1N34
AMBIENT POWER MODULE
(C) - GROUNDLOOP 2012

Circuit Diagram

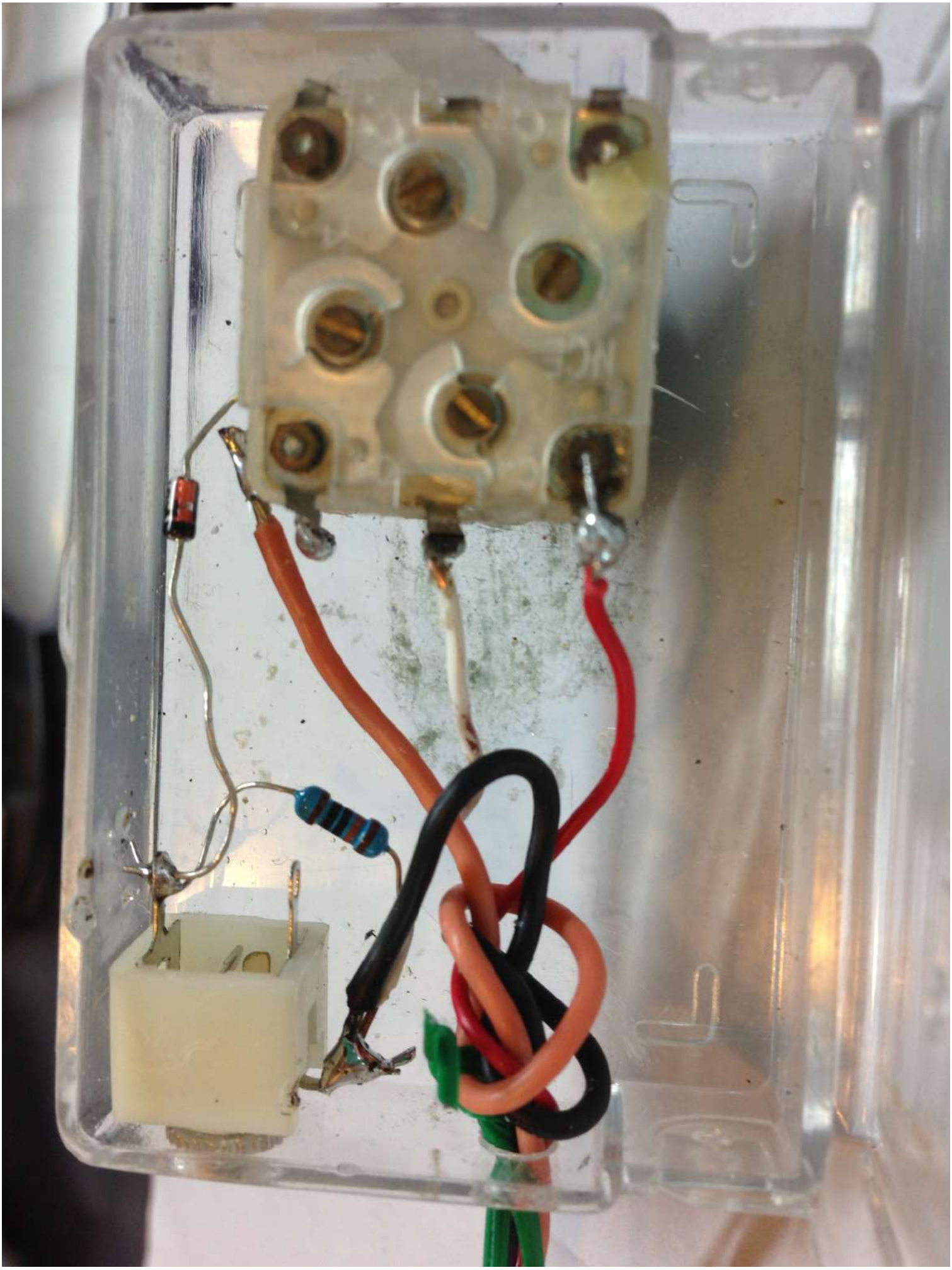


Parts List

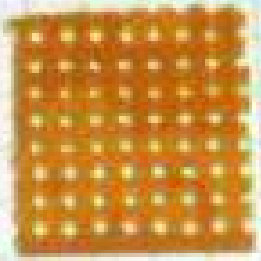
All Diodes are 1N4148

C1---C8 = 0.22uF/100V mylar

C9----C16 = 33uF/25V electrolytic



Matrix Board



Resistor



Capacitor



Inductor



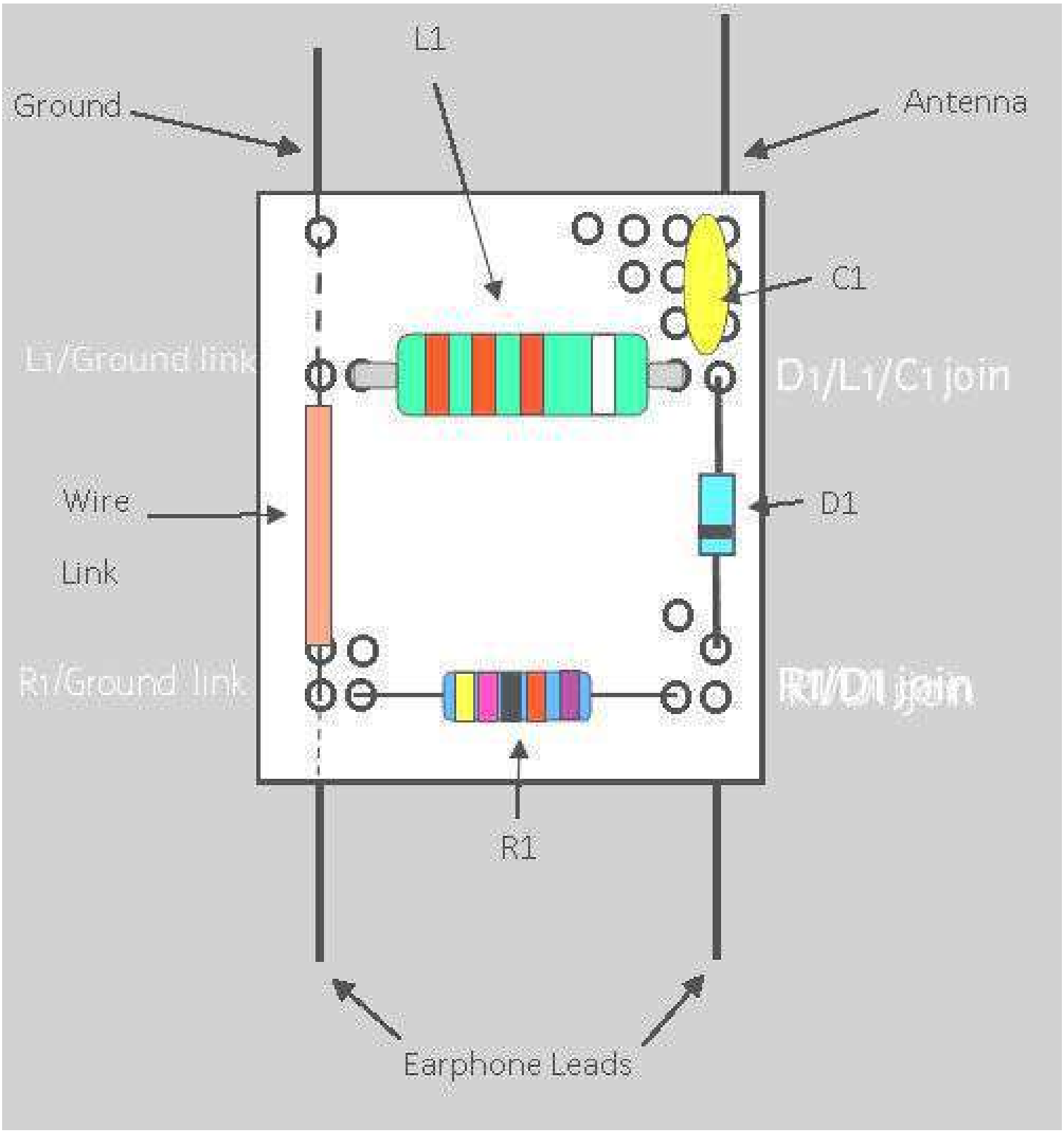
Diode



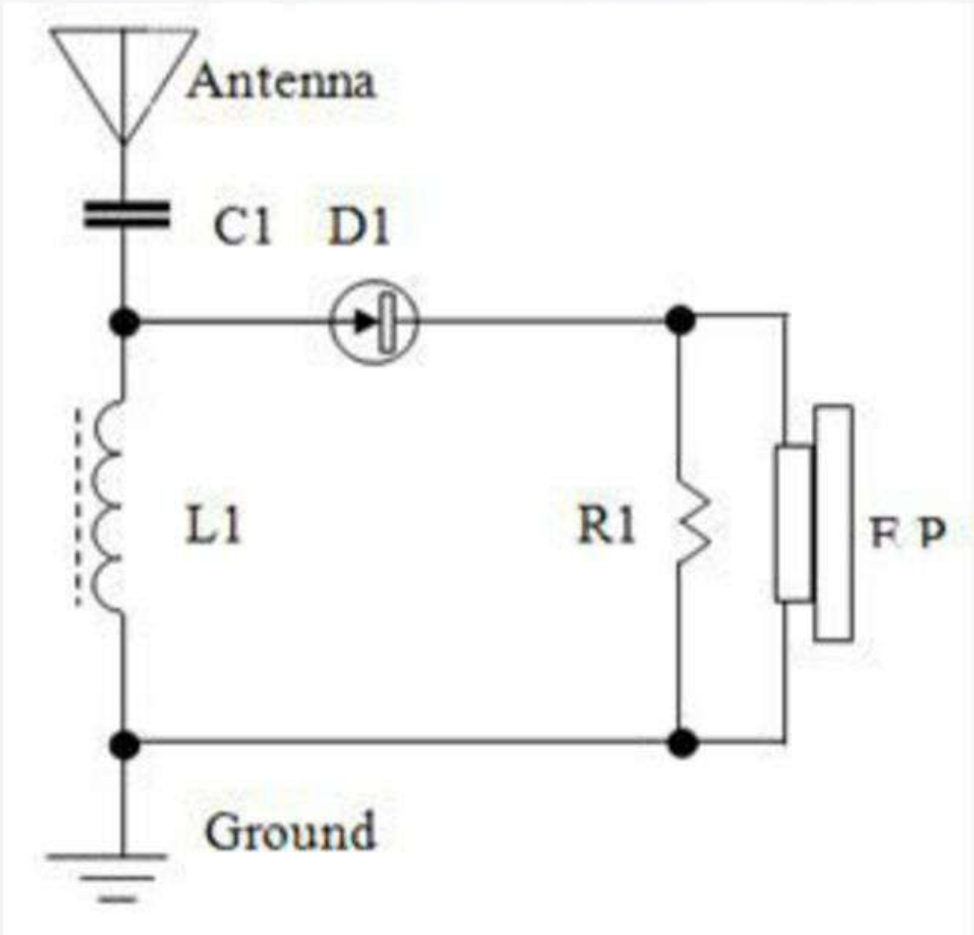
Crystal

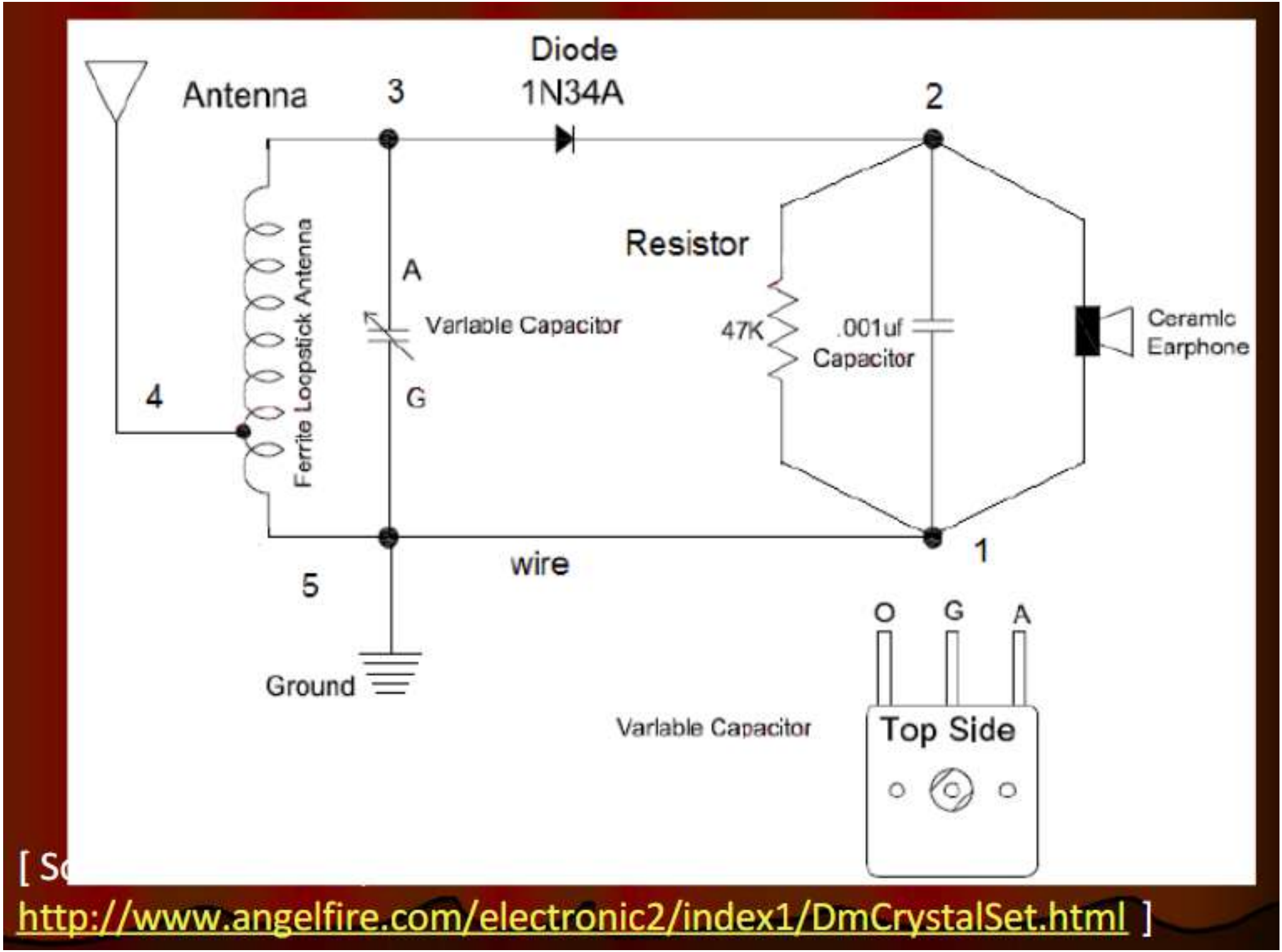
Earphone




L1
Ground
Antenna
C1
L1/Ground link
D1/L1/C1 join
Wire
Link
D1
R1/Ground link
R1/D1 join
R1
Earphone Leads


tic tac
Strawberry Fields
24g NET
FRESHNESS IN 2 CALORIES

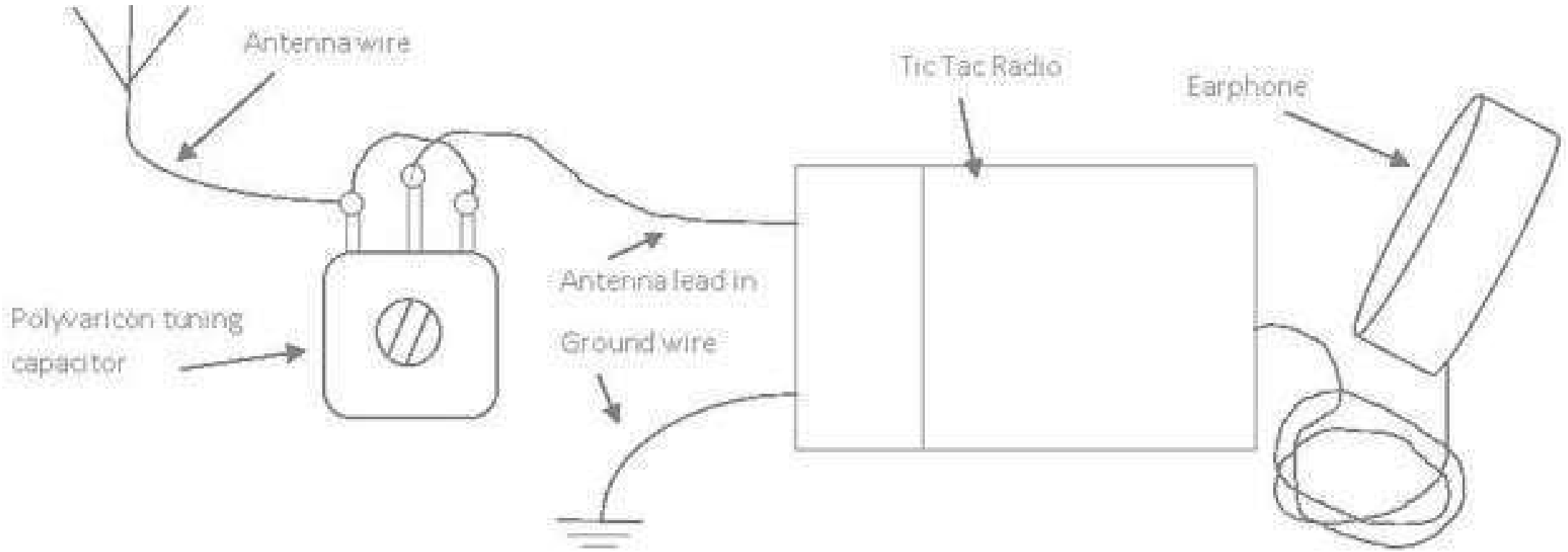

Antenna
C1
D1
L1
R1
Ground

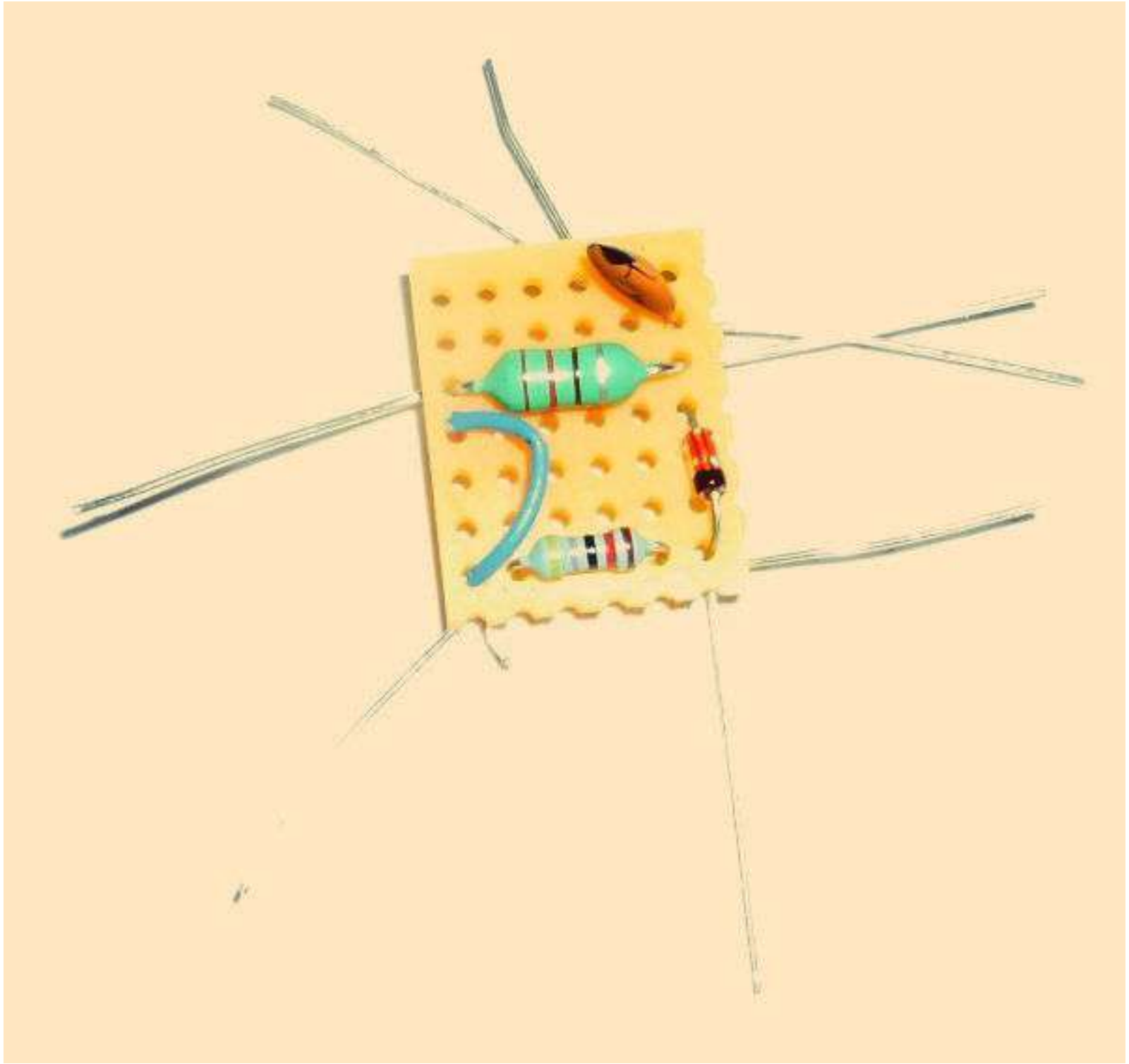


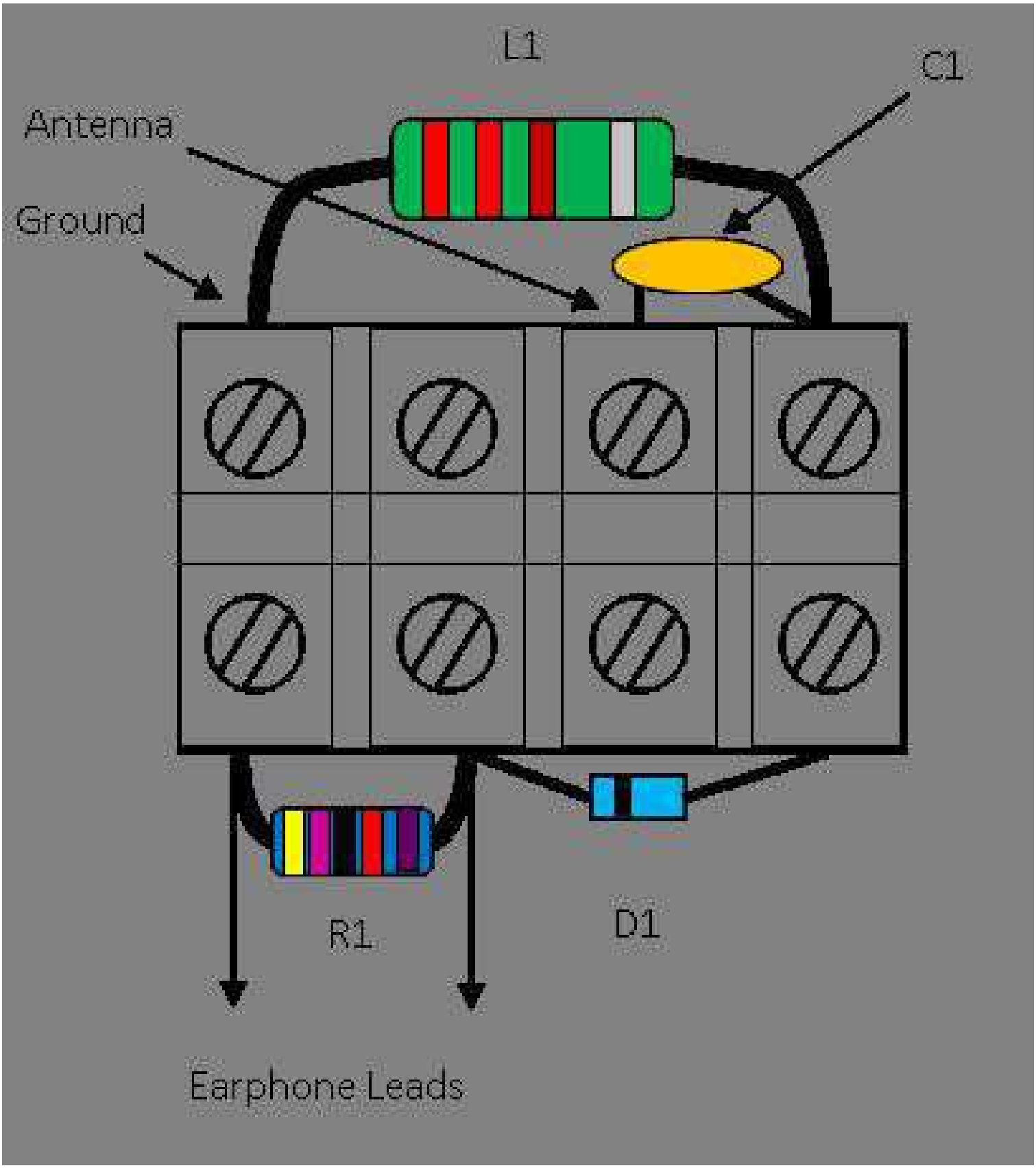
[So

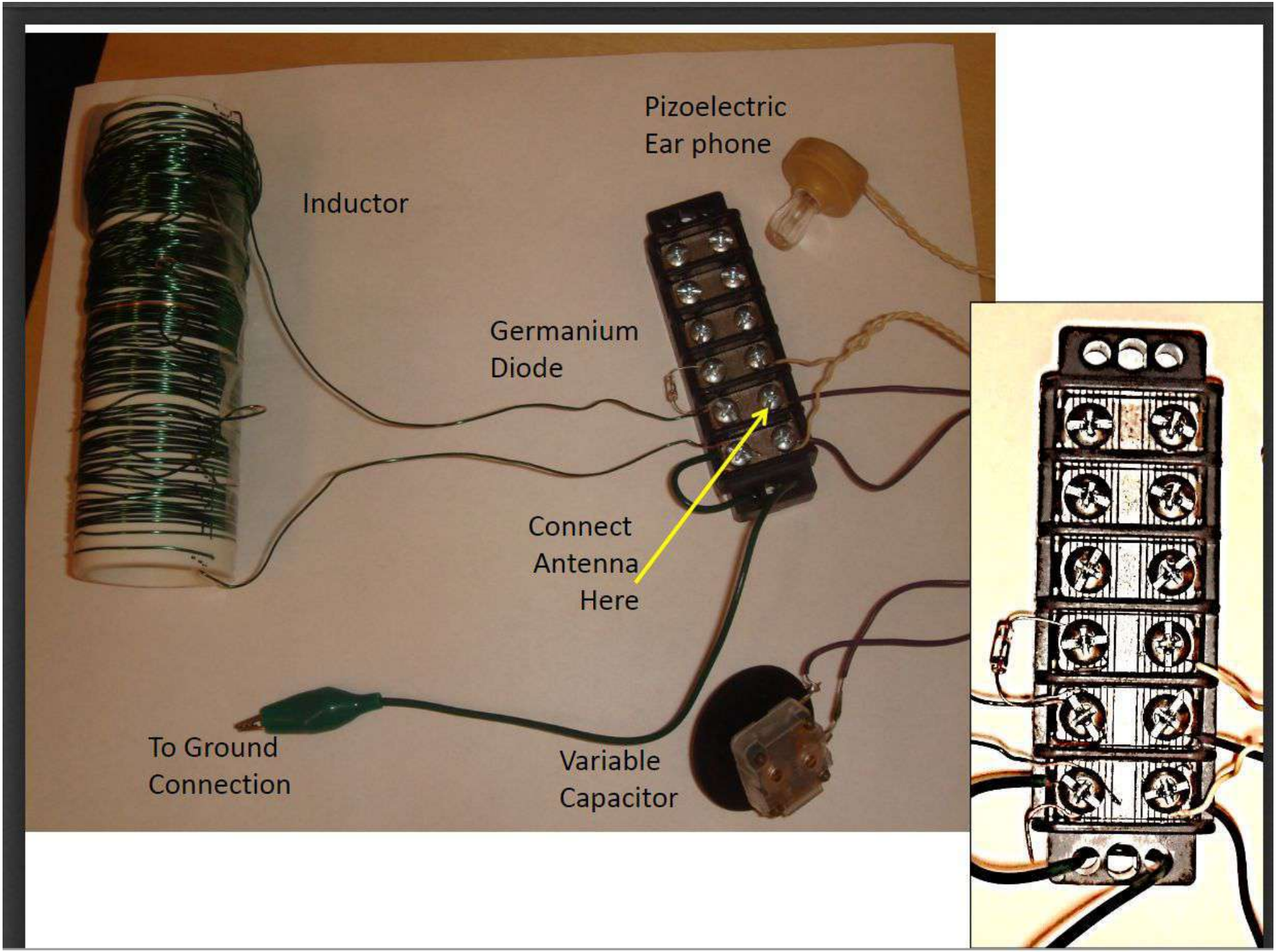
http://www.angelfire.com/electronic2/index1/DmCrystalSet.html]

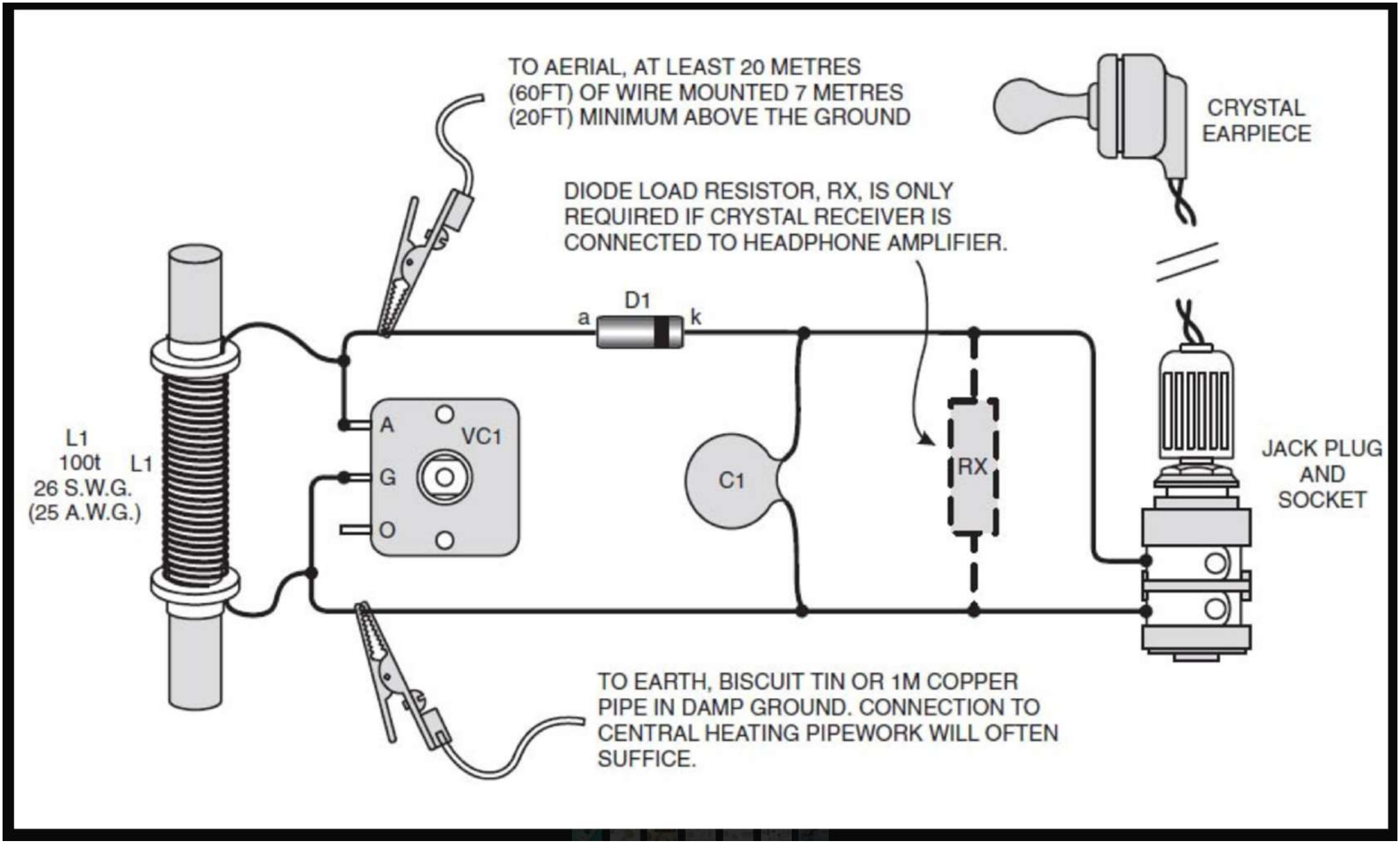



Antenna wire
Tic Tac Radio
Earphone
Antenna lead in
Polyvaricon tuning capacitor
Ground wire

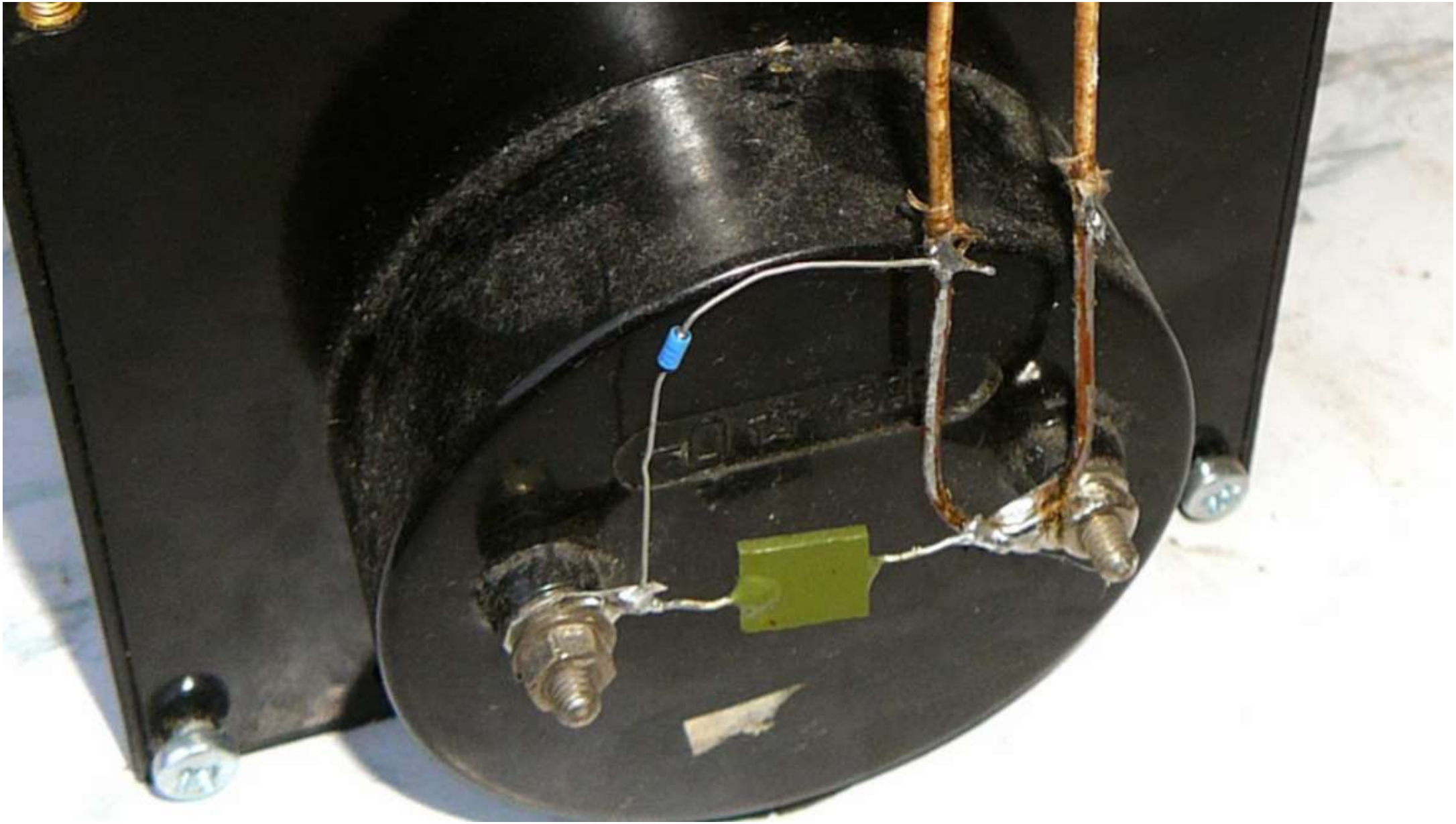



L1
C1
Antenna
Ground
R1
D1
Earphone Leads


Pizoelectric
Ear phone
Inductor
Germanium
Diode
Connect
Antenna
Here
To Ground
Connection
Variable
Capacitor

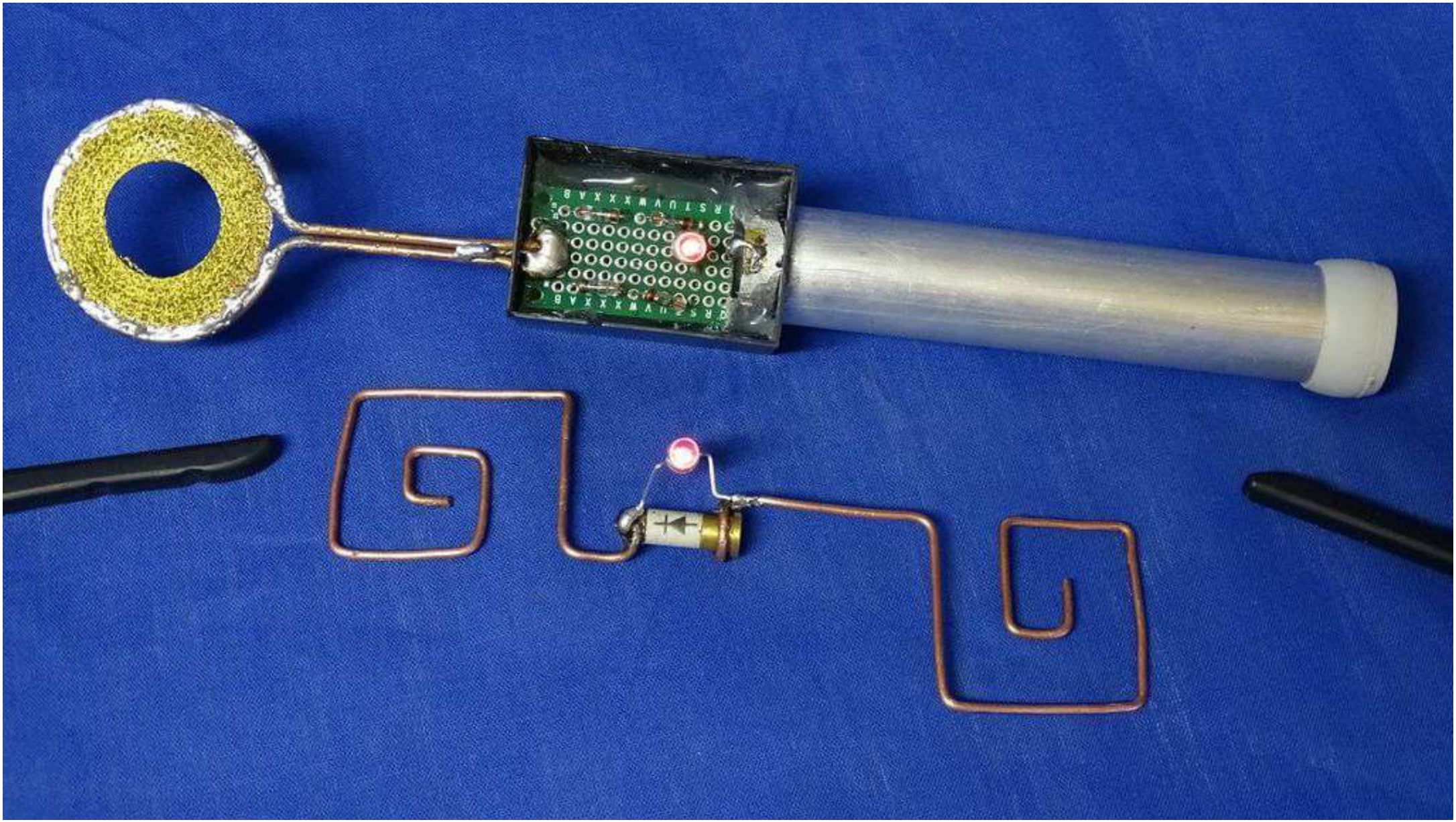

TO AERIAL, AT LEAST 20 METRES
(60FT) OF WIRE MOUNTED 7 METRES
(20FT) MINIMUM ABOVE THE GROUND
CRYSTAL
EARPIECE
DIODE LOAD RESISTOR, RX, IS ONLY
REQUIRED IF CRYSTAL RECEIVER IS
CONNECTED TO HEADPHONE AMPLIFIER.
D1
a
k
L1
100t
26 S.W.G.
(25 A.W.G.)
L1
A
G
O
VC1
C1
RX
JACK PLUG
AND
SOCKET
TO EARTH, BISCUIT TIN OR 1M COPPER
PIPE IN DAMP GROUND. CONNECTION TO
CENTRAL HEATING PIPEWORK WILL OFTEN
SUFFICE.


ANTENNA
-
+
.022
GROUND









Step 1: LED+RF Diode

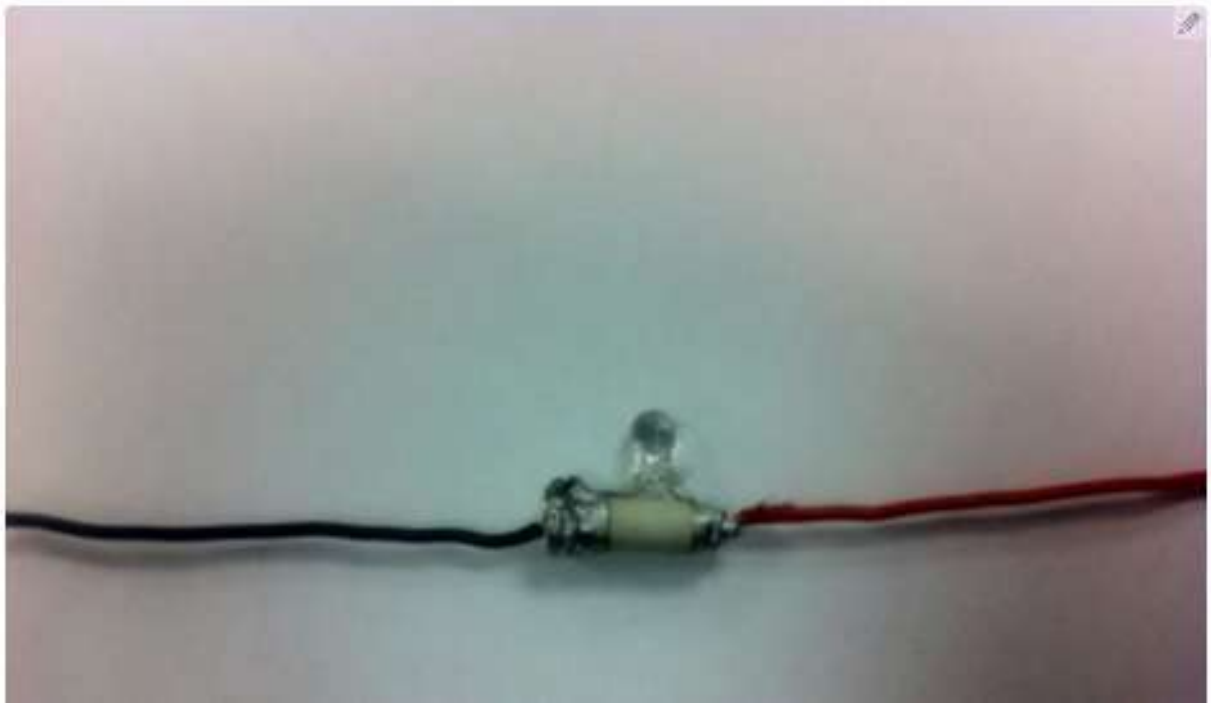




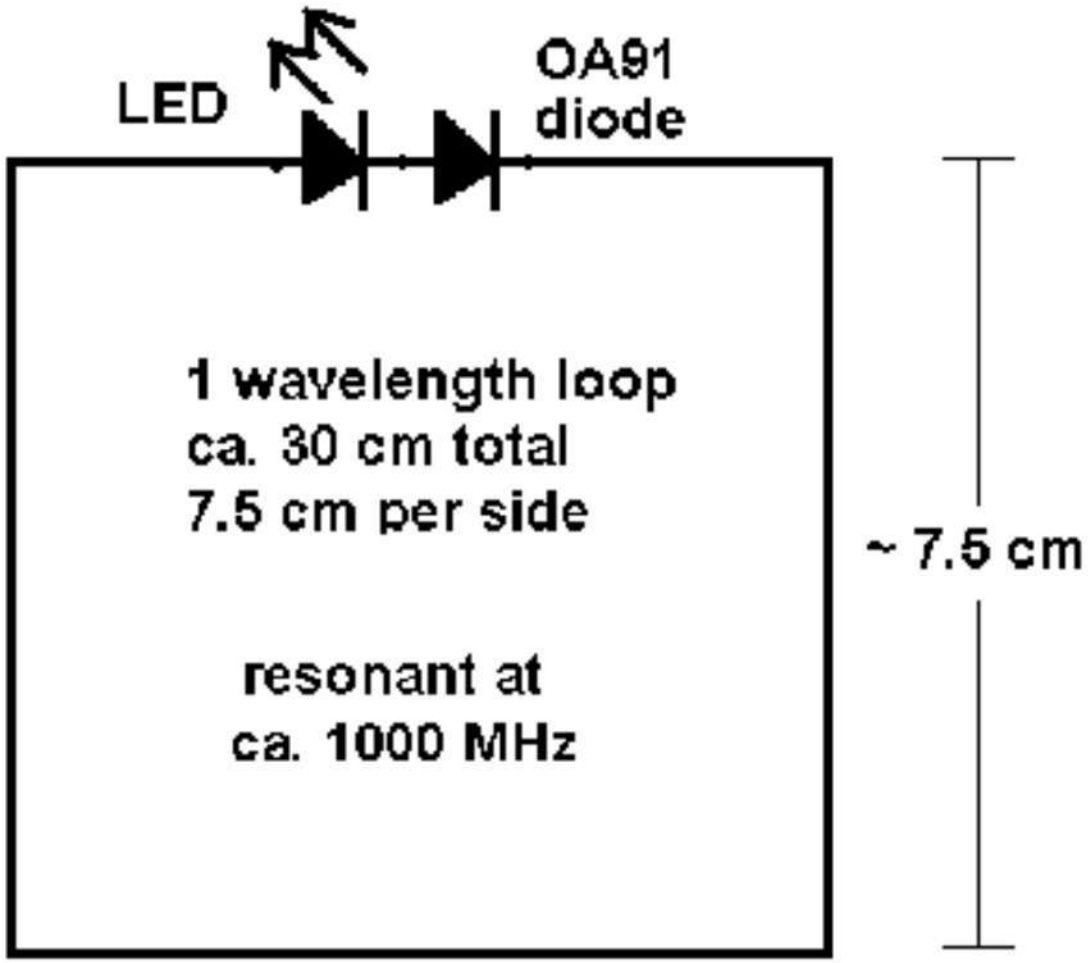
First Solder the led parallel to the Rf diode

Add Tip Ask Question Comment Download

Step 2: RF Diode+ LED+ Wires

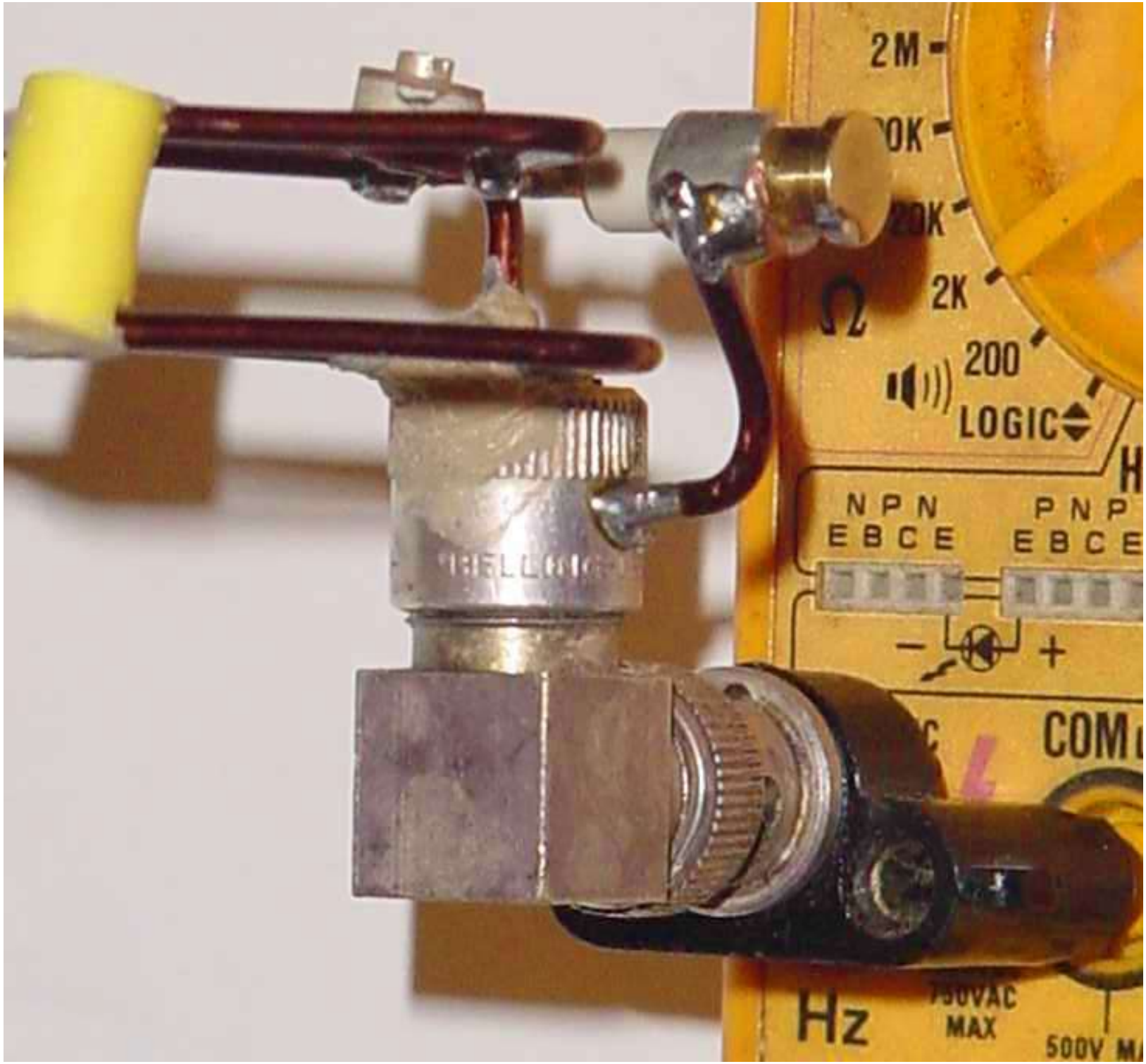


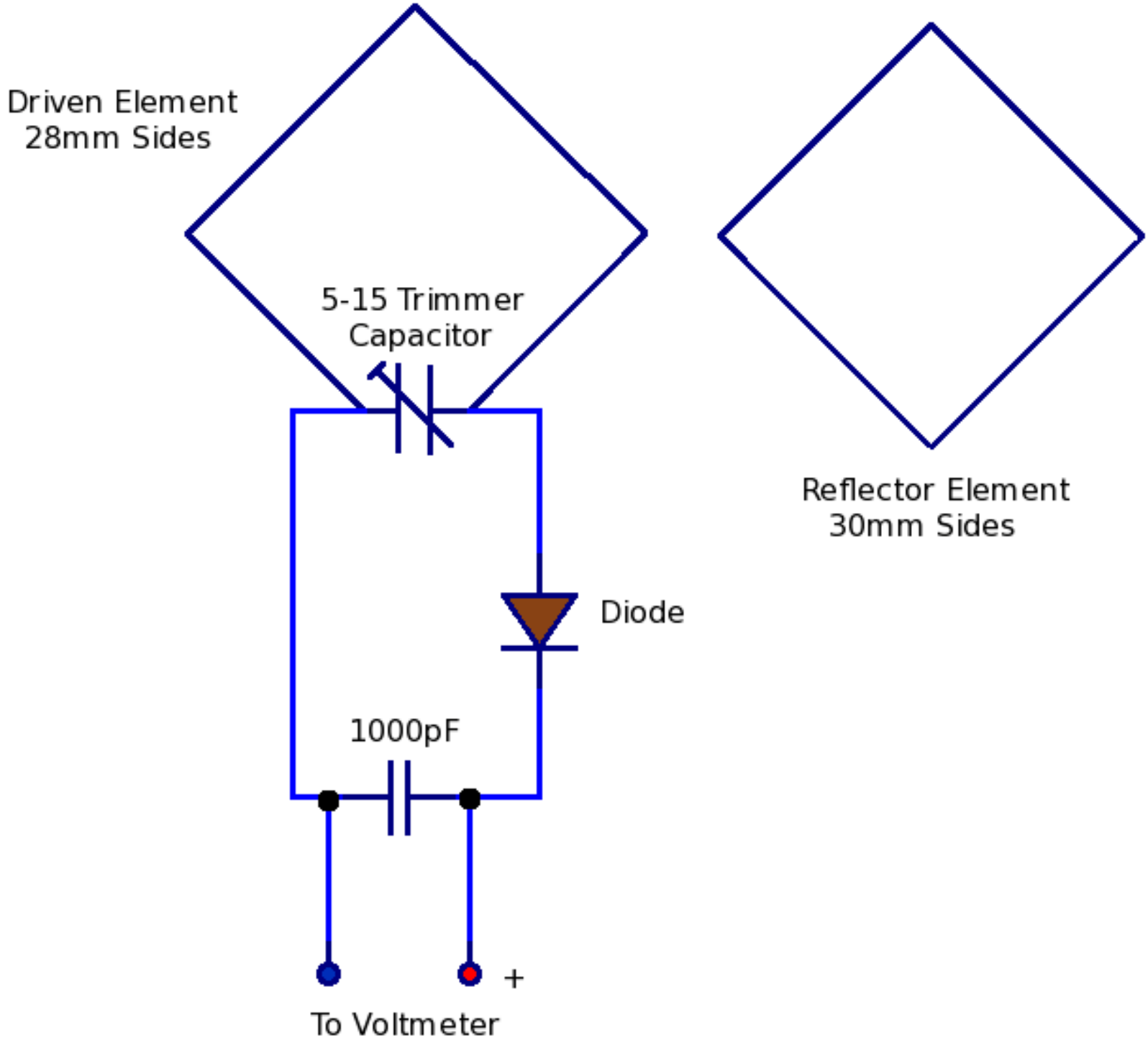



LED
OA91
diode
1 wavelength loop
ca. 30 cm total
7.5 cm per side
resonant at
ca. 1000 MHz
~ 7.5 cm

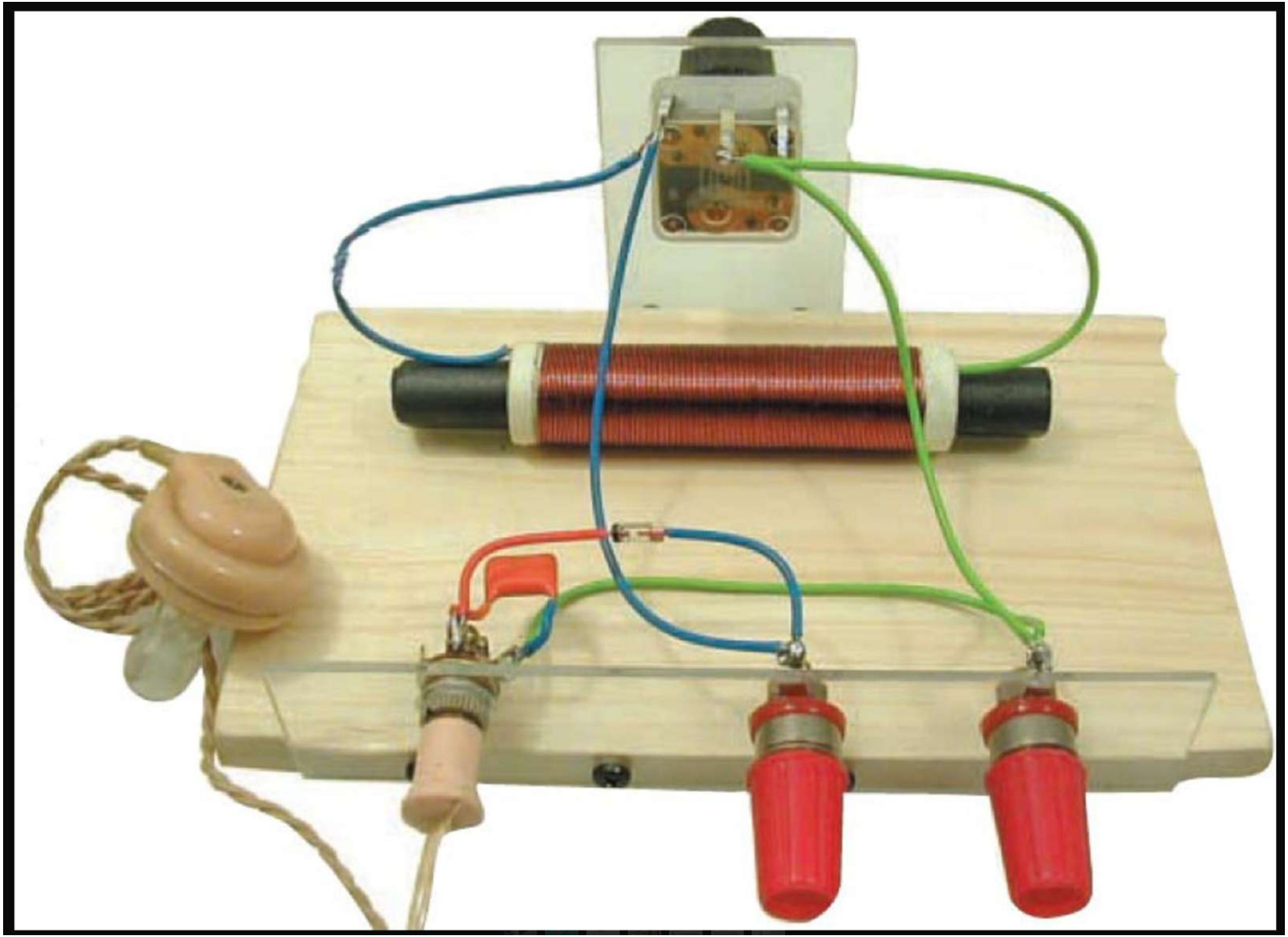

IN23
0:56 / 1:49

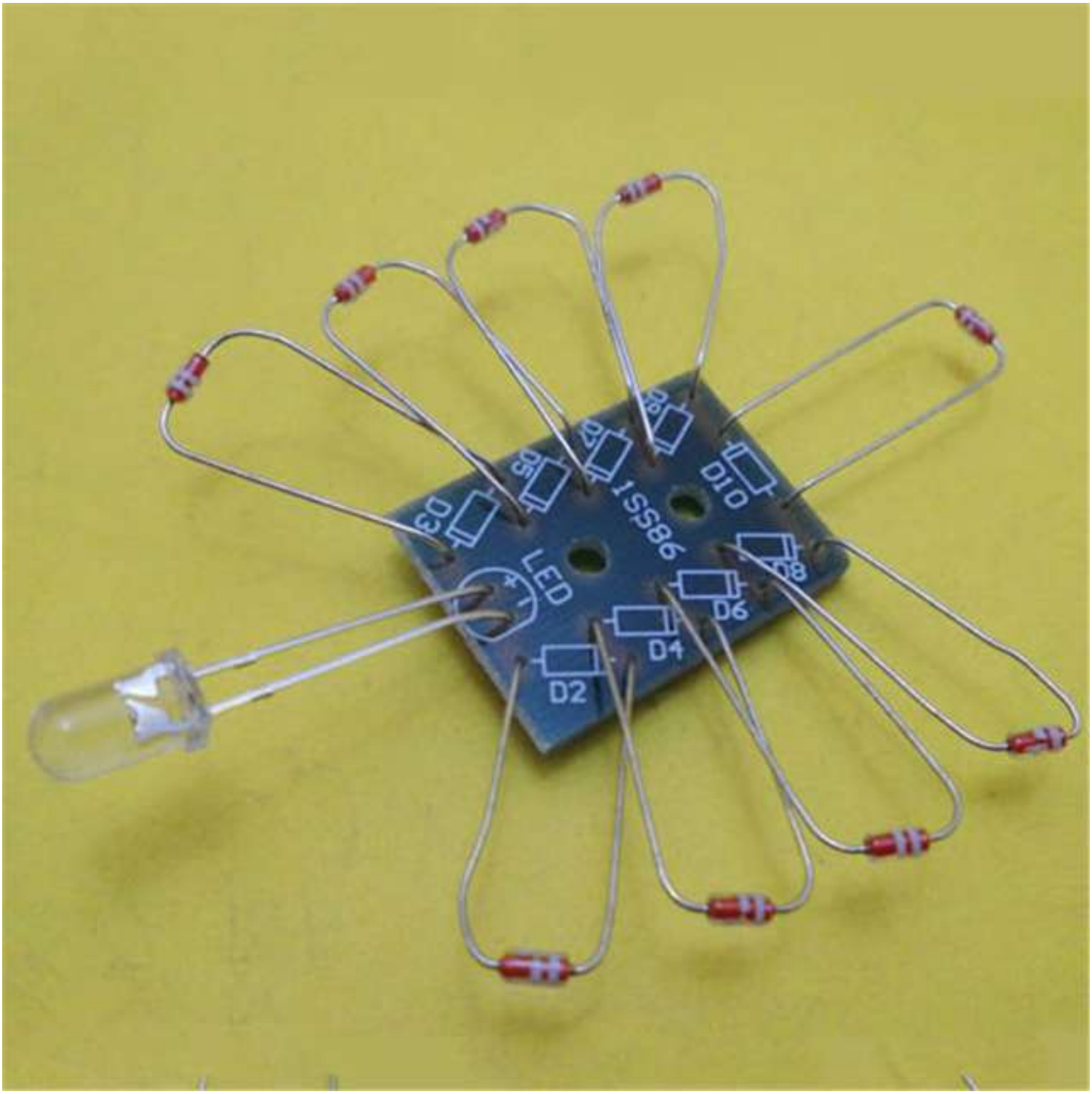

COM
LOGIC

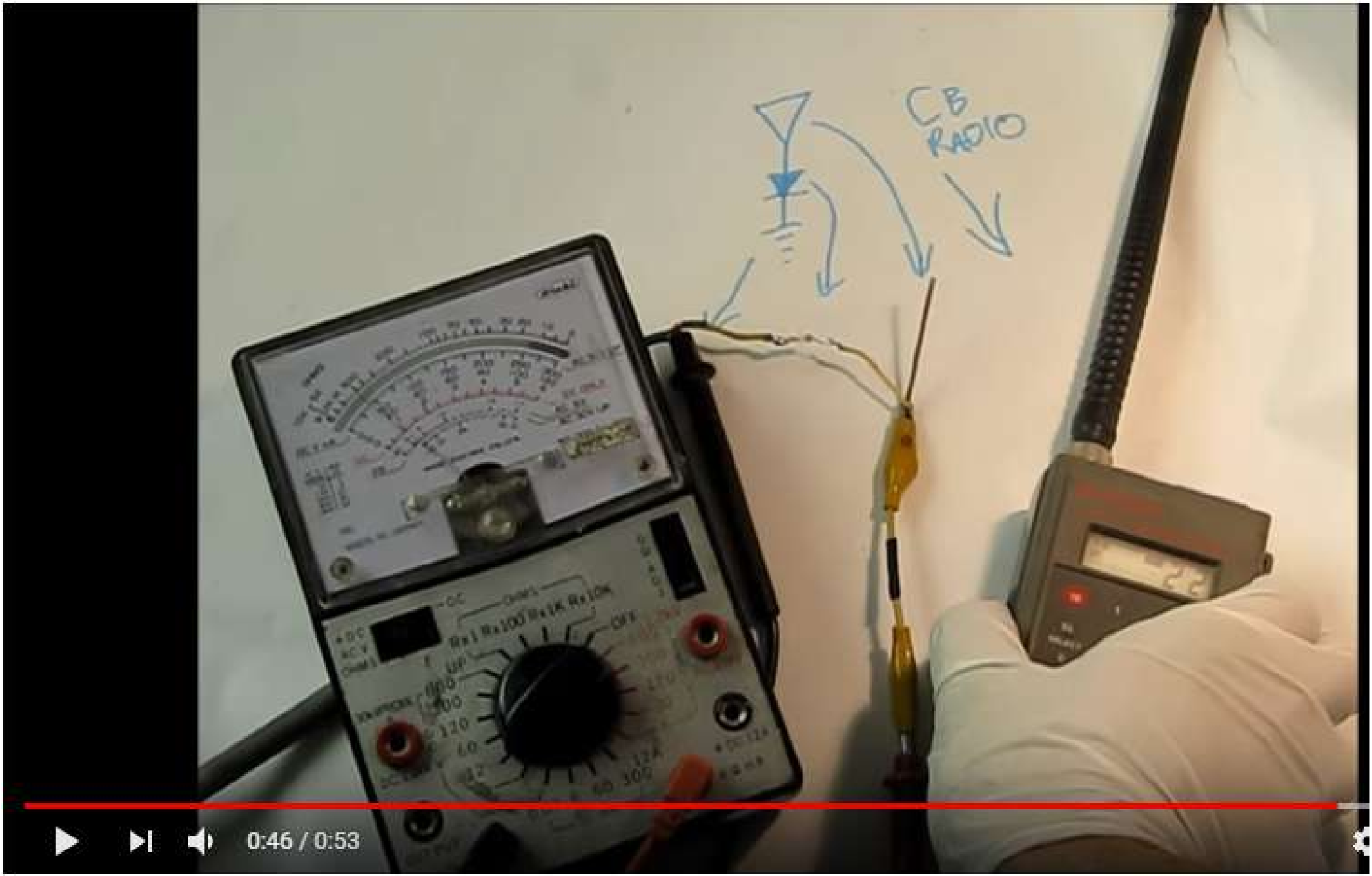

2M
2K
200
LOGIC
NPN
E B C E
PNP
E B C E
COM
Hz
MAX


Driven Element
28mm Sides
5-15 Trimmer
Capacitor
Diode
1000pF
+
To Voltmeter
Reflector Element
30mm Sides

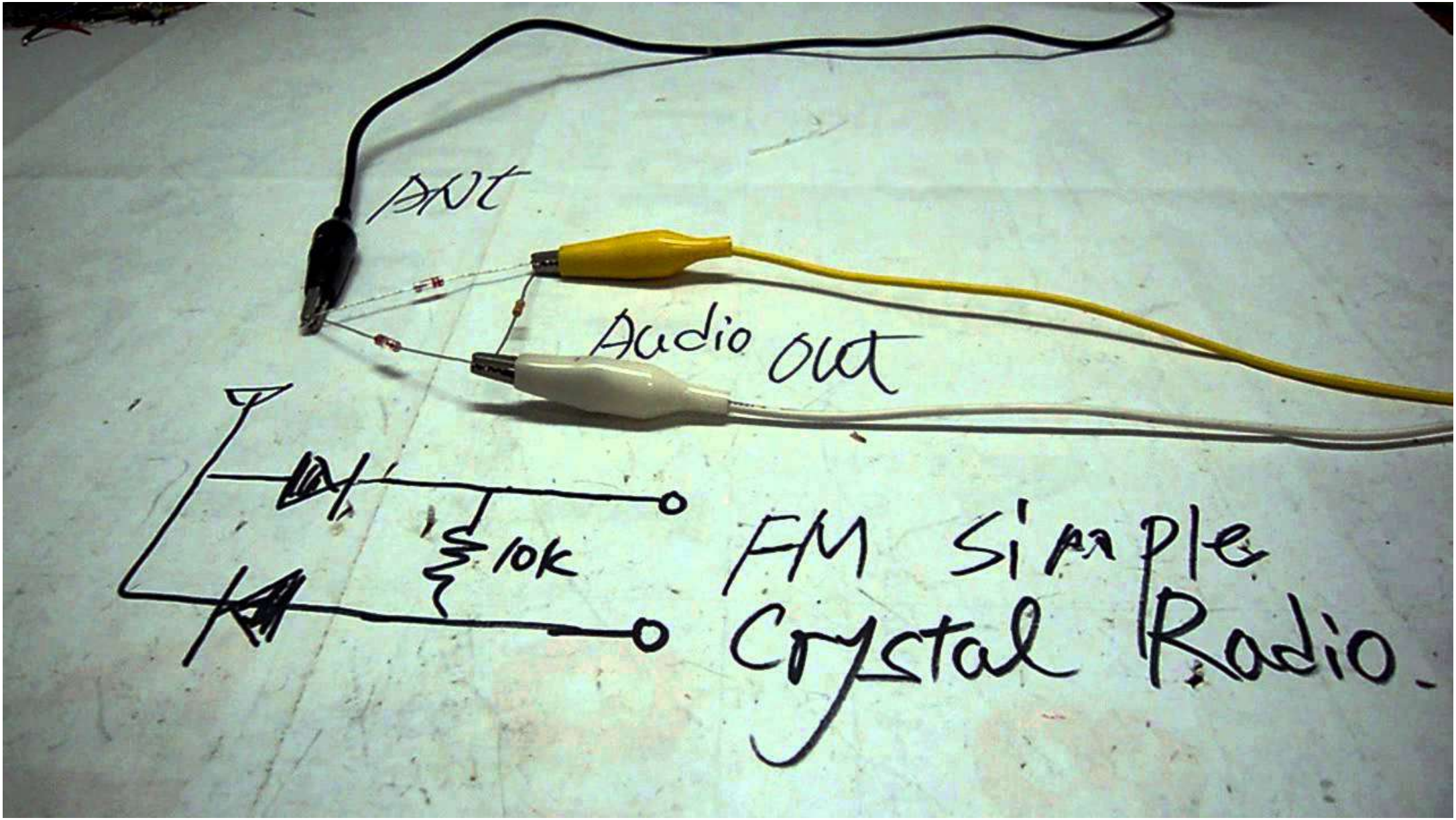


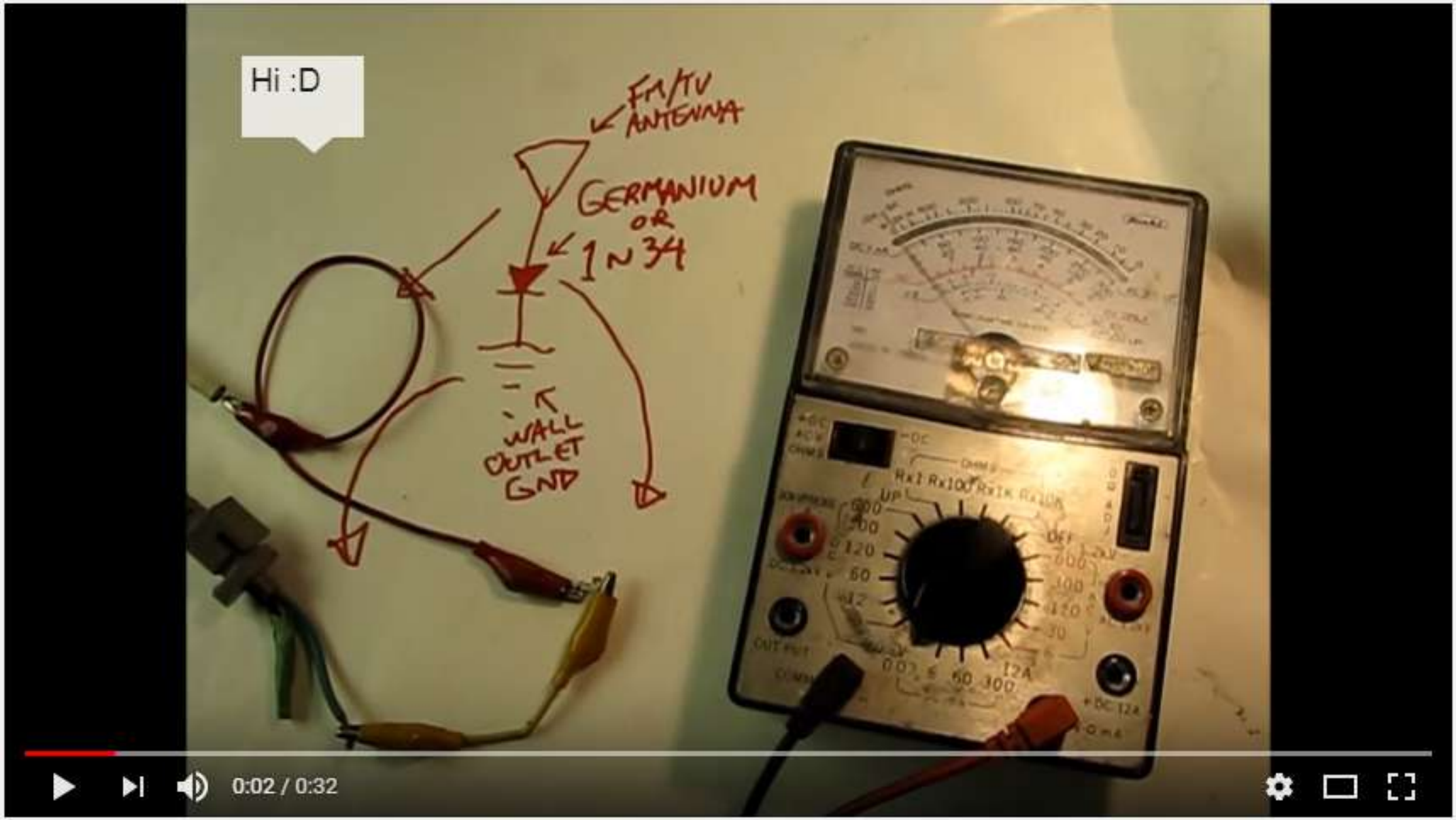



D3
D5
D7
D9
D10
1SS86
LED
D2
D4
D6
D8

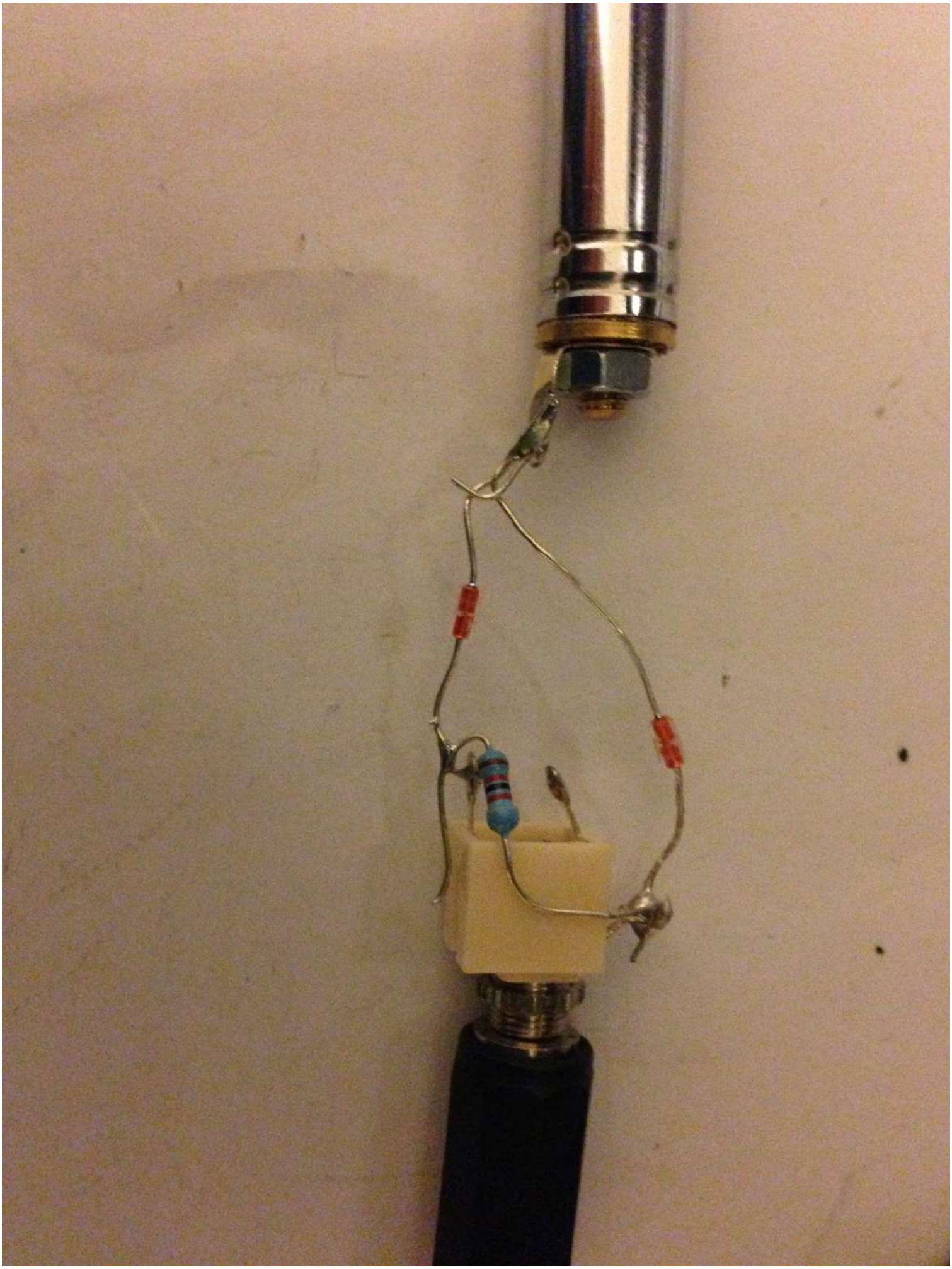


DIY Wireless Power - Part 2: Simple Wireless Power Transmission! (CB)


ANT
Audio out
10K
FM Simple
Crystal Radio.

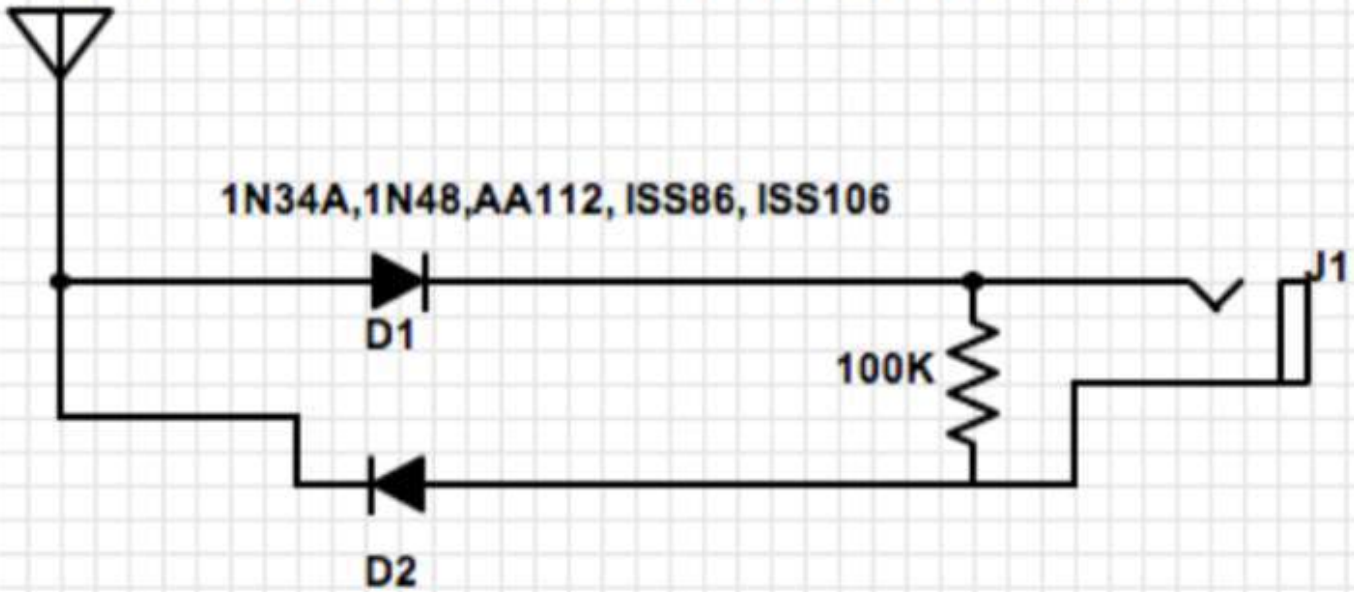


DIY Wireless Power - Part 1: TV/FM Antenna,1N34/Germanium Diode



The simplest FM Crystal Radio Circuit - http://billydiy.blogspot.hk

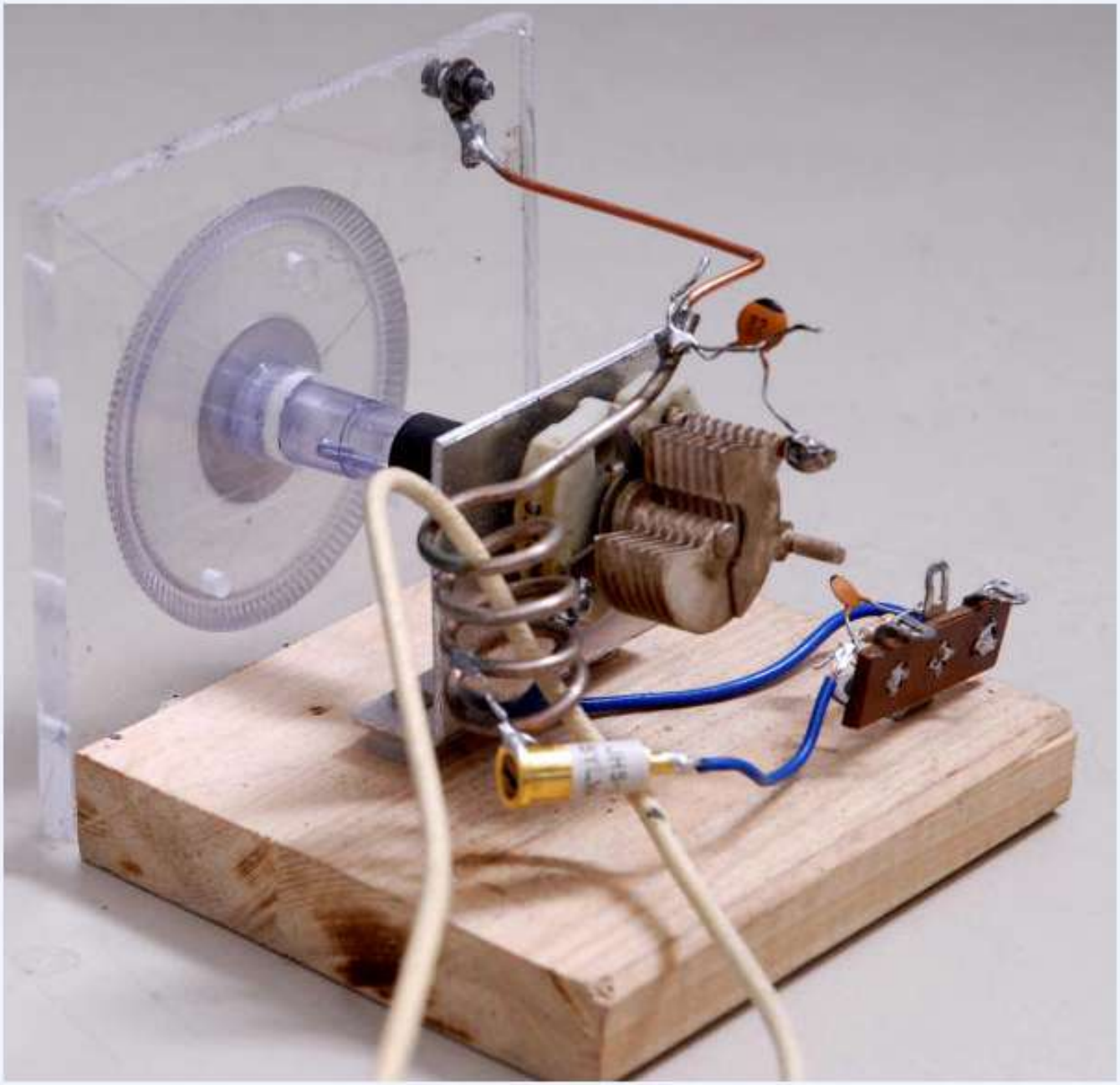
Antenna - Extendable Radio 1.8 meter. That also serves as tuning



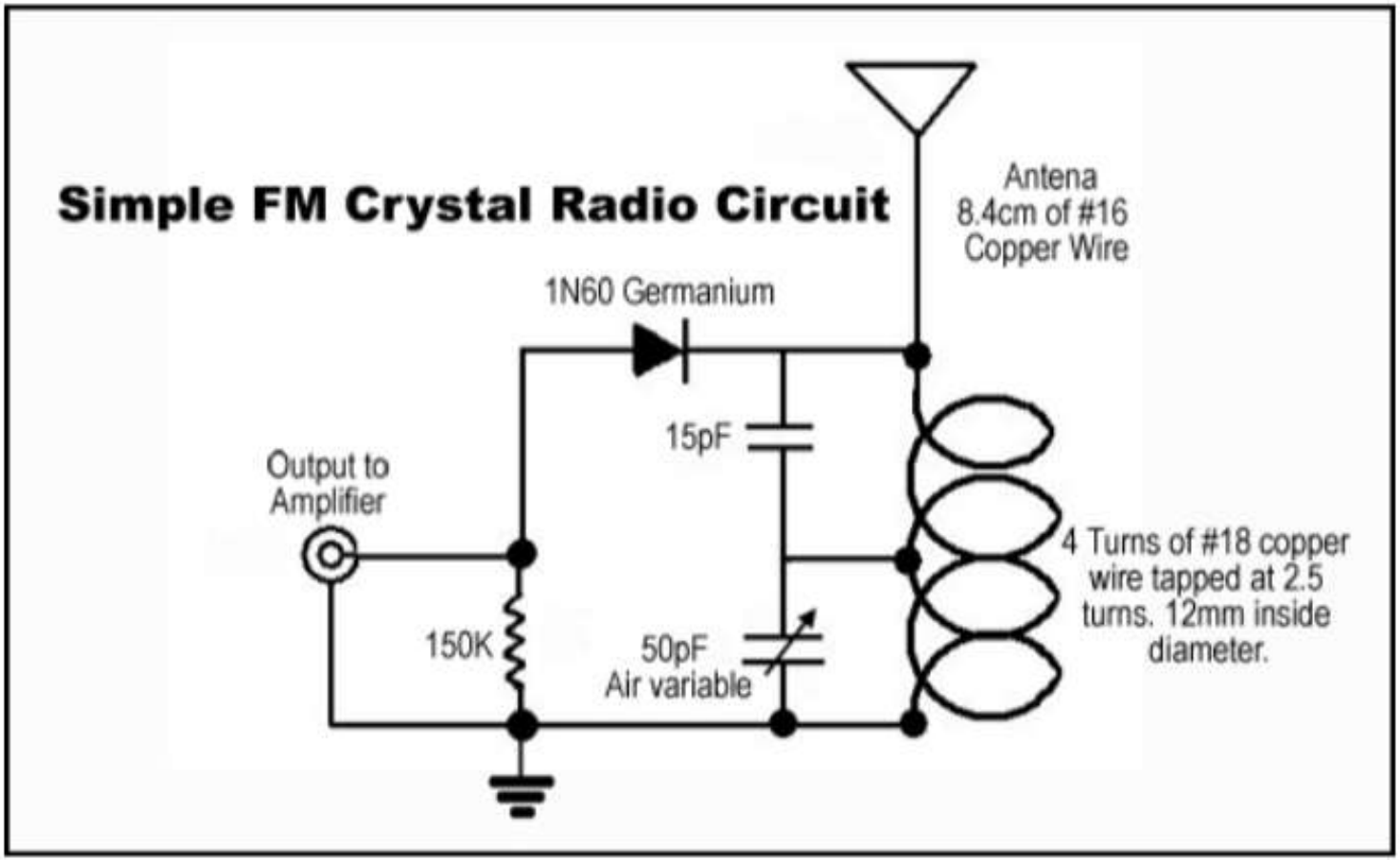
3.5mm Mono earphone Jack for Crystal earphone

Simple crystal receiver for FM

Carlo Bramanti

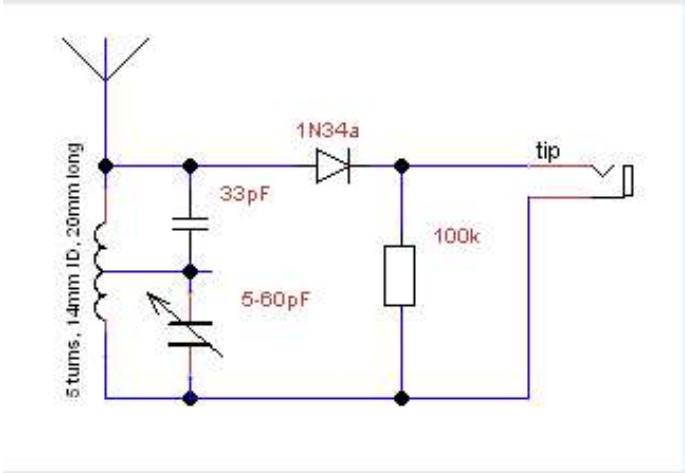


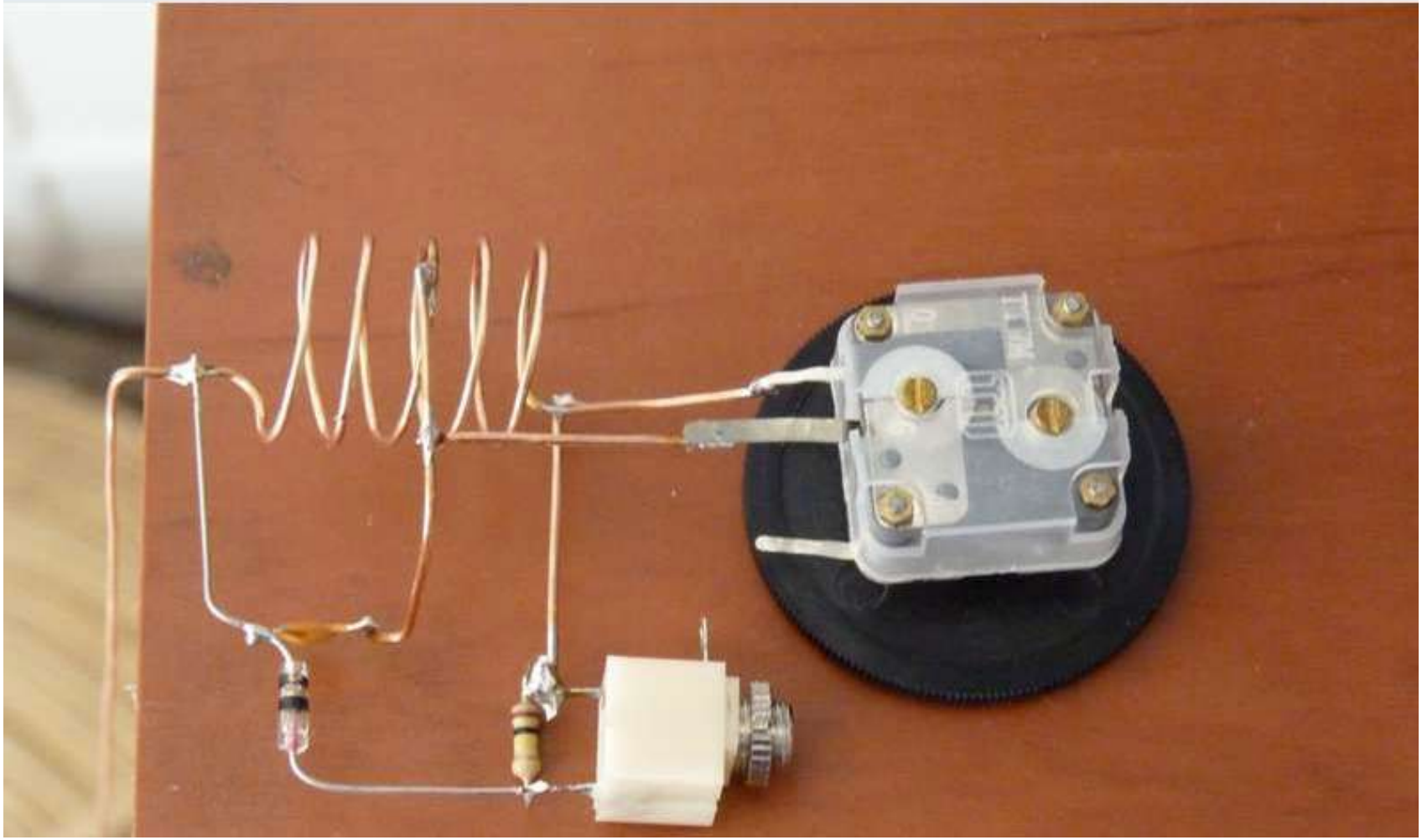
FM Crystal Radio Circuit



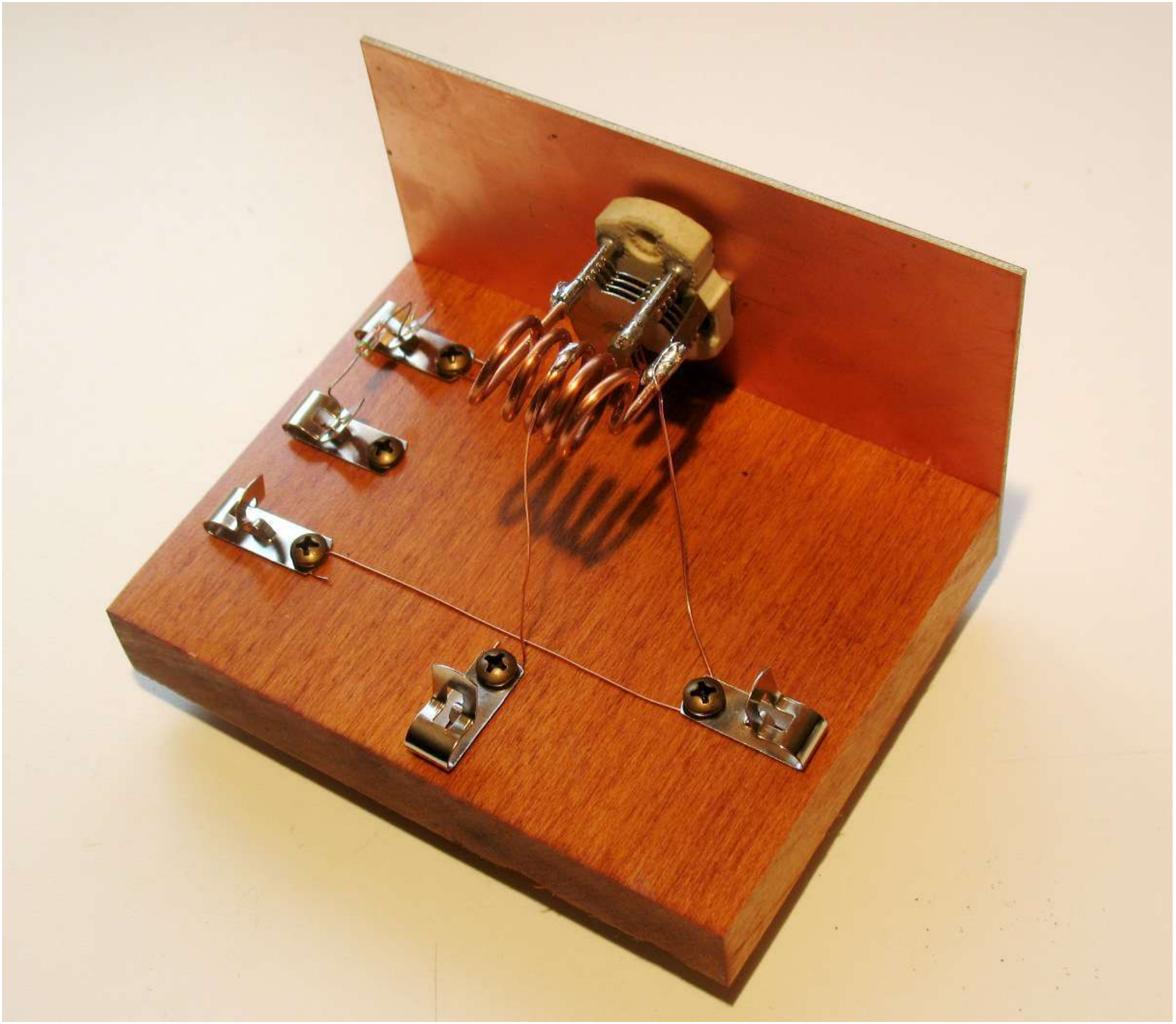
Parts List (some of these parts you can buy from our online store):

- 1N60 Germanium Diode
- 15pF Ceramic Capacitor
- 50pF Variable Capacitor
- 150K Ohm Resistor
- #16 & #18 Copper wires

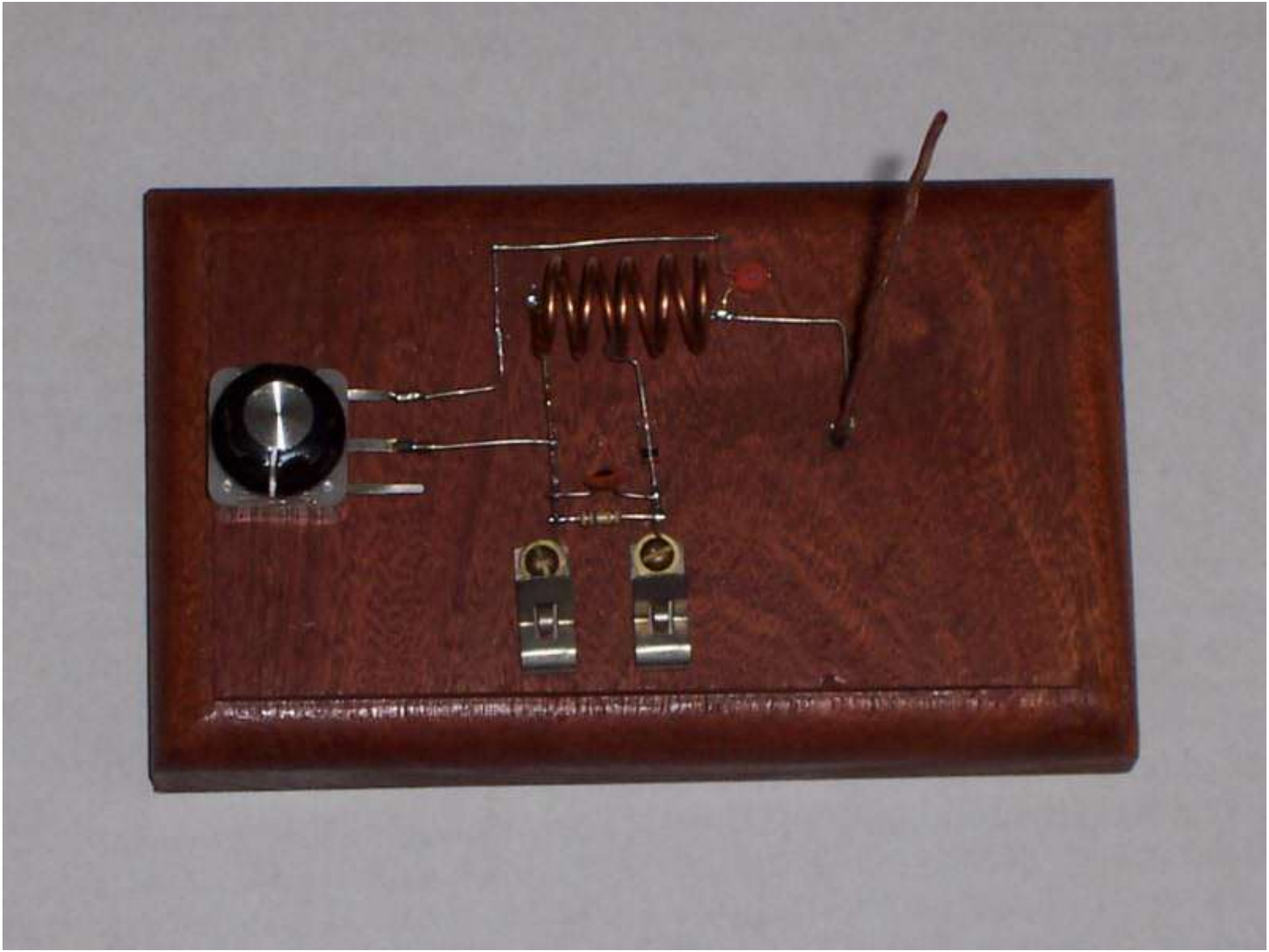

1N34a
tip
33pF
100k
5-60pF
5 turns, 14mm ID, 20mm long

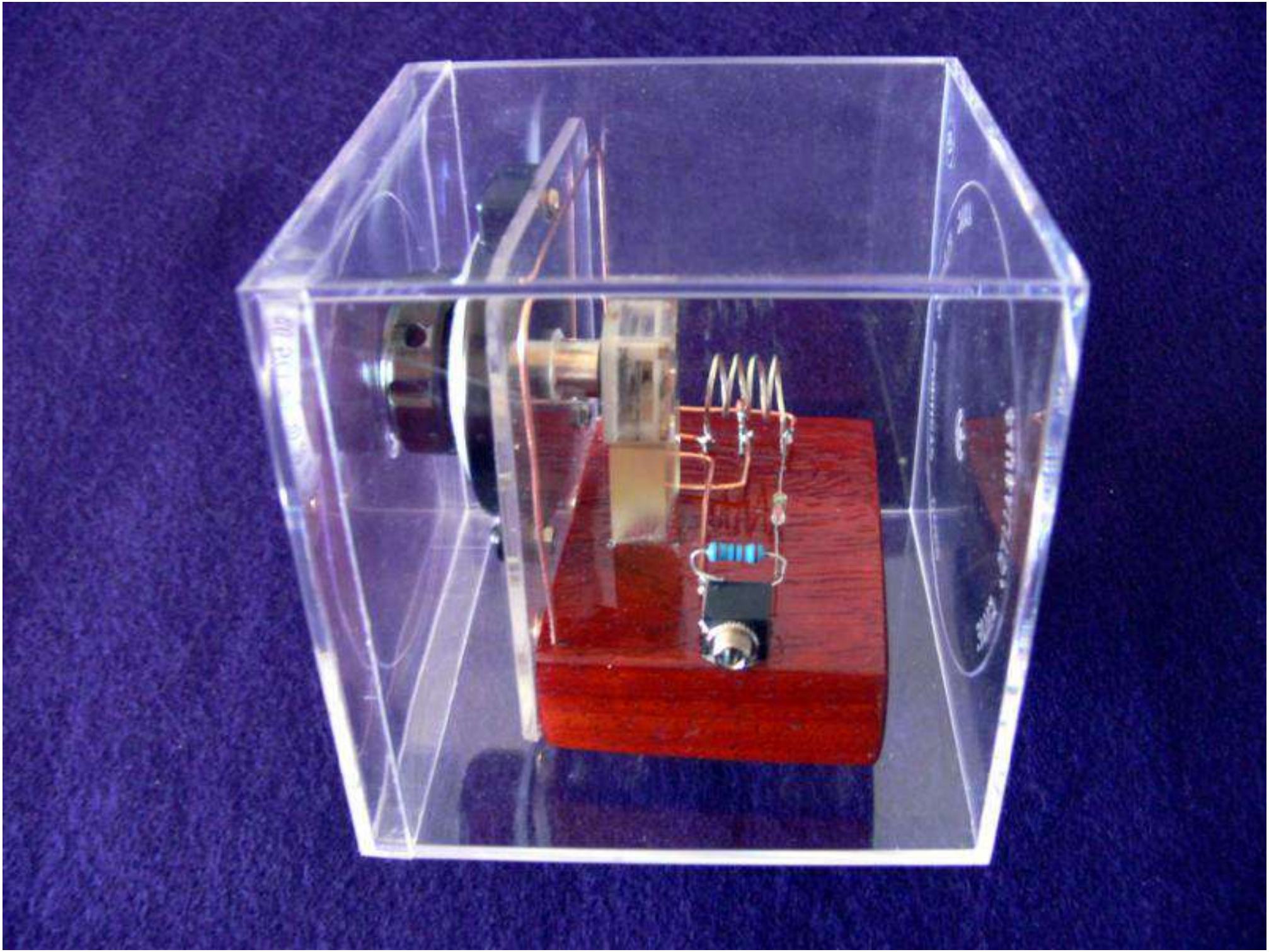






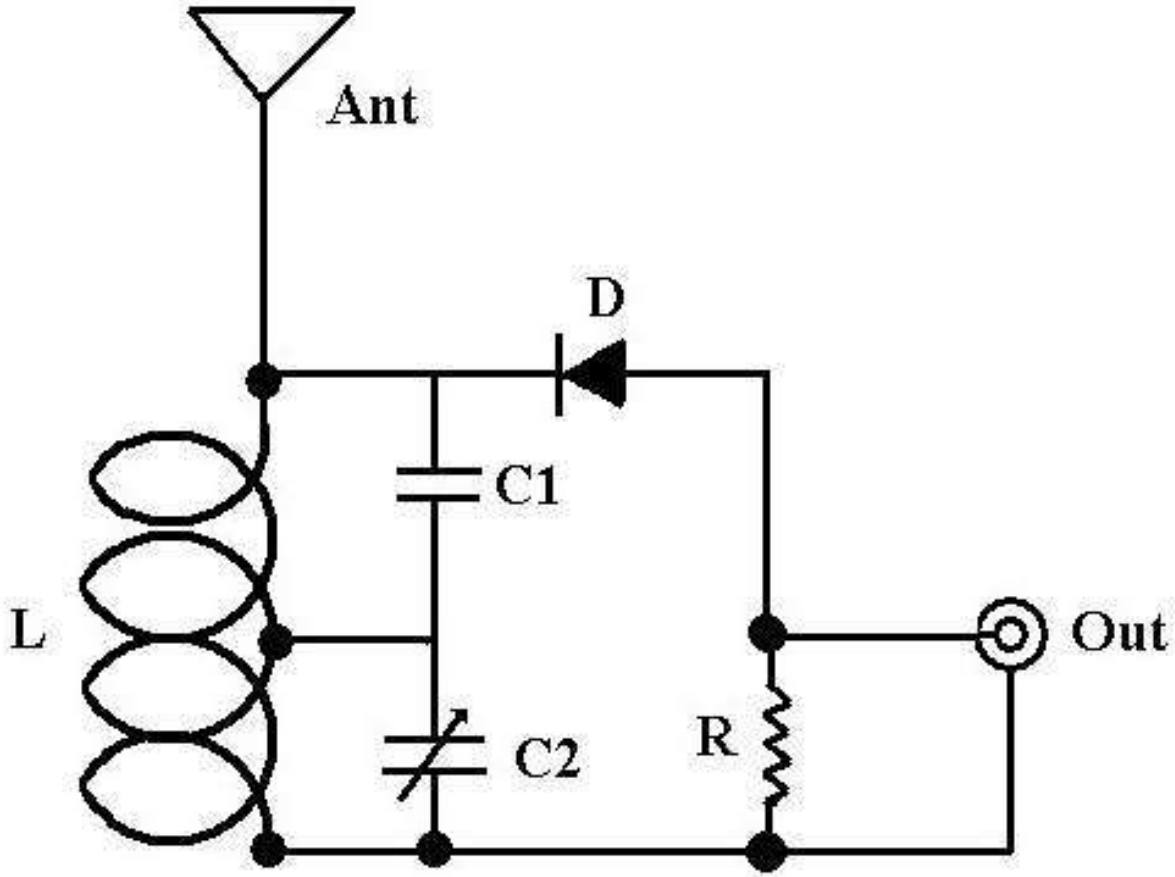


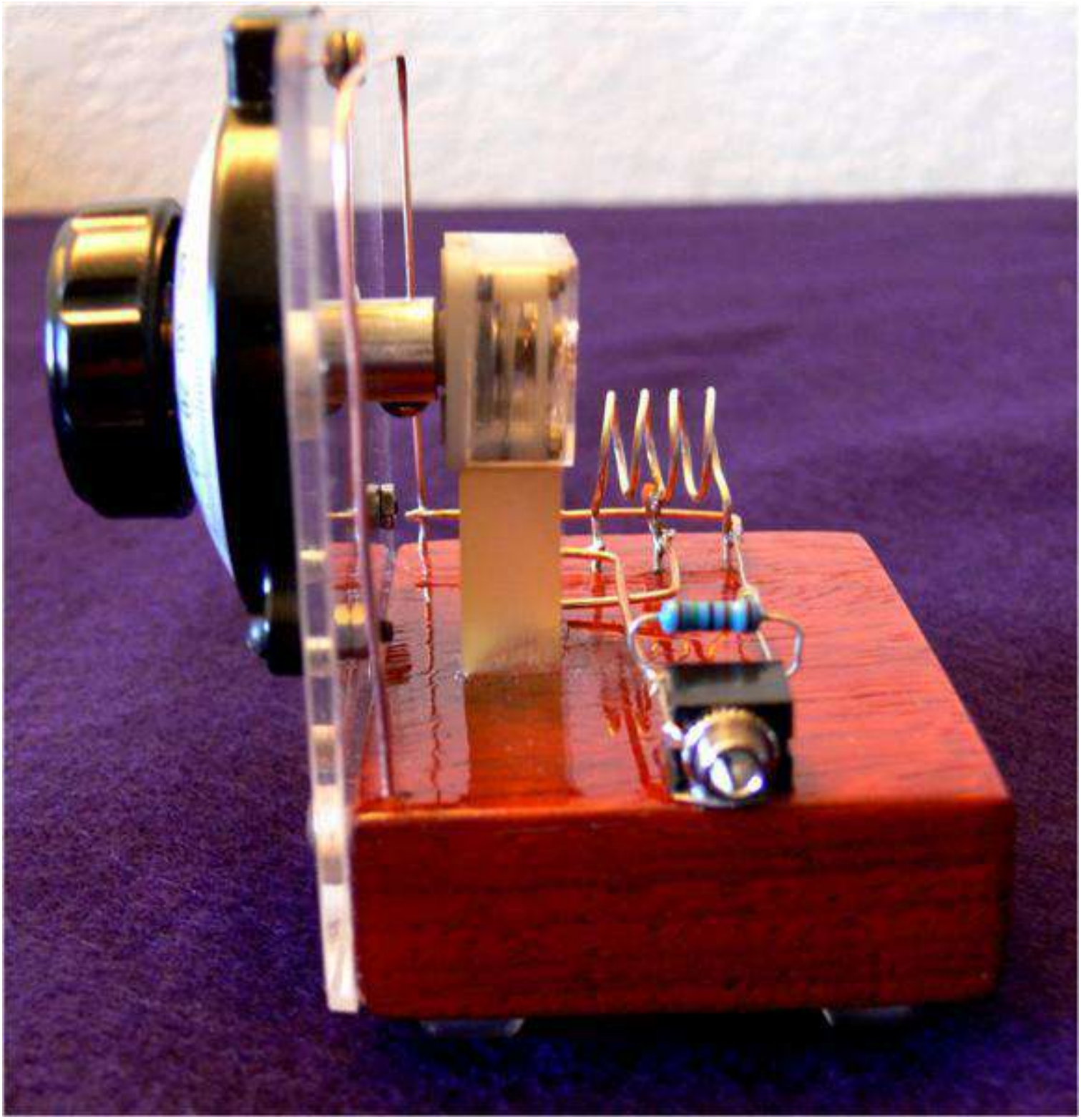




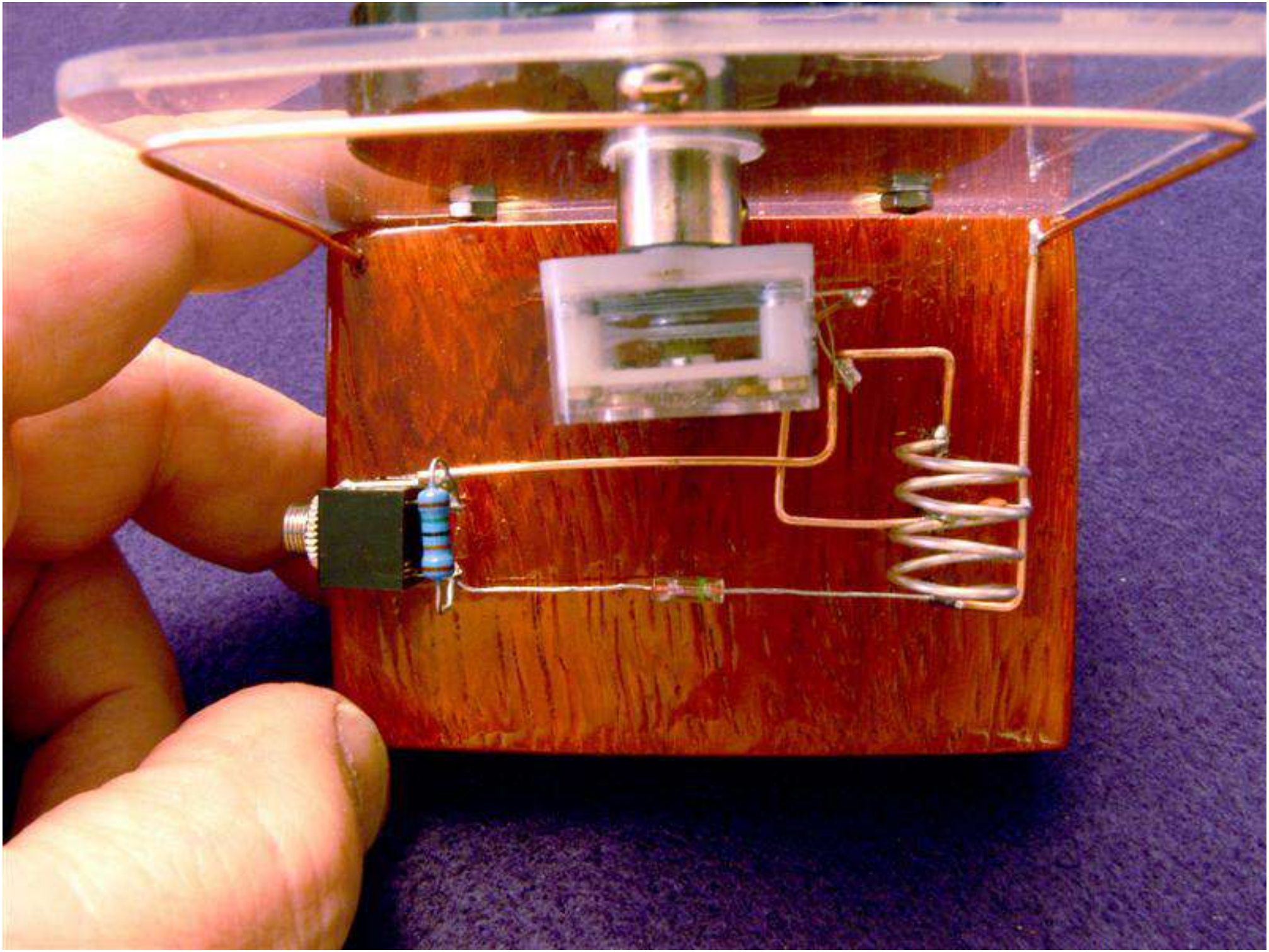
L - 4 turns #18 copper or silver wire, 12mm inside diameter, tapped at 2.5 turns
Ant - 7 inches of #18 bare copper wire
C1 - 18 pf ceramic capacitor
C2 - 50 pf air variable capacitor
D - 1N34 diode or rock crystal
R - 150K resistor

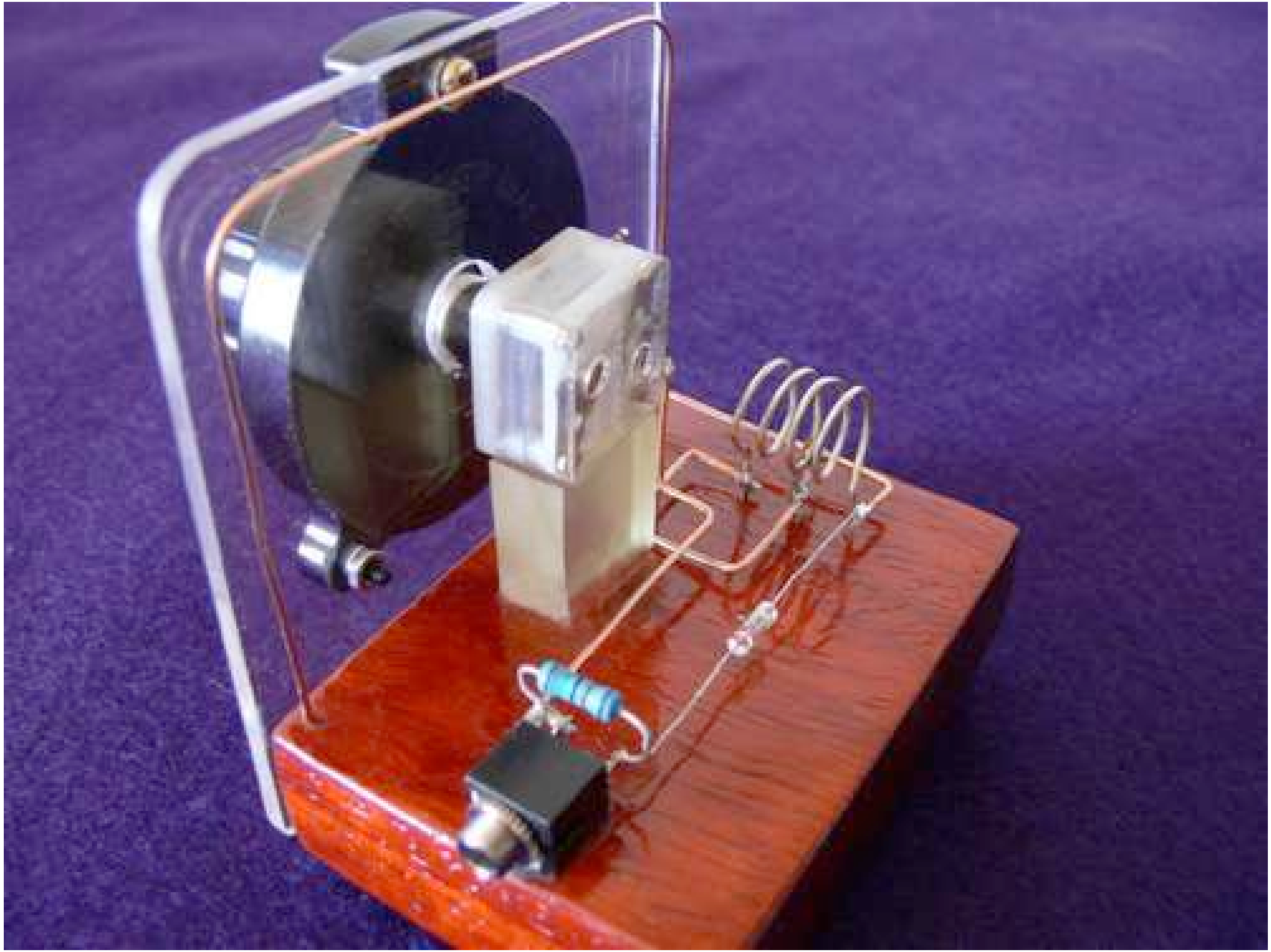
All passive components

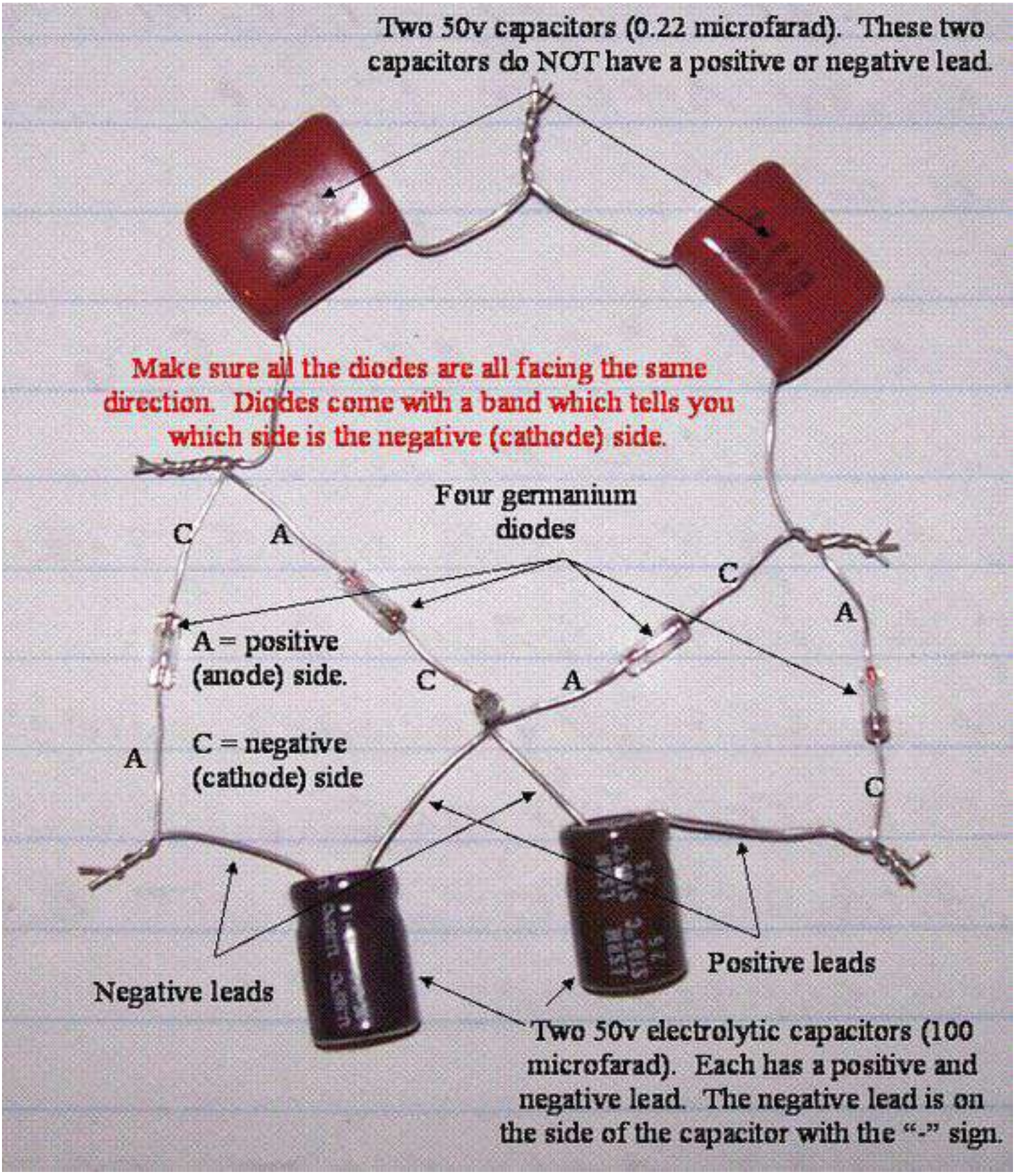


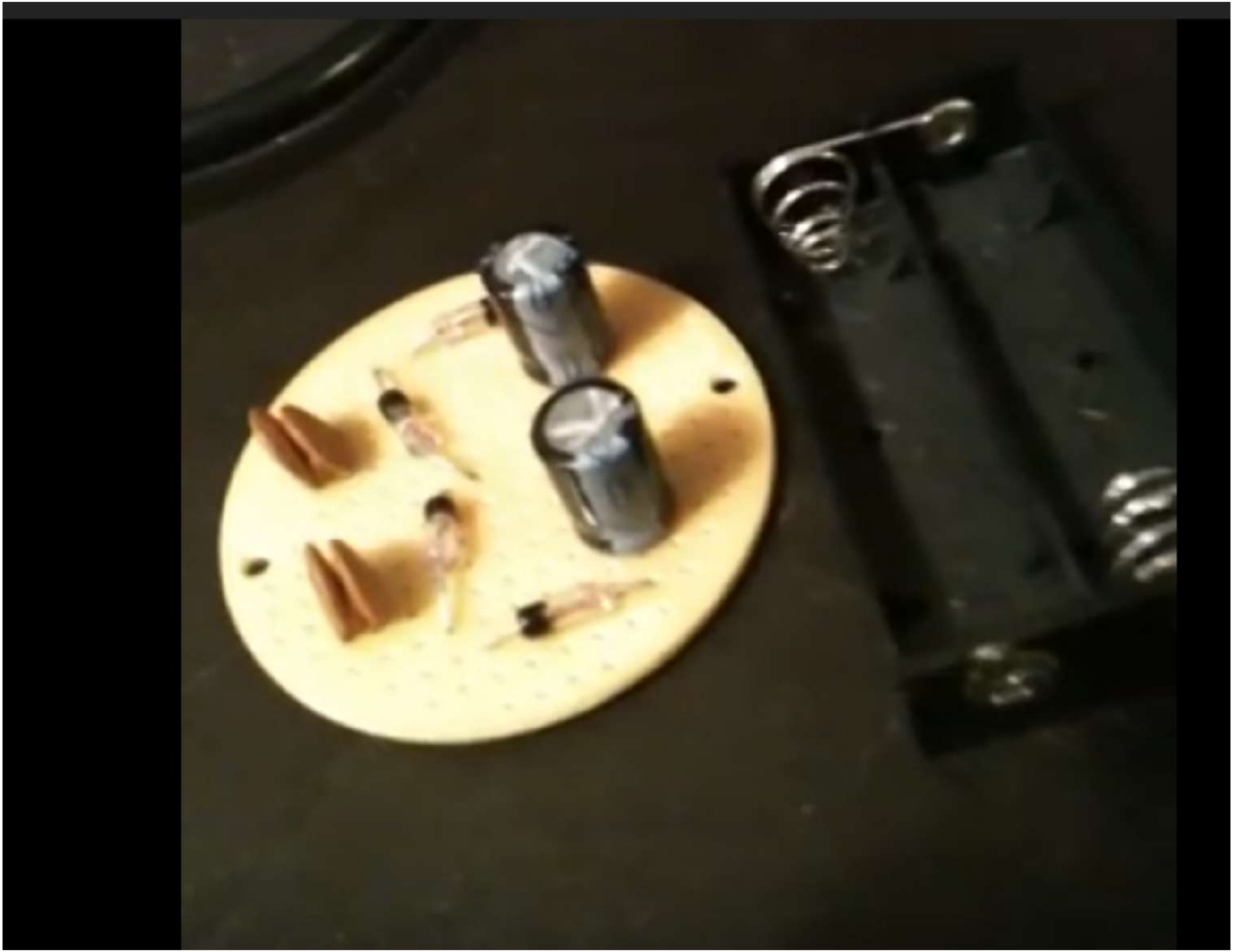


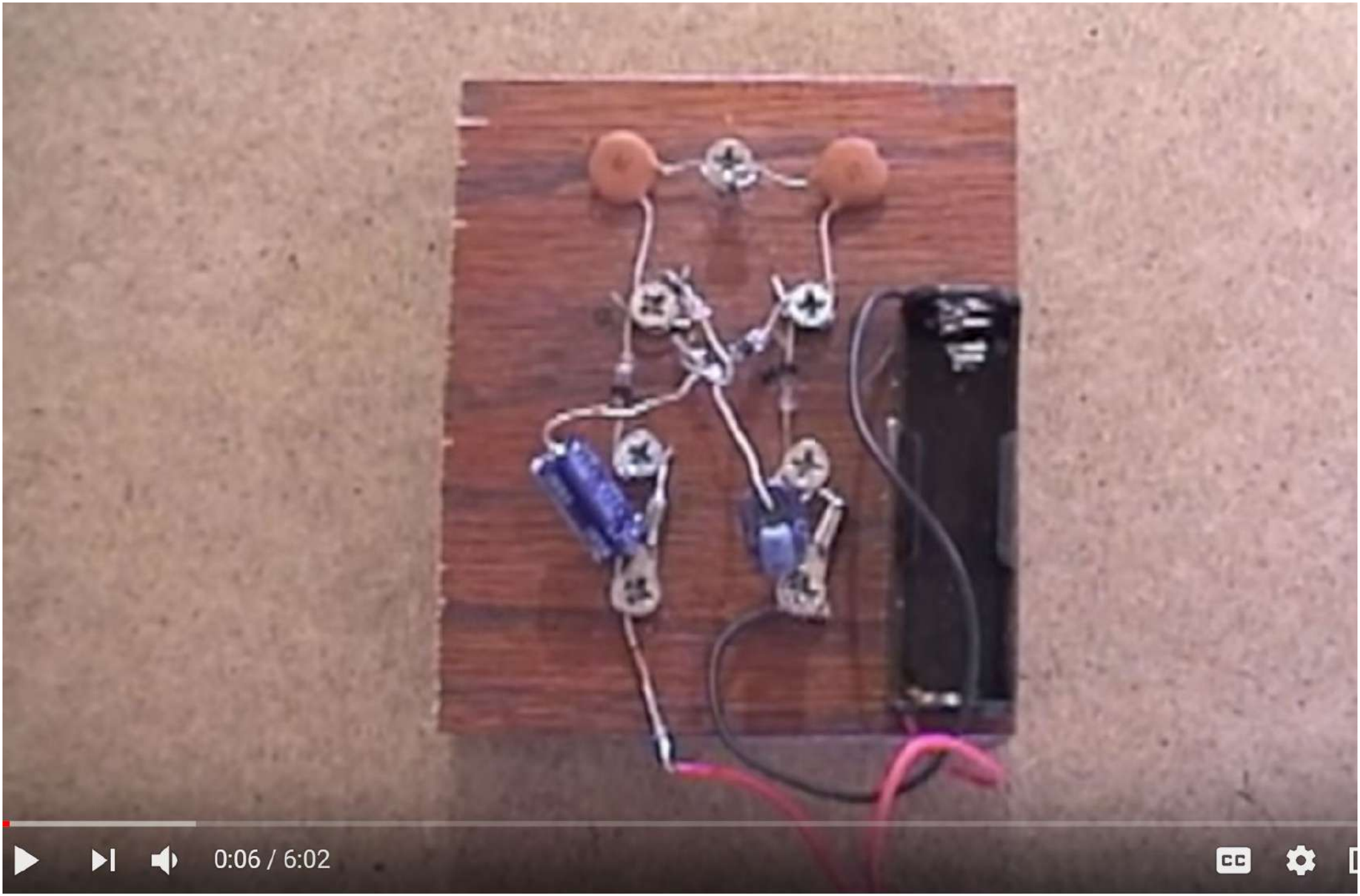


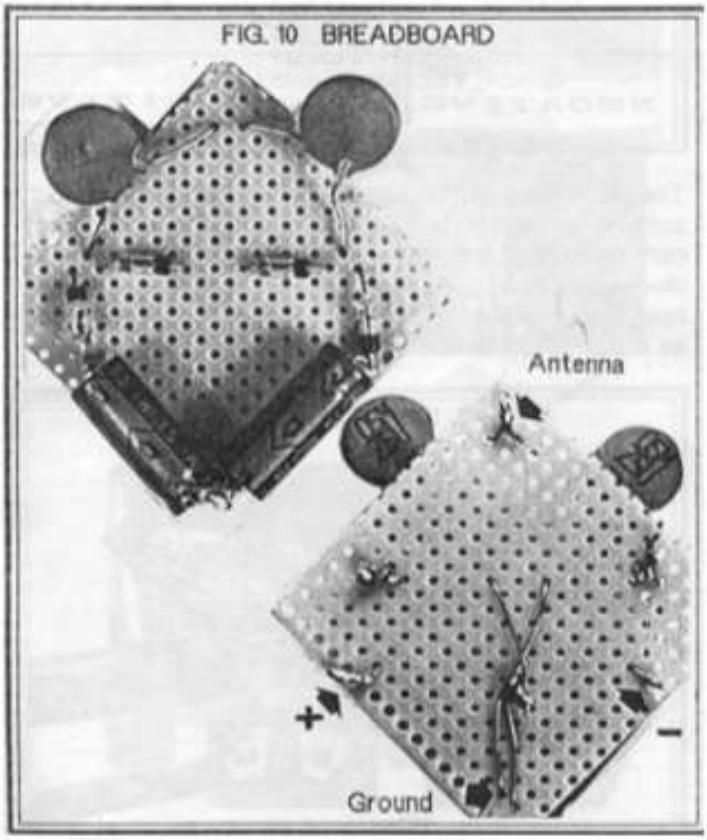




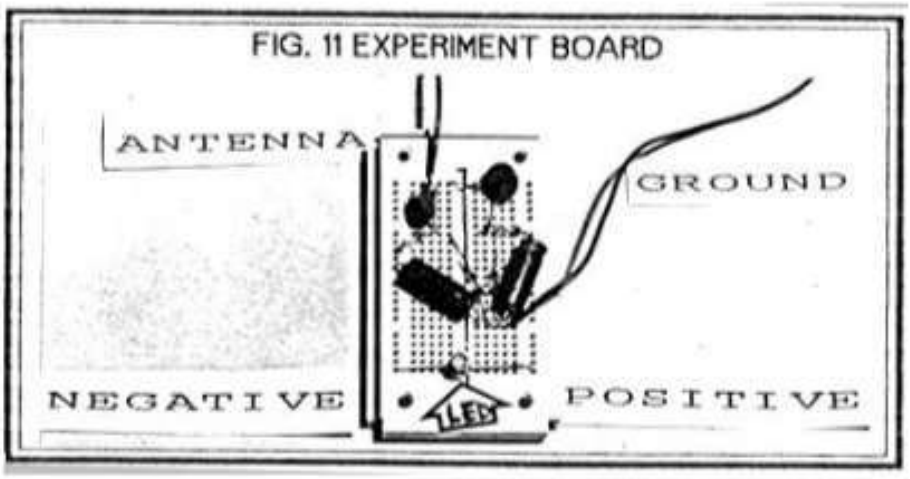

Two 50v capacitors (0.22 microfarad). These two capacitors do NOT have a positive or negative lead.
Make sure all the diodes are all facing the same direction. Diodes come with a band which tells you which side is the negative (cathode) side.
Four germanium diodes
C
A
C
A
A = positive (anode) side.
C
A
C = negative (cathode) side
A
C
Negative leads
Positive leads
Two 50v electrolytic capacitors (100 microfarad). Each has a positive and negative lead. The negative lead is on the side of the capacitor with the "-" sign.




0:06 / 6:02

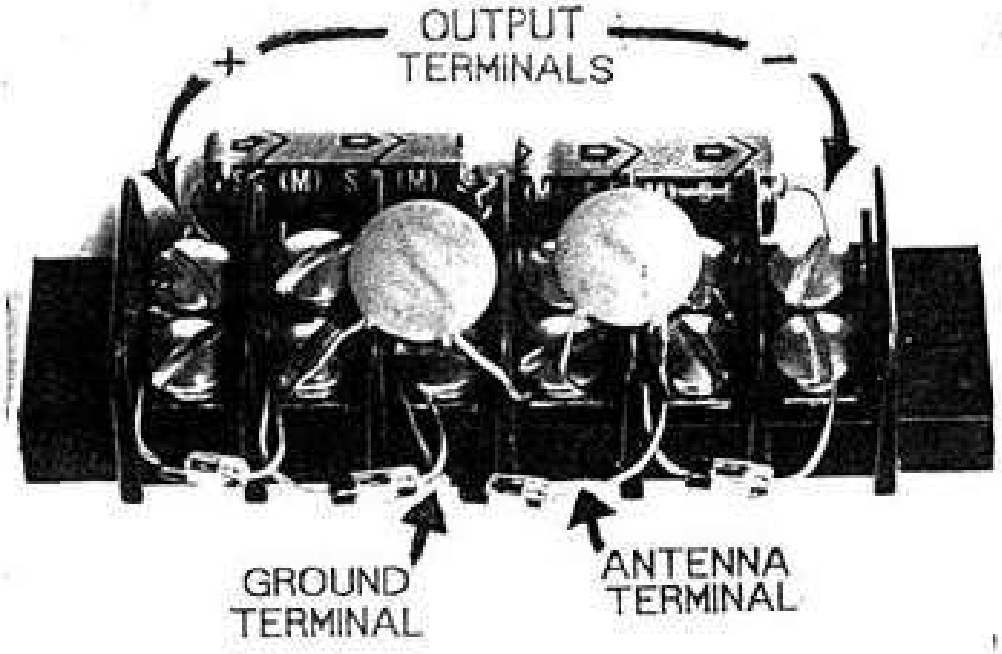


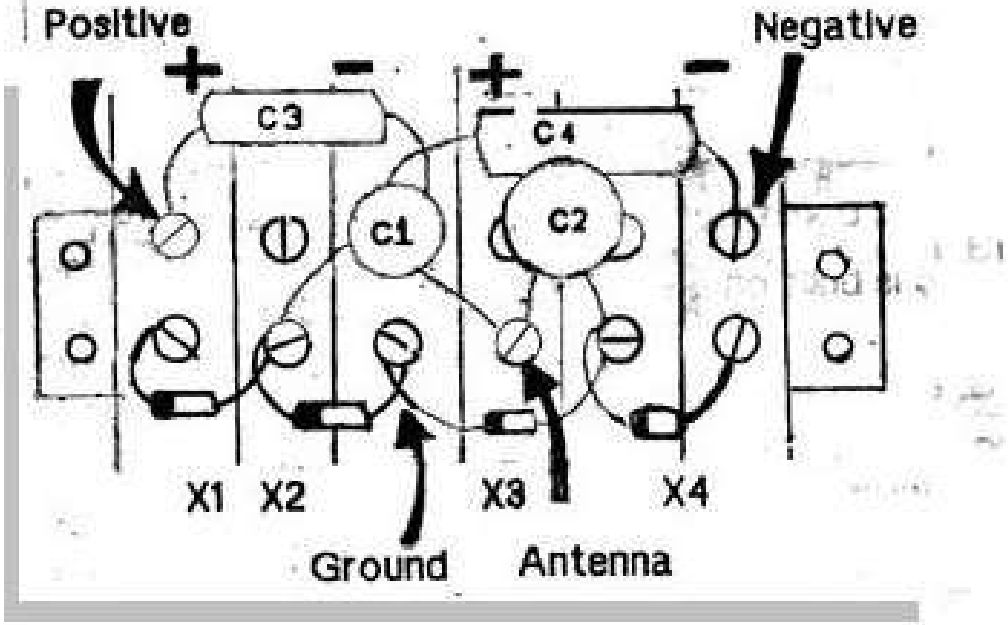
the board as shown in Figure 11. This unit is powering a small red LED indicated by the arrow.



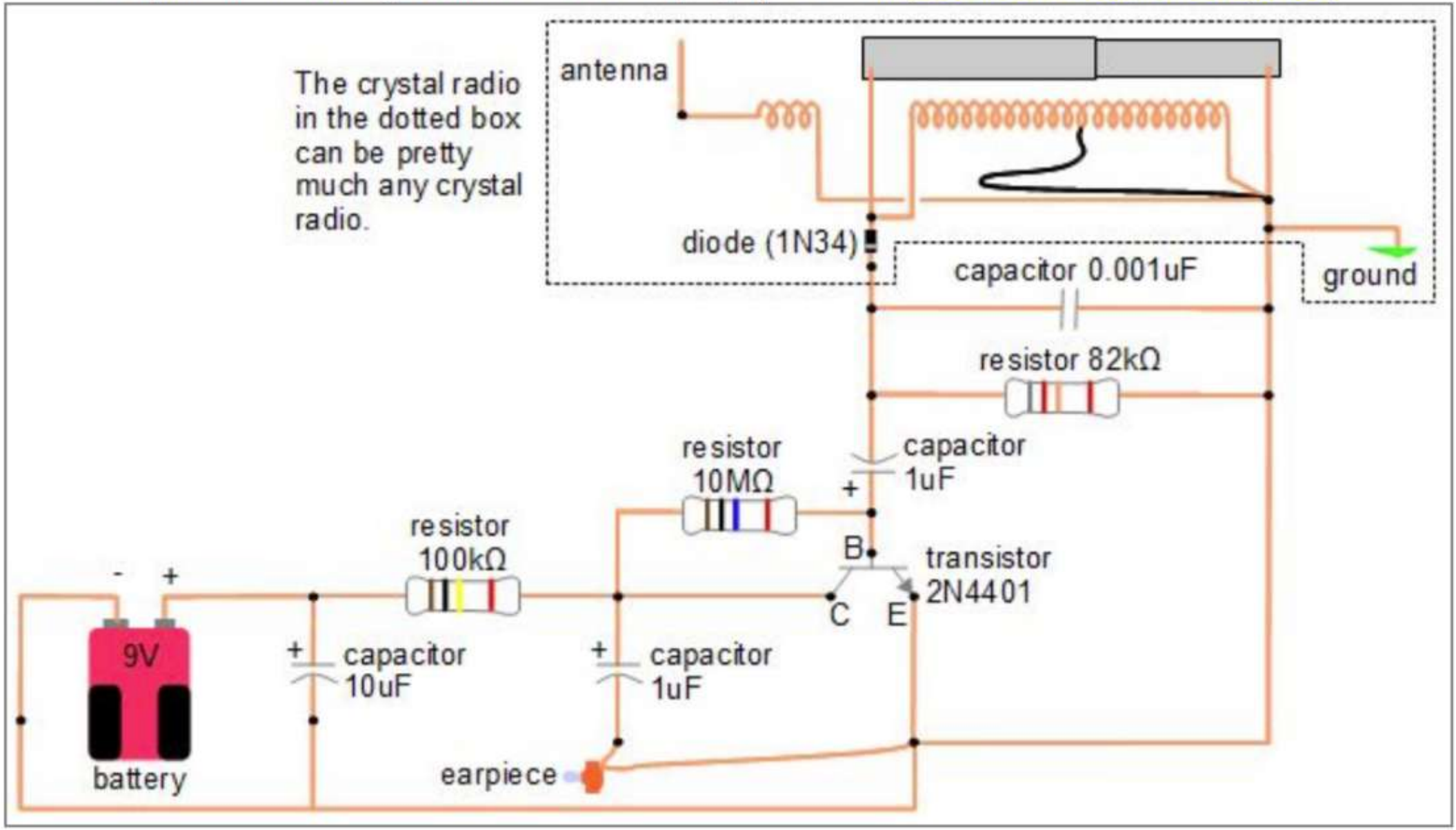
ıade to the twisted ends of the ceramic capacitors. When soldering the leads of the 1N34 diodes, care must be taken t

FIG. 9 TERMINAL STRIP





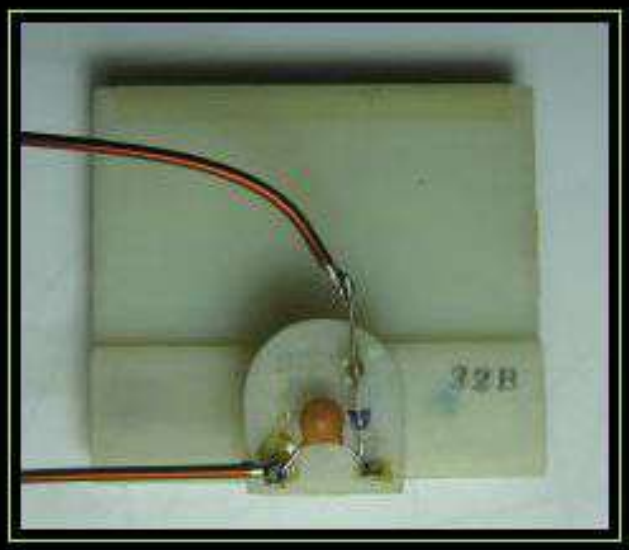
Amplifier circuit. The crystal radio used for example purposes is the crystal radio made from scraps here.

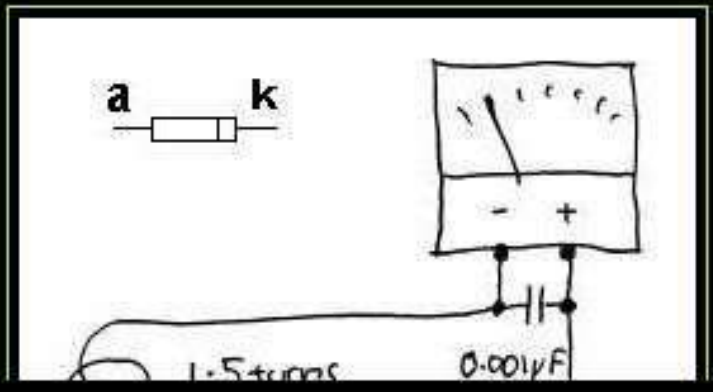


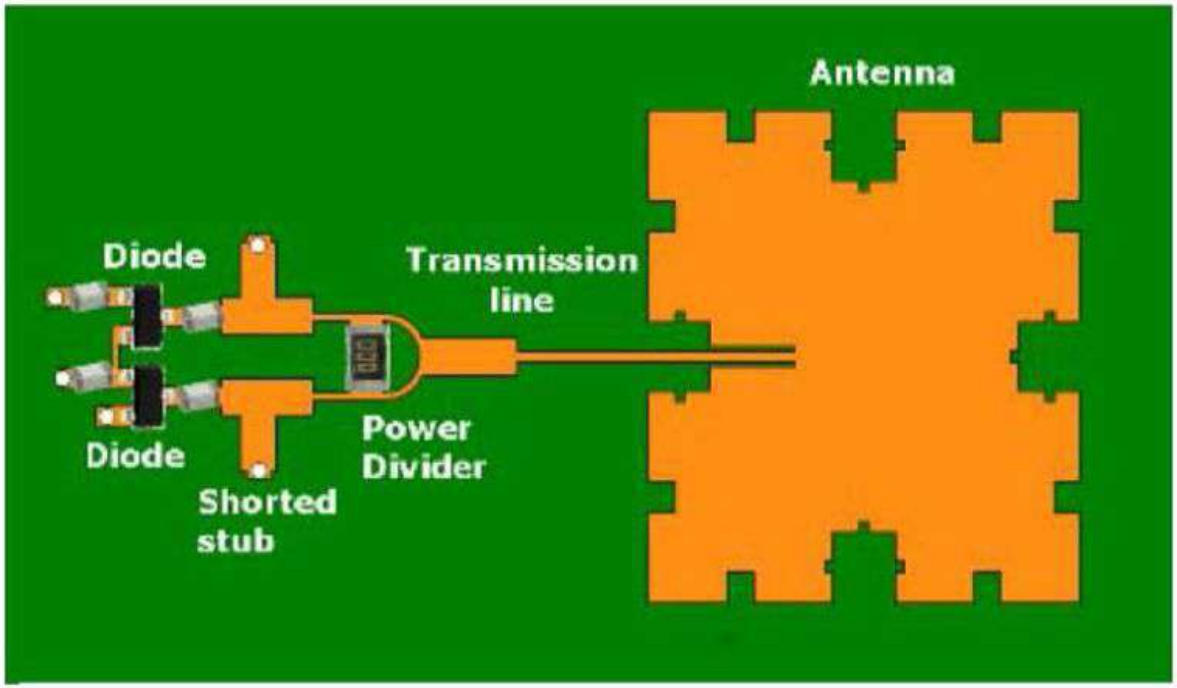
SATURDAY, NOVEMBER 13, 2010

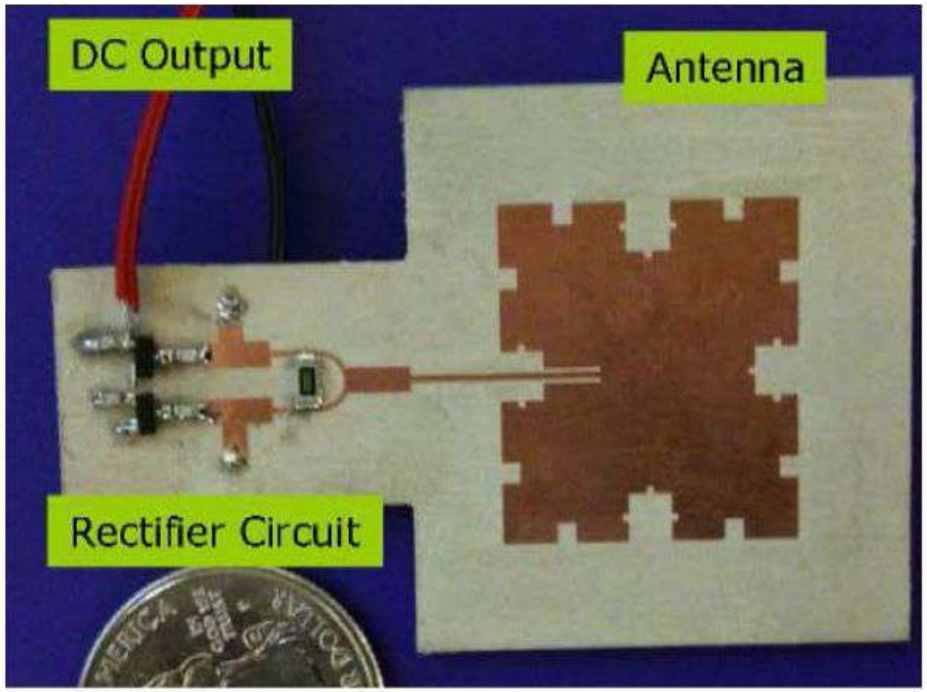
SIMPLE FIELD STRENGTH METER








Antenna
Diode
Transmission line
Diode
Power Divider
Shorted stub


DC Output
Antenna
Rectifier Circuit

4. Results and Analysis

The simulated and measured results at the output voltage of voltage multiplier circuit are shown graphically in **Figure 8**. From the graph analysis, the simulated and the measured results agree considerably with each other. The measured results are shown to be better than the simulation results. The reason behind this may be due to the uncertainty in series resistance value of the diode obtained from SPICE parameters in modeling as explained in Equation (5). This resistance vale of diodes in practical circuit may be lower than in the model, which provides fast discharge path, in turn rise in voltage as passes through the stages and reaches to final output. In this work, the DC output voltages obtained through simulation and measurement at 0 dBm re 2.12 V and 5.0 V respectively. These results are comparatively much better than in ref. [9], where in at 0 dBm, 900 MHz they achieved 0.5 V and 0.8 V through simulation and measurement increasing to 1.4 V, 1.67 V, 1.87 V and 2.12 V for 4, 5, 6 and 7 stages respectively compared to 2 mS as shown in [10]. **Figure 12** shows that the conversion ratio of 22 is achieved at 0 dBm input power and drops to 2.5 at –40 dBm. The highest value at 0 dBm is due to the innate characteristics of the zero bias Schottky diodes which conduct fairly well at higher input voltages.

5. Conclusion

From the experimental results, it is found that the pro-

Table 2. Component used in 7 stage voltage multiplier.

Name of component	Label	Value
Stage capacitors	C_1 - C_{14}	3.3 nF
Stage diodes	D_1 - D_{14}	HSMS 2850
Filter capacitor	C_L	100 nF
Load resister	R_L	100 kΩ

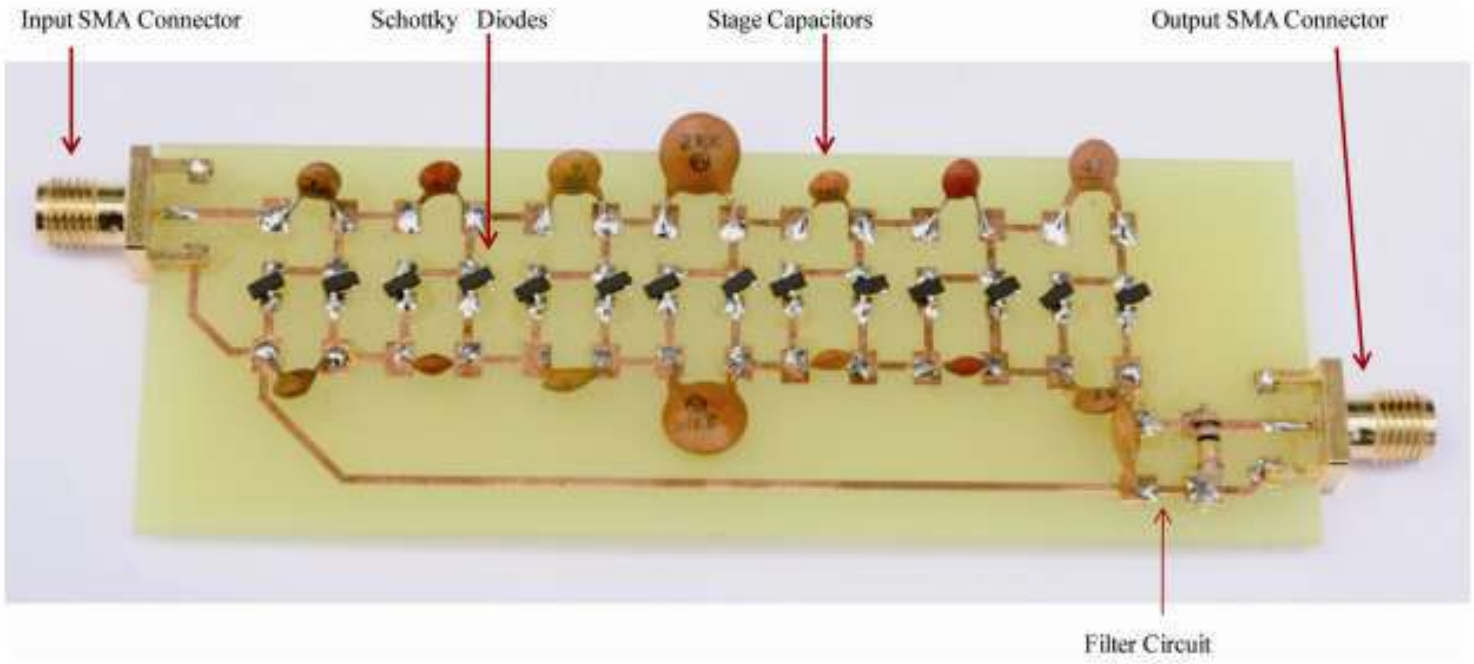


Figure 7. Photograph of assembled circuit board.

sign in this paper uses a capacitor across the load to store and provide DC leveling of the output voltage and its value only affects the speed of the transient response. Without a capacitor across the load, the output is not a good DC signal, but more of an offset AC signal.

In addition to the above, an equivalent load resistor is connected at the final node. The output voltage across the load decreases during the negative half cycle of the AC input signal. The voltage decreases is inversely proportional to the product of resistance and capacitance across the first stage was 3.3 nF, the second stage was 1.65 nF, third stage was 825 pF, fourth stage was 415 pF and so on. But keeping in view of testing, the capacitance values were chosen to have a close match with the standard available values in the market.

Simulation was carried out through 4 to 9 voltage doubler stages. Based on results obtained a 7 stage doubler is best to implemented for this application.

The design of the printed circuit board (PCB) was carried out using DipTrace software. The material used to

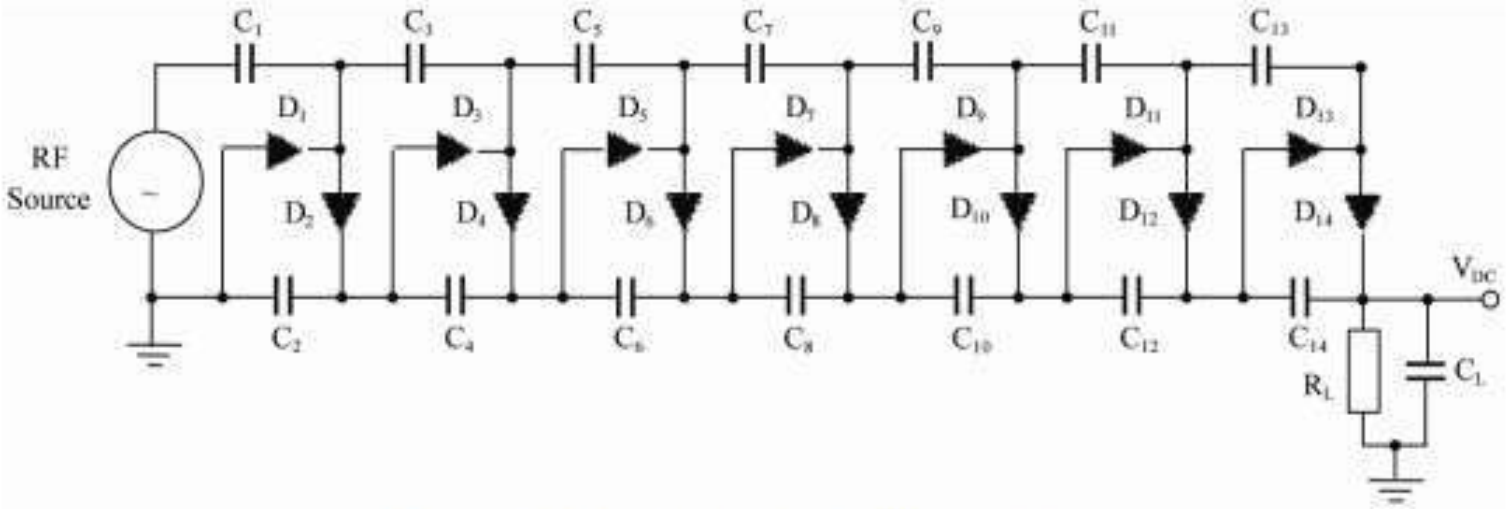


Figure 6. Schematic of 7 stage voltage multiplier.

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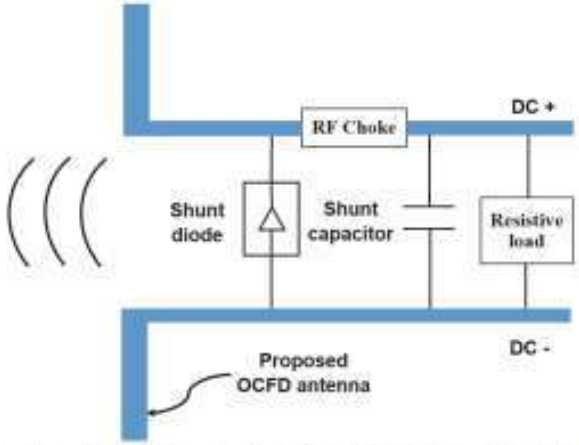


Fig. 9. Configuration of a single shunt diode (Class F) rectifier with a dipole antenna.

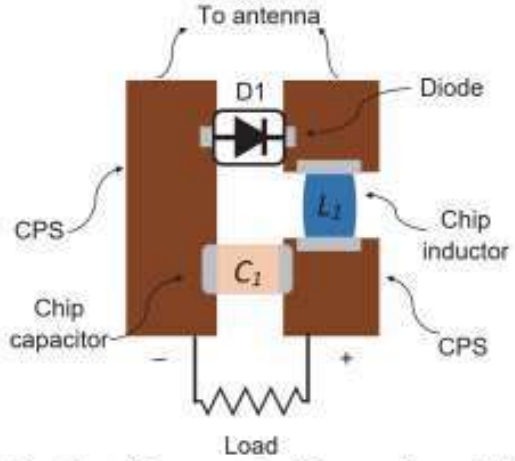


Fig. 10. Configuration of the proposed rectifier on coplanar striplines (CPS).

TABLE III
CIRCUIT COMPONENTS USED IN THE DESIGN

Component name	Nominal Value	Part number and supplier
D1	Schottky diode	SMS7630-079LF, Skyworks
L1	47 nH chip inductor	0603HP47N, Coilcraft
C1	100 nF chip capacitor	GRM188R71H104JA93D, Murata

antenna have a radius of 50 mm and a circumference angle of

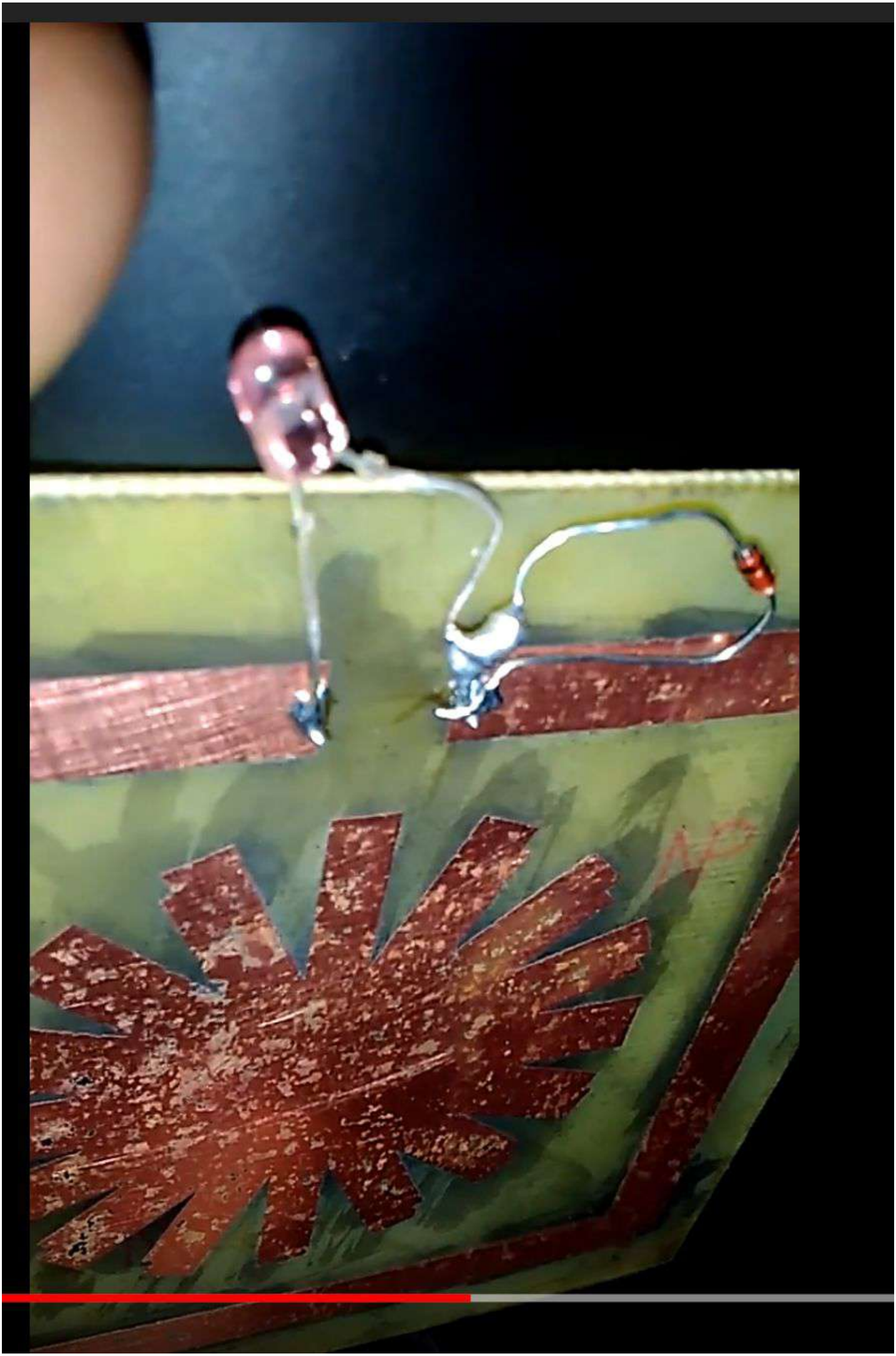
respectively. While the imaginary part of the proposed OCFD is around 0 Ω at resonant frequencies 0.6 GHz, 1.2 GHz and 2.4 GHz, which are f_0, $2f_0$, and $4f_0$ respectively. These results have demonstrated that the simulated results agree with the OCFD theory as discussed in Section III–A. Furthermore, the imaginary part of the impedance of the antenna over the resonant frequency band from 1.4 to 2 GHz turns from negative values (for the reference antenna) to positive values (for the proposed antenna). As shown in Fig. 7(b), the value of the imaginary part of the proposed antenna impedance varies between 0 and 300 Ω over the desired frequency band. This feature could help the proposed antenna to produce a better conjugate matching with the rectifier, since the imaginary part of the impedance of the rectifier normally varies between -700 and 0 Ω as we discussed earlier. The simulated 3D radiation patterns of the proposed antenna at the frequencies of interest are depicted in Fig. 8. The 2D polar plots of antenna patterns in *E-plane* and *H-plane* are shown as well. Here we have only showed the directivity (maximum gain) of the antenna (without taking the mismatch loss into account). From Fig. 8, it can be seen that the antenna has symmetrical patterns about YOZ plane with a maximum directivity of 1.8 dBi at 0.9 GHz, 3.5 dBi at 1.8 GHz and 3.3 dBi at 2.4 GHz. The antenna is more directive towards the long arm direction at 1.8 GHz and 2.4 GHz with the half-power beam-widths (HPBW) of around 174° and 185° respectively. The HPBW is about 96° at 0.9 GHz.

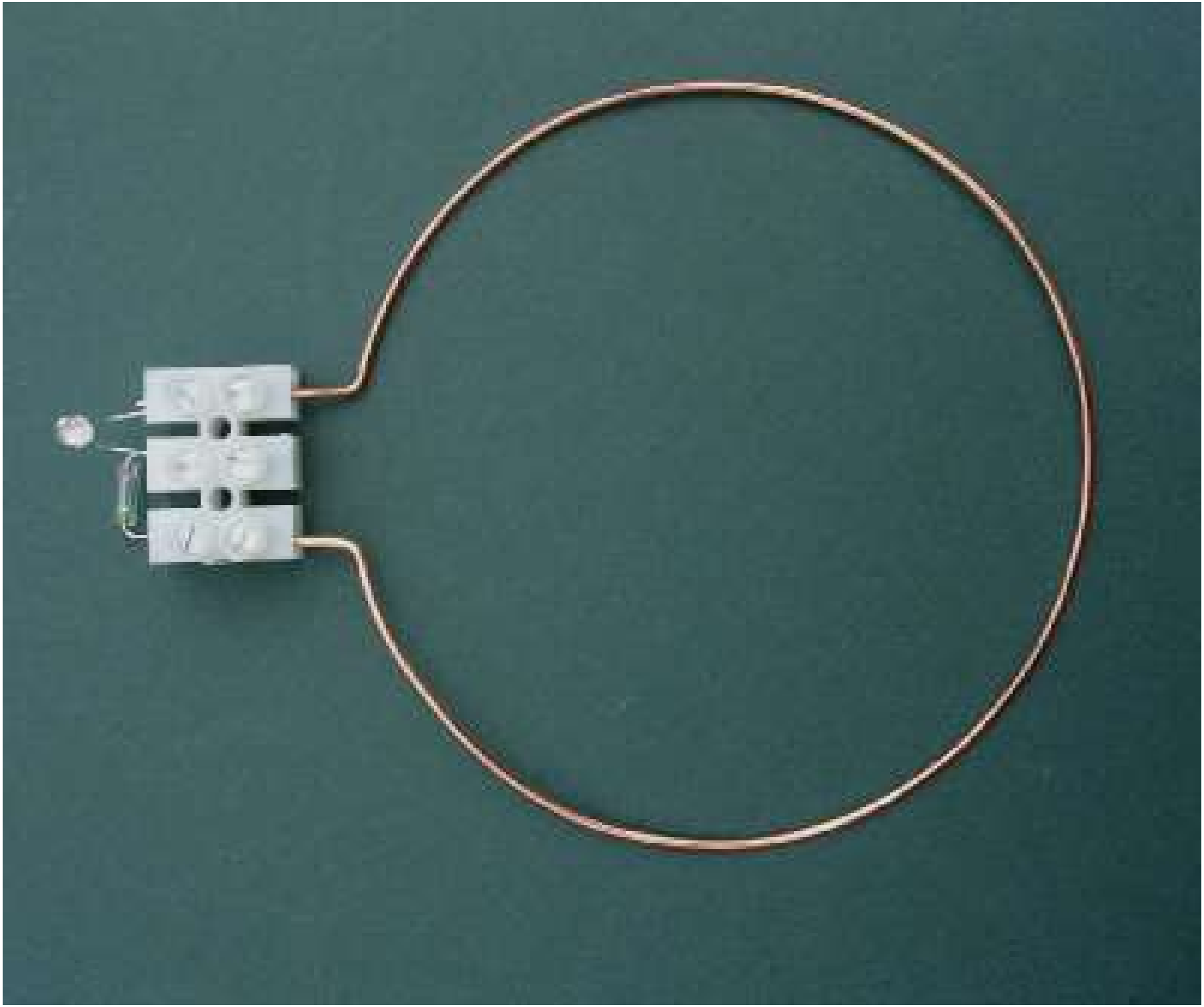
Therefore, the proposed broadband OCFD antenna has obtained high impedance over a wide frequency range. The proposed design is just an example to illustrate the proposed new method. The details of the dipole could be modified according to the frequency of interest.

IV. RECTENNA INTEGRATION

A. Rectifier Configuration

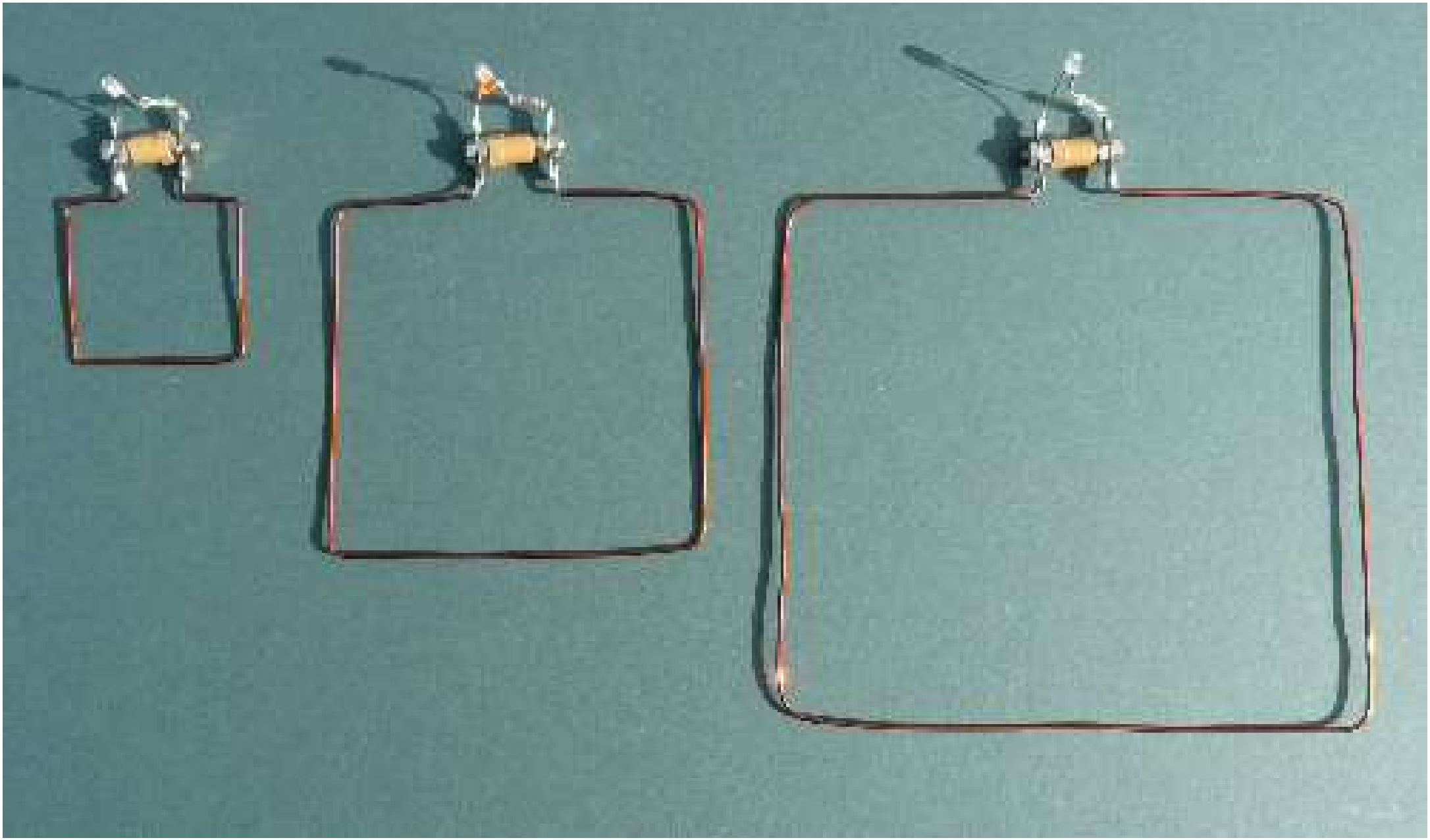
The proposed high impedance OCFD antenna may directly conjugate match with the input impedance of a rectifier over a wide frequency band. The rectifier should only consist of few circuit components for rectification, DC storage and output. A single shunt diode rectifier is selected due to its very simple structure and high conversion efficiency [33]. The configuration of the single shunt diode rectifier with a dipole






Sony Ericsson

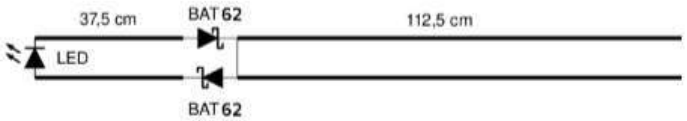






ake and it can be sent in an envelope. I made tens of them and sent them to politicians, newspapers, universities... I gave some to local people, together with a user
later version, that can be rolled up in an envelope that fits the conditions to be sent with only one stamp.



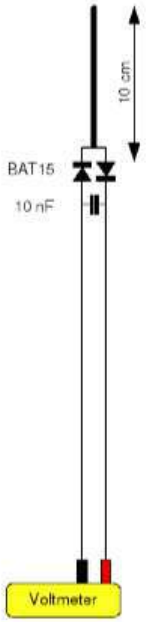


BAT62 detection diodes are no more produced. **BAT15** diodes work fine but they wear out; after a few months they stop functioning. **SMS7630** diodes are great but very little and mechanically fragile. **MMSD701T1G** diodes are sturdy and powerful; an excellent choice for a beginner. Such SMD diodes do also work for cell phone frequencies, which allows to test out a snake with a calling cell phone pushed against it. But any detection diodes that can manage 100 MHz will do.

The LED I'm currently using is the **L-7113SEC-H** . It lights up with a low tension and a very low current (the bluer a LED, the more tension it needs). Its color is red yet close to orange hence it is easily seen by the human eye (the eye is most sensitive to green, yellow and orange). The beam is quite narrow so when the LED is directed towards somebody's eyes it will appear quite bright.

For the lengths of 37.5 and 112.5 centimeters, any electric wire with two copper conductors will do. Audio signal wire is a practical solution. Use the shielding as one of the two conductors. The lengths of the two segments must not be precise. What matters is that the total length of the snake be 1.5 meters. Do not hesitate to try out if a little longer or shorter snake gives better results.

A schematic of my current probes, that I connect to a standard multimeter, measuring Volts DC. The measure displayed by the multimeter must be multiplied by 10. When using a 200.0 mV scale, just read while forgetting the dot:



Lead Free Status	Lead Free
RoHS Status	RoHS Compliant



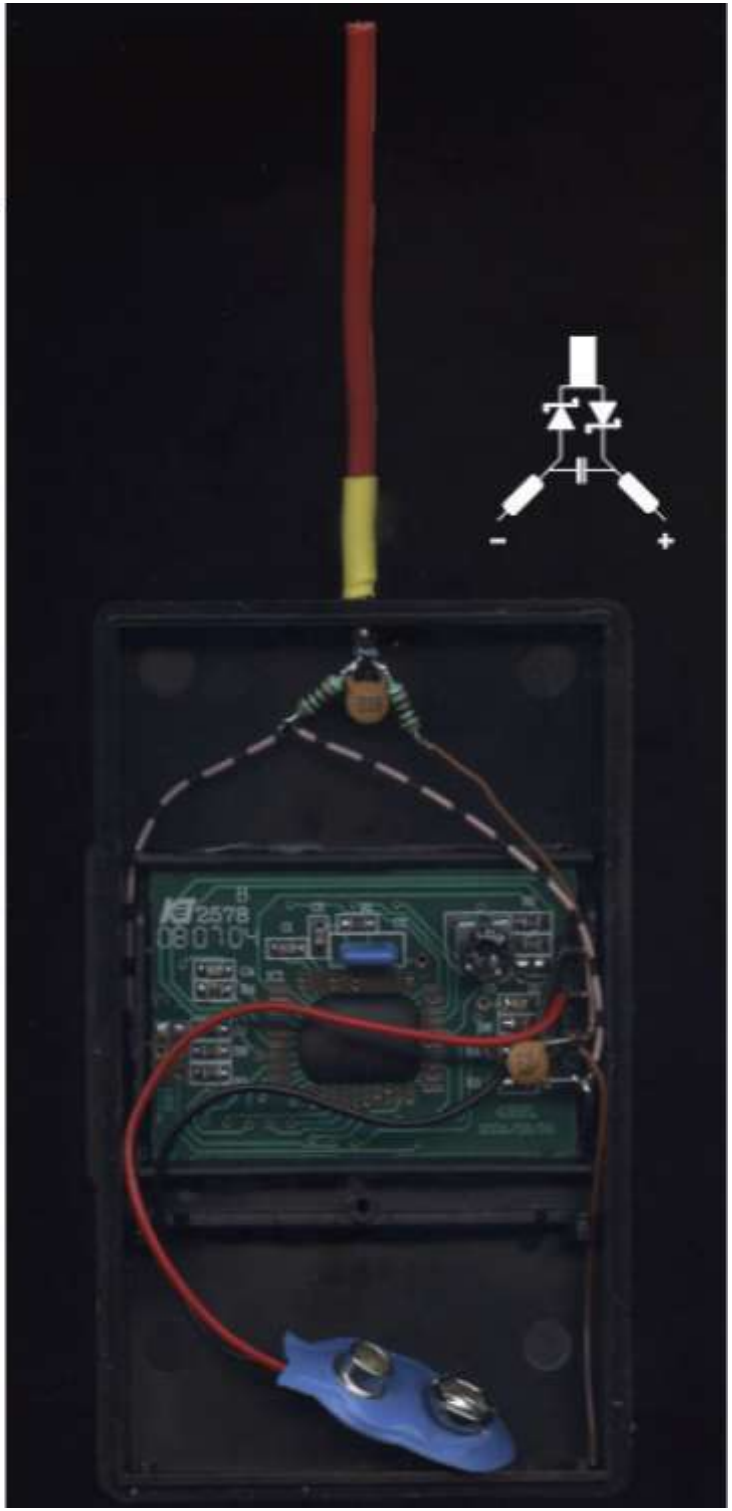
Features, Applications

The MMSD301T1, and MMSD701T1 devices are spin-offs of our popular MMBD301LT1, and MMBD701LT1 SOT-23 devices. They are designed for high-efficiency UHF and VHF detector applications. Readily available to many other fast switching RF and digital applications.

Extremely Low Minority Carrier Lifetime Very Low Capacitance Low Reverse Leakage AEC Qualified and PPAP Capable S Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant*

XXX G = Specific Device Code SMMSD701T1G = Date Code = Pb-Free Package
Rating Reverse Voltage MMSD701T1G, SMMSD701T1G Forward Current (DC) Continous Forward Power Dissipation = 25C Junction Temperature Storage Temperature Range Symbol VR Value to +150 Unit Vdc M G

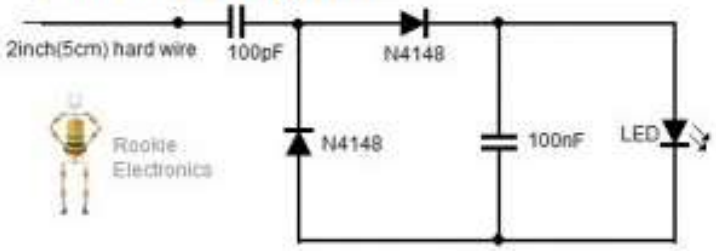

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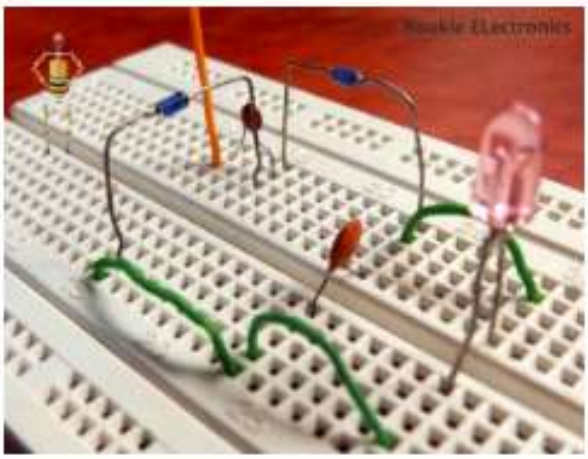
Parts Required:

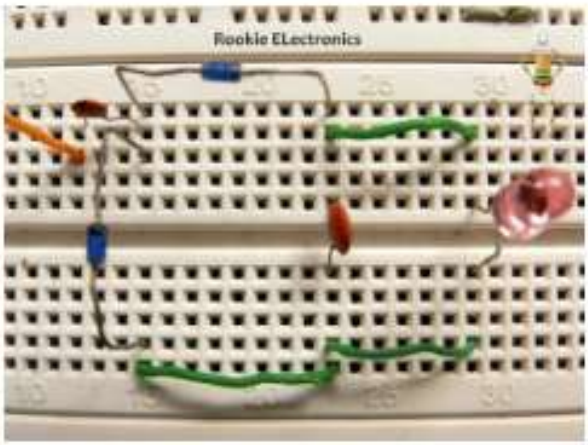
1. 100nF & 100pF
2. n4148 Diode x(2)
3. A bright good quality LED

Circuit Diagram:

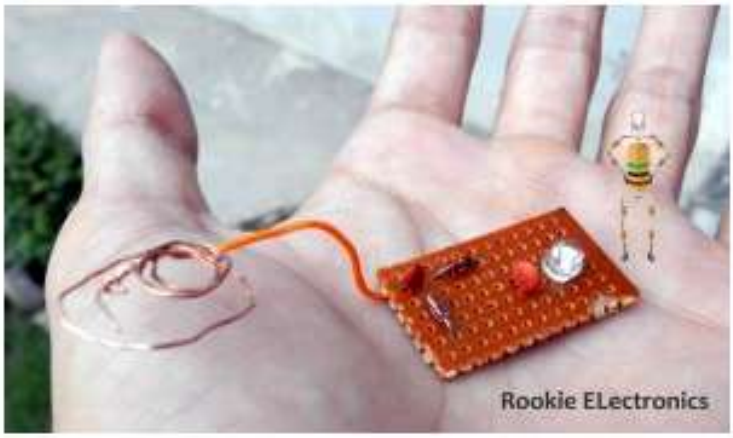


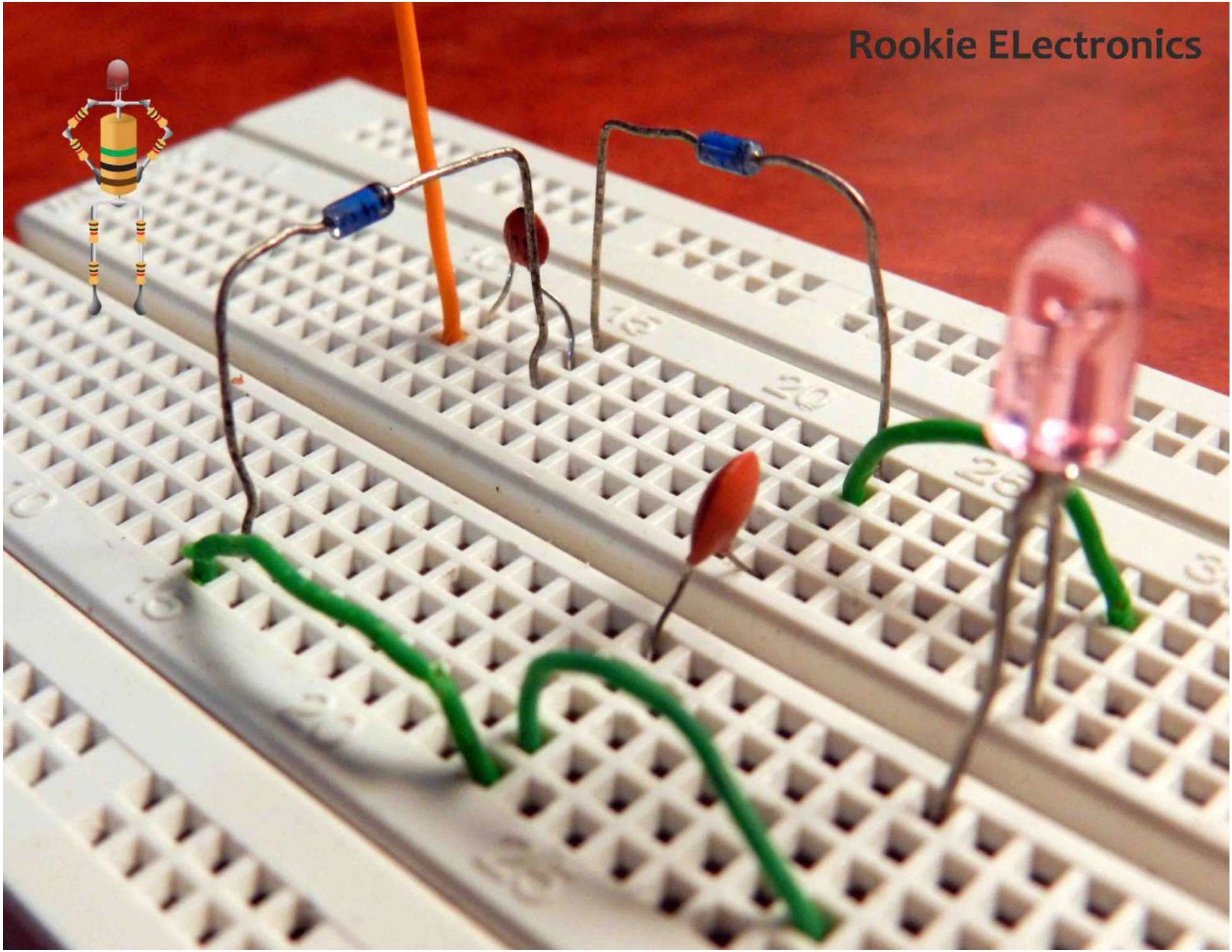
Bread board Arrangement:

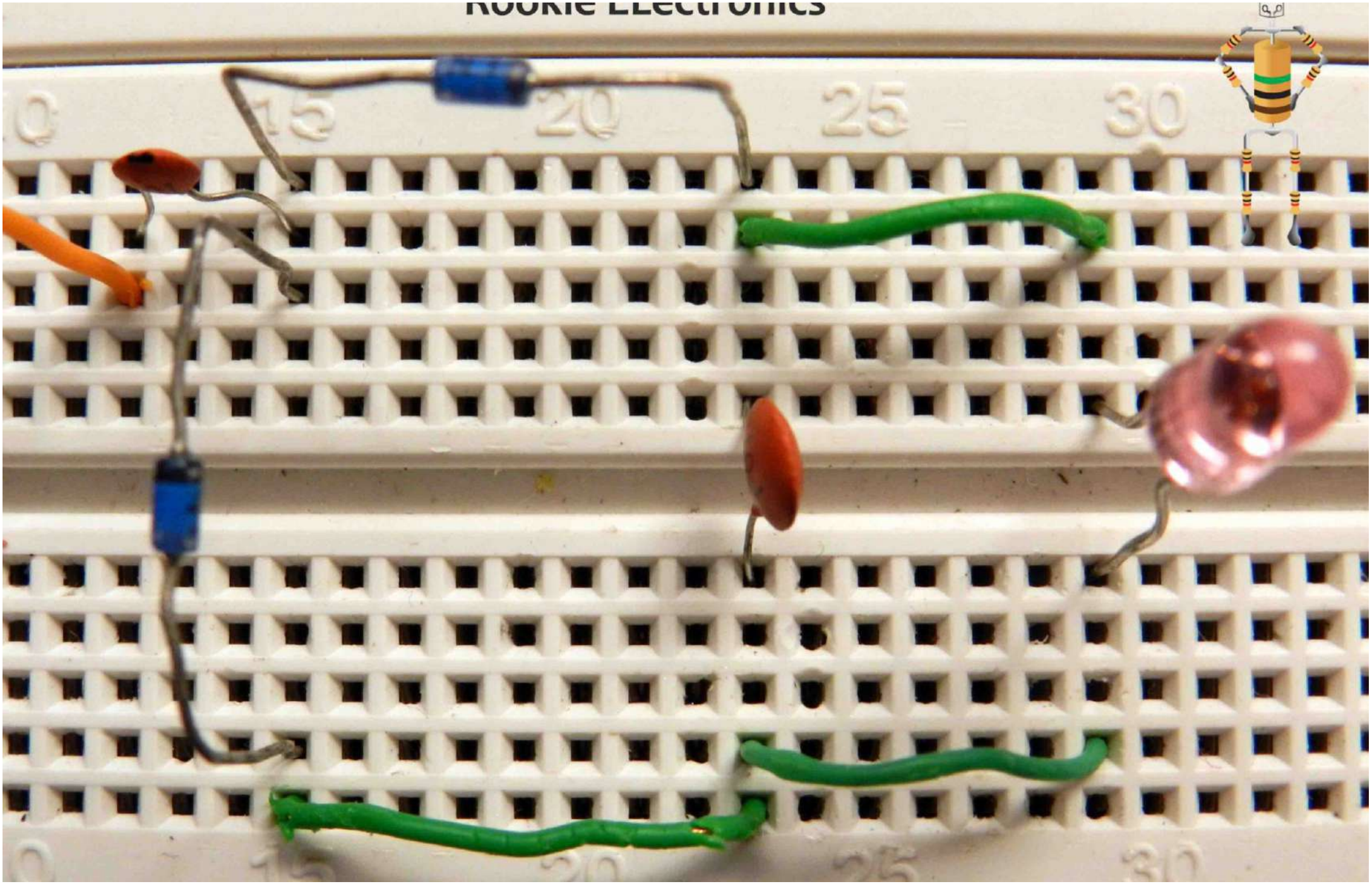


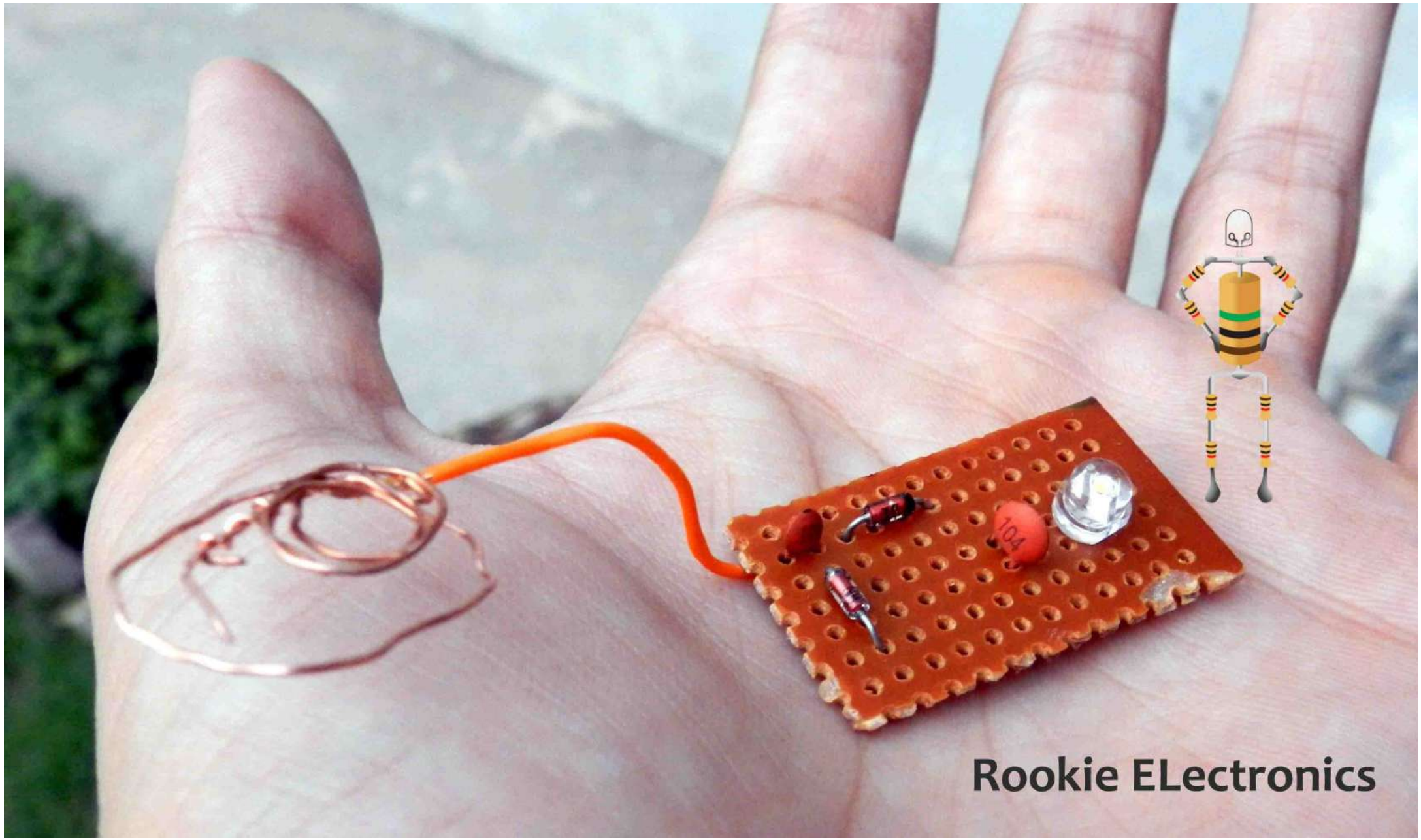


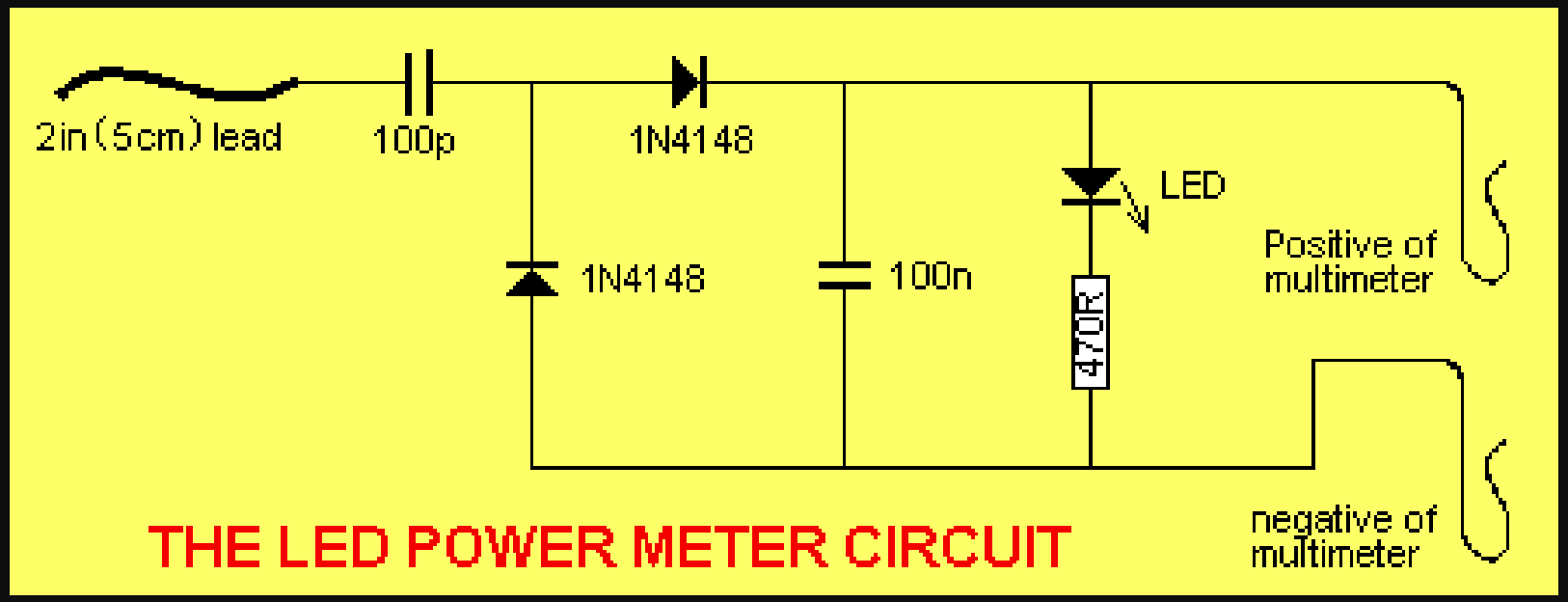
Strip Board:

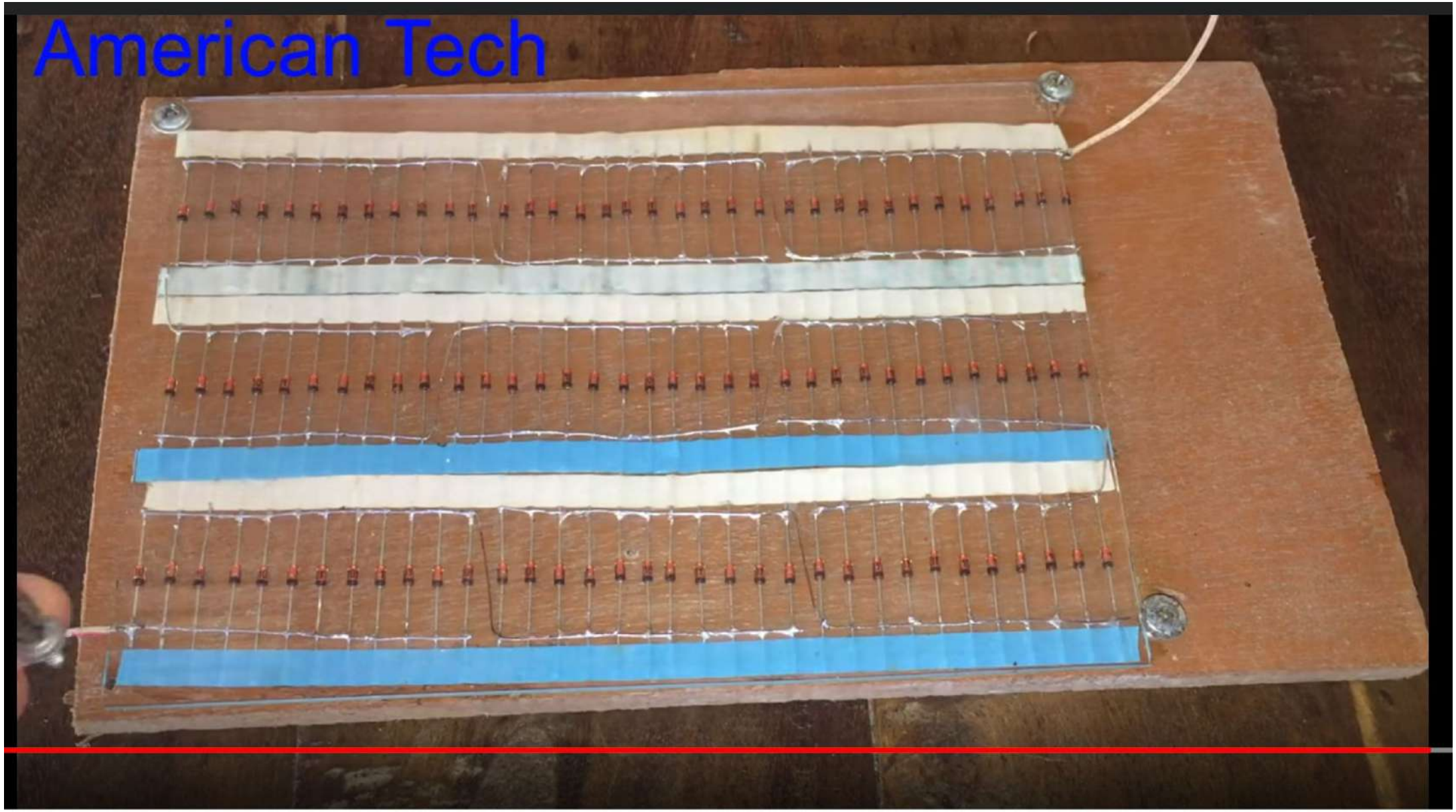


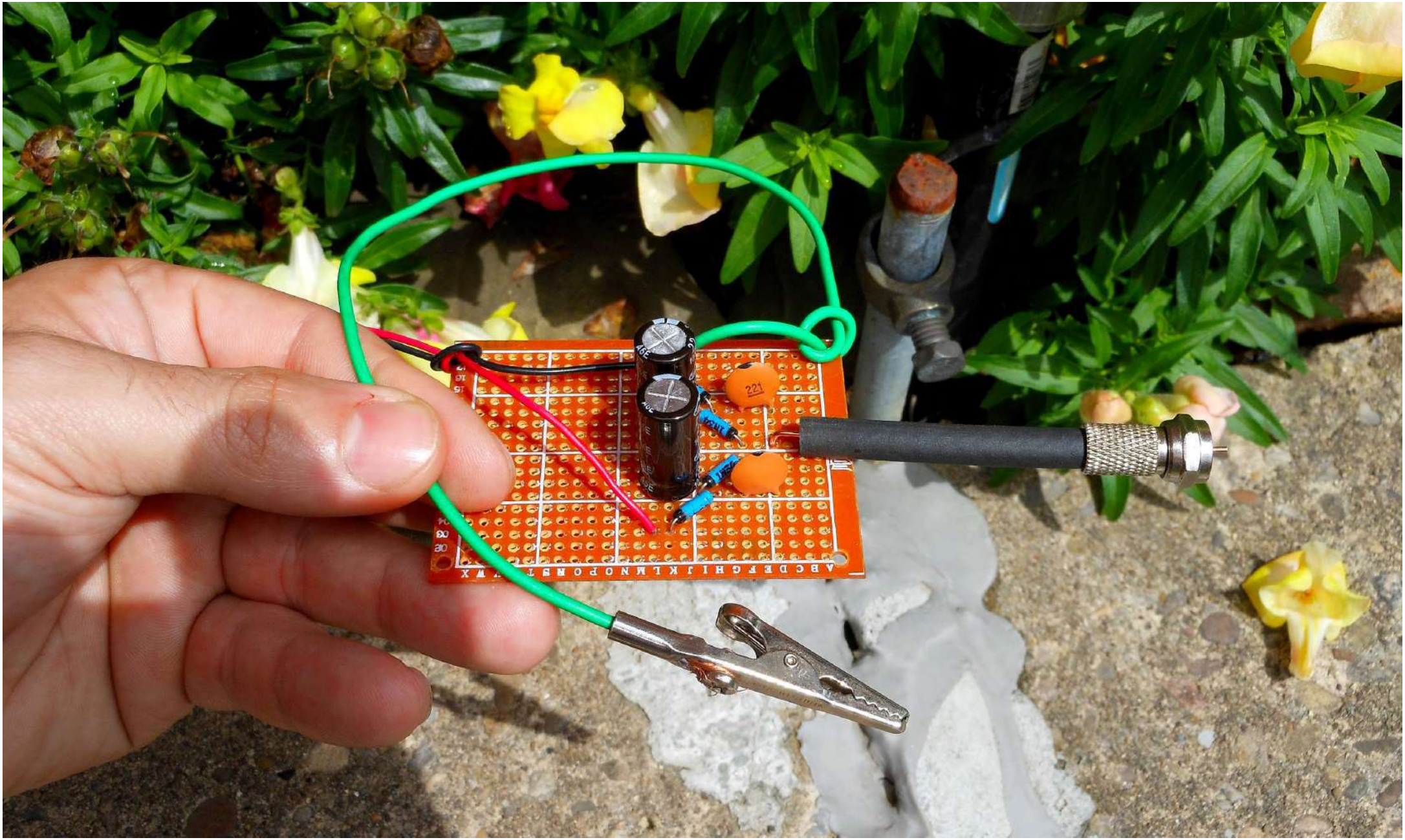

Rookie ELectronics

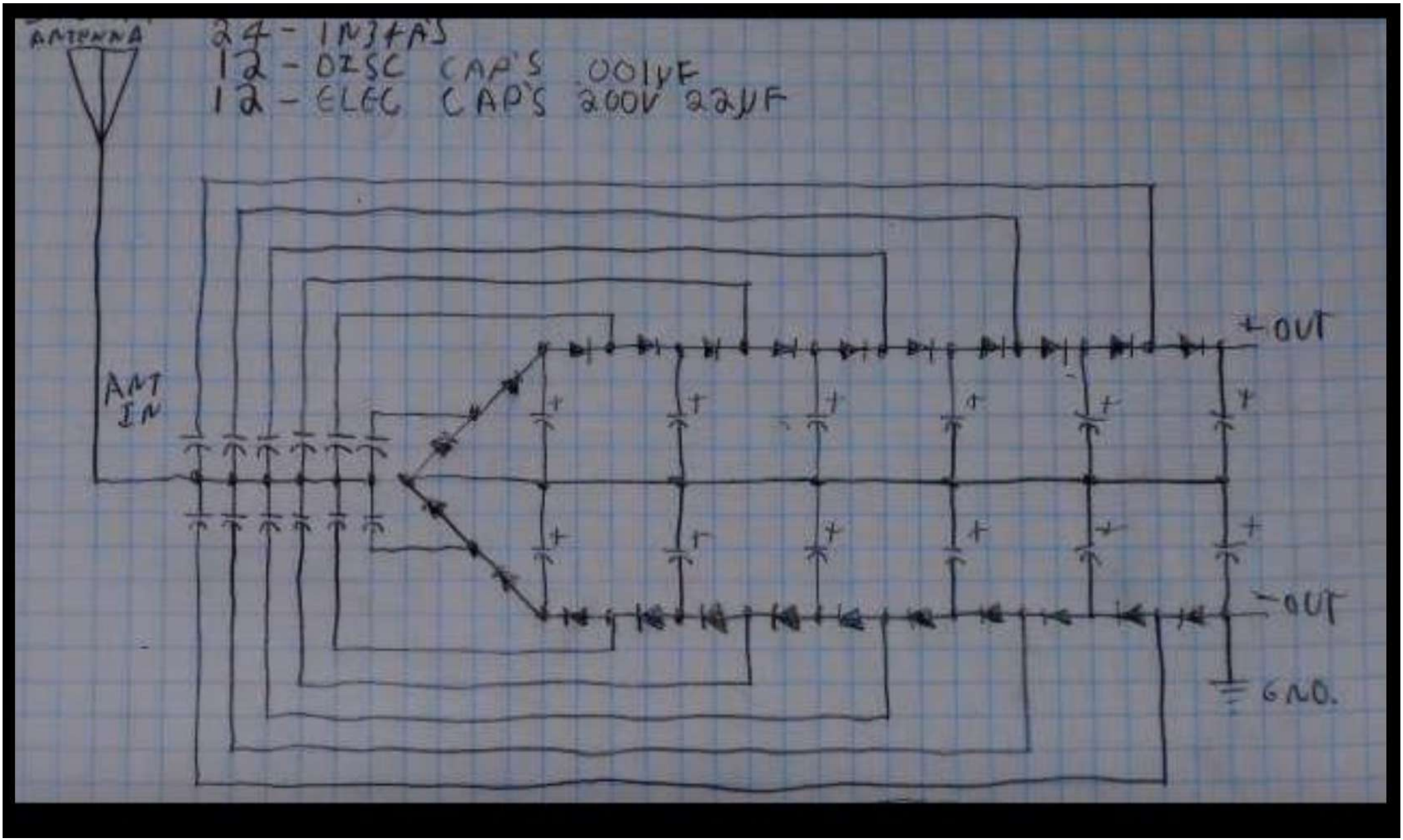

Rookie Electronics
0
15
20
25
30

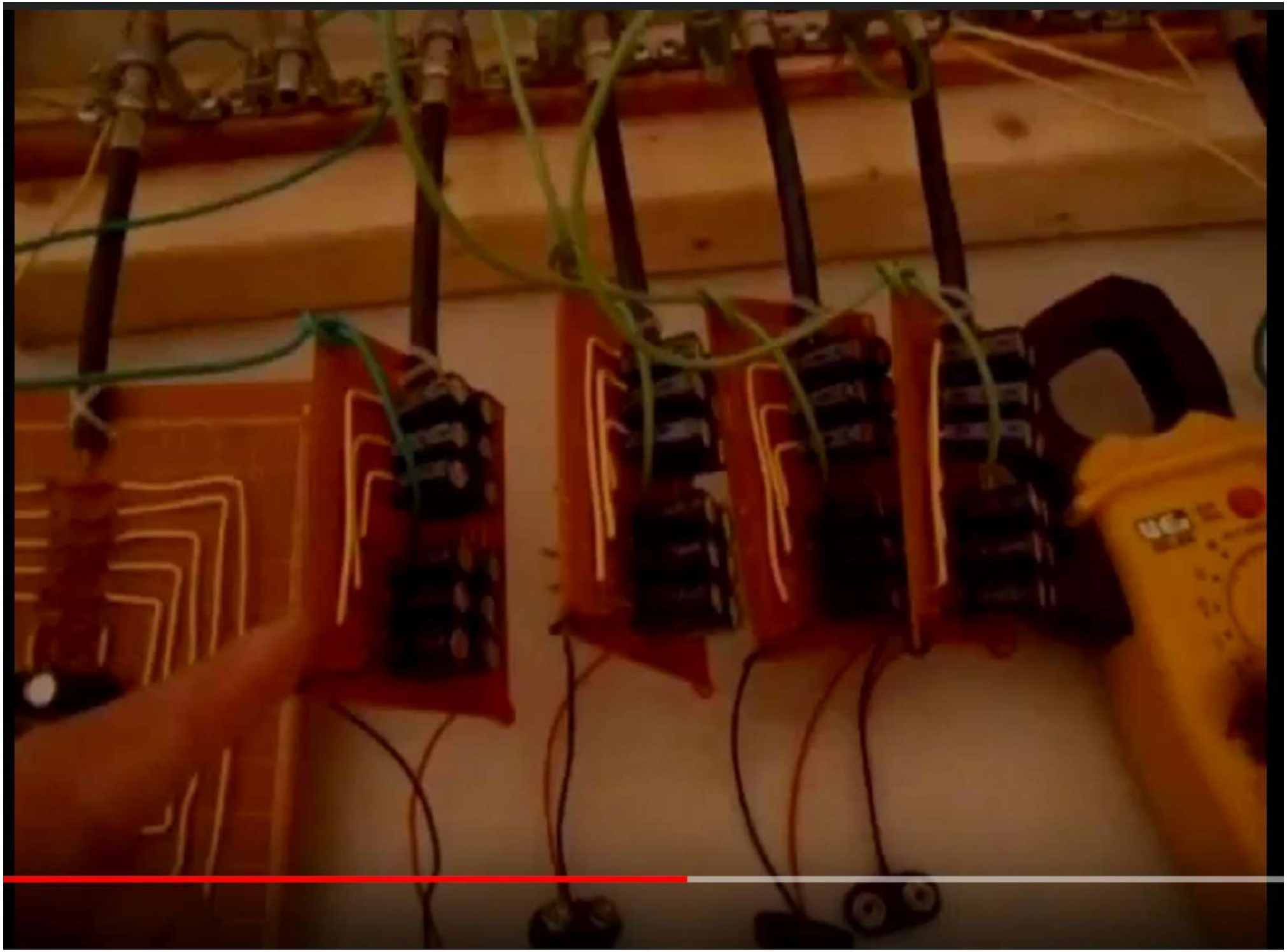

104
Rookie ELectronics

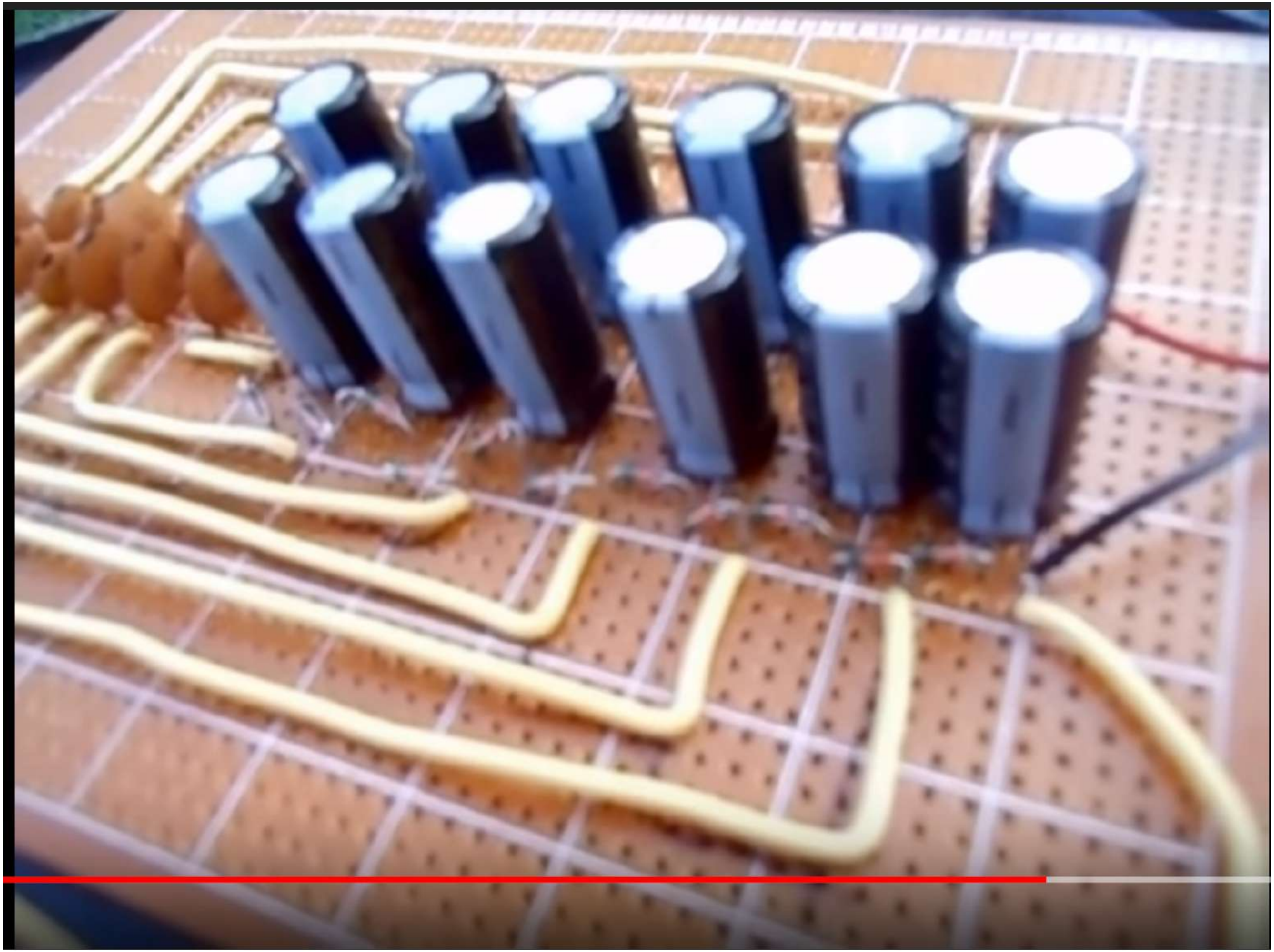

2in (5cm) lead
100p
1N4148
LED
1N4148
100n
470R
Positive of multimeter
negative of multimeter
THE LED POWER METER CIRCUIT

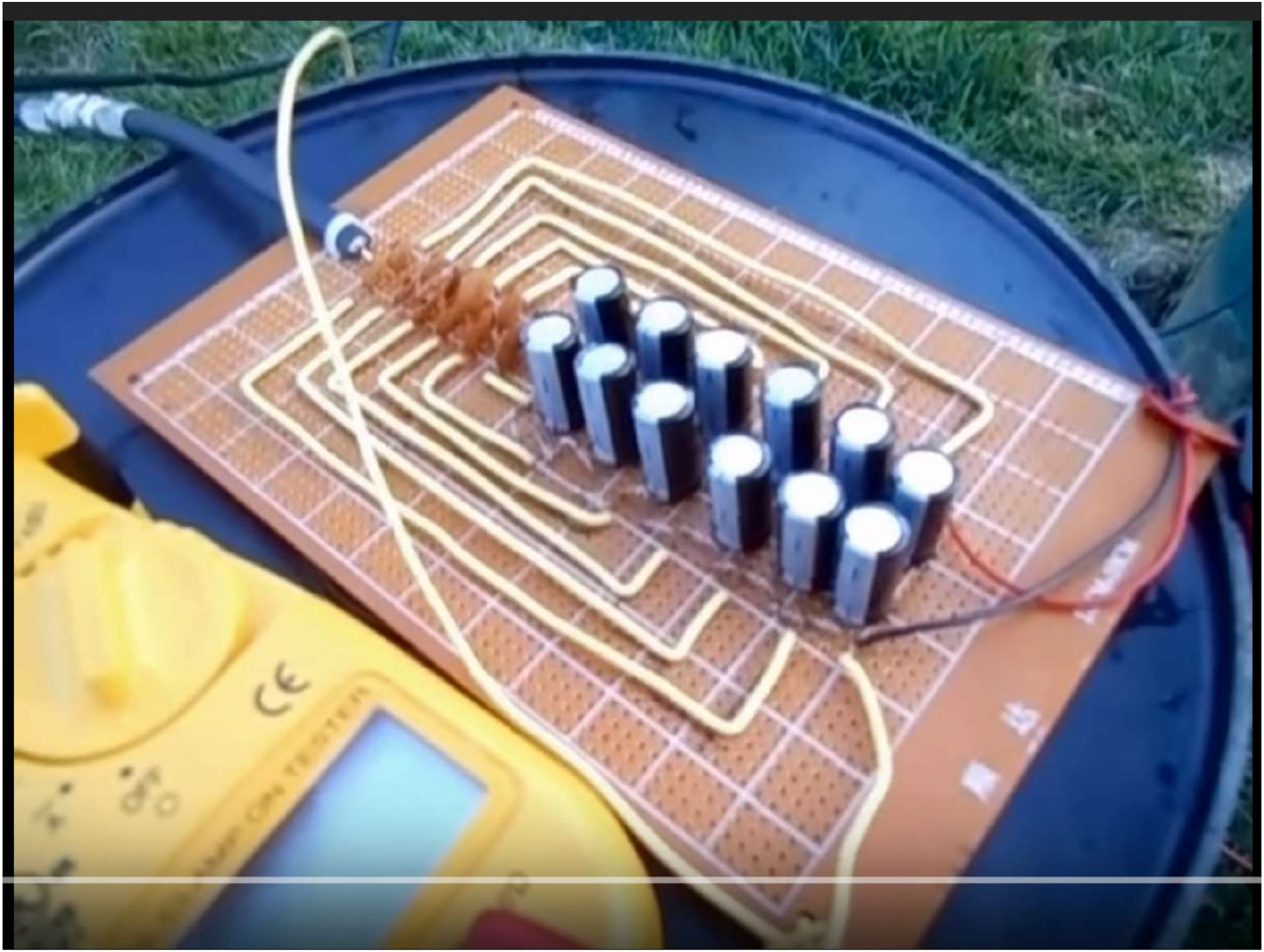

American Tech

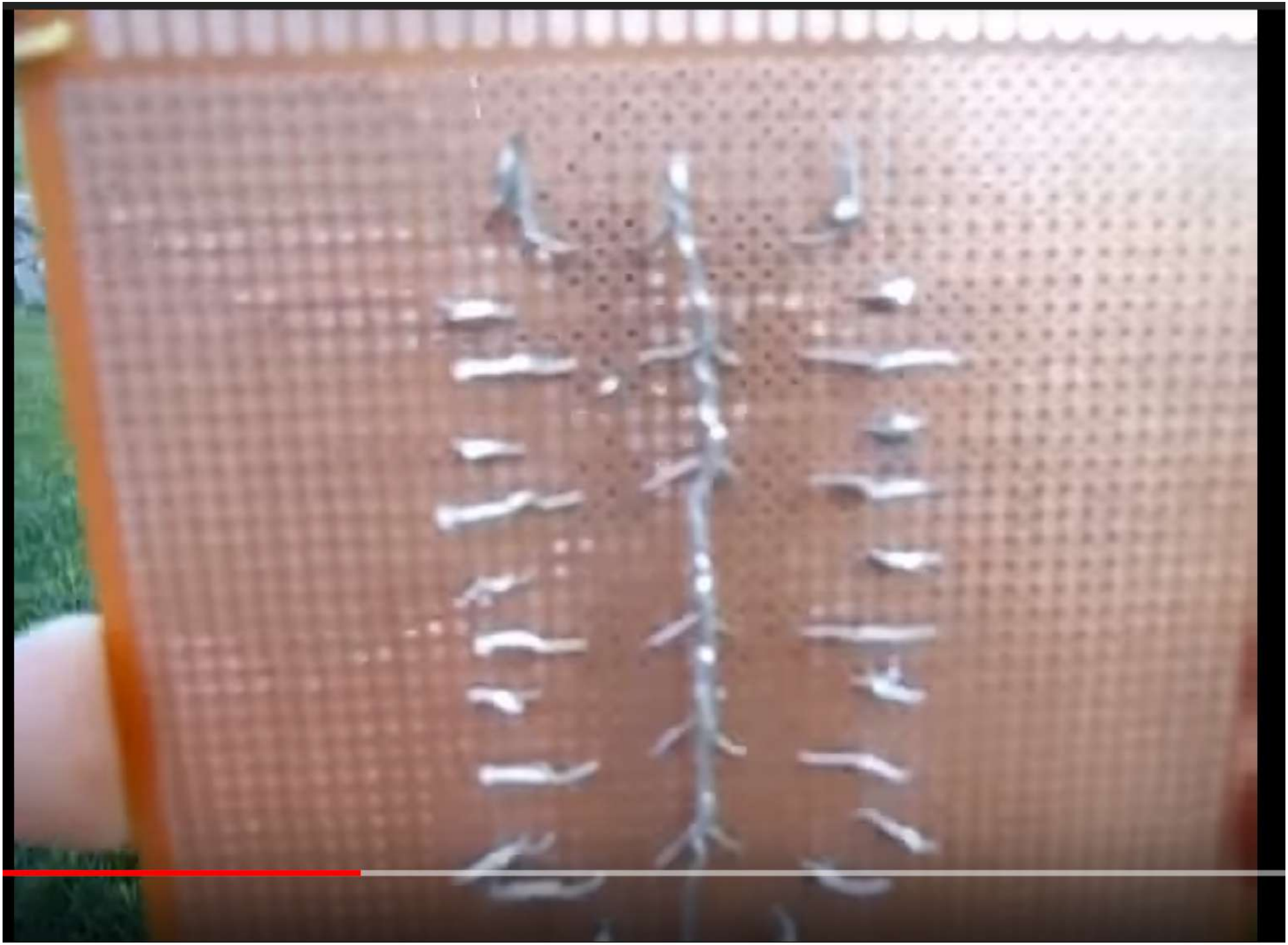

221


ANTENNA
24 - 1N34A'S
12 - DISC CAP'S .001μF
12 - ELEC CAP'S 200V 22μF
ANT IN
+ OUT
- OUT
GND.

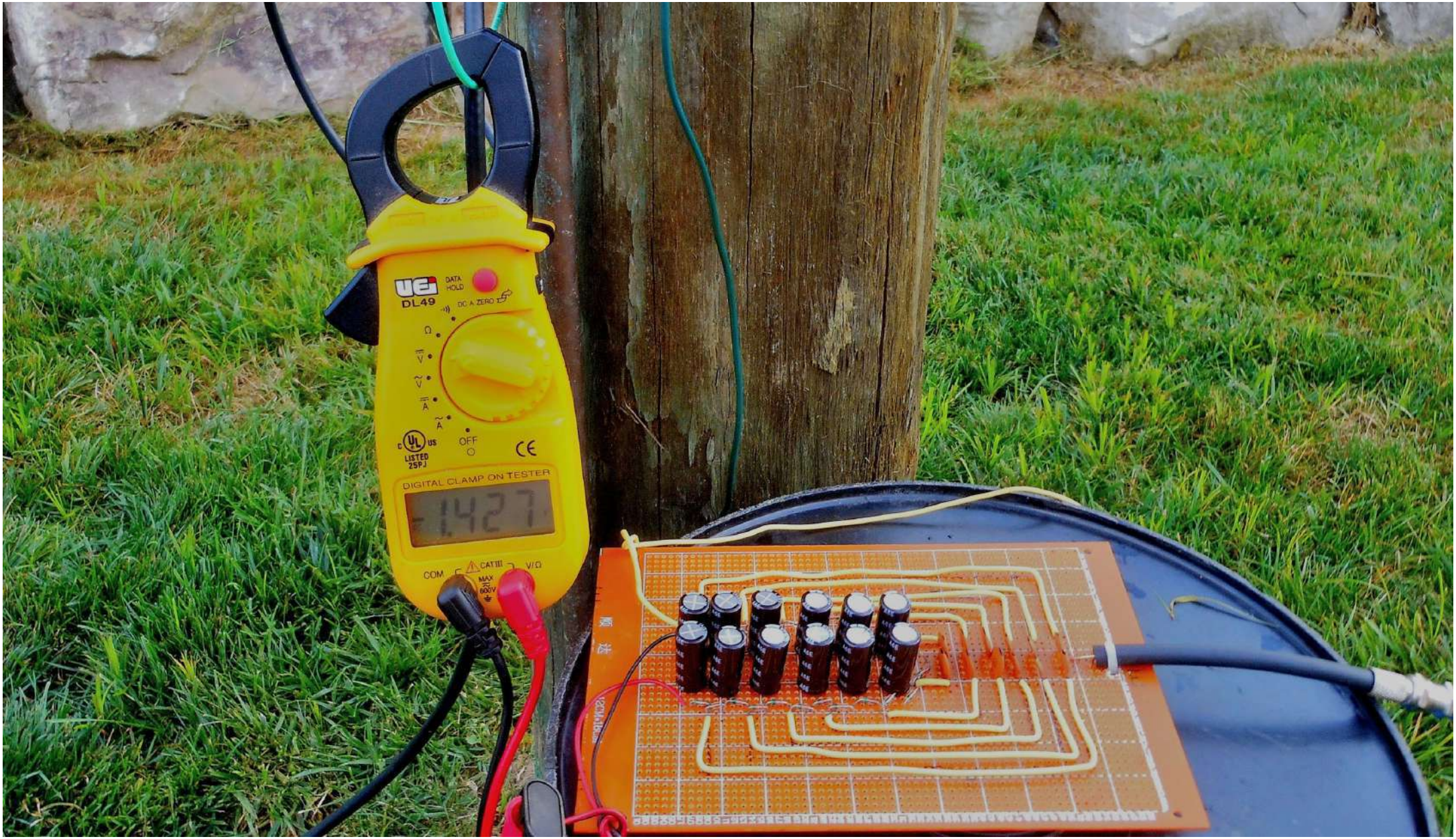


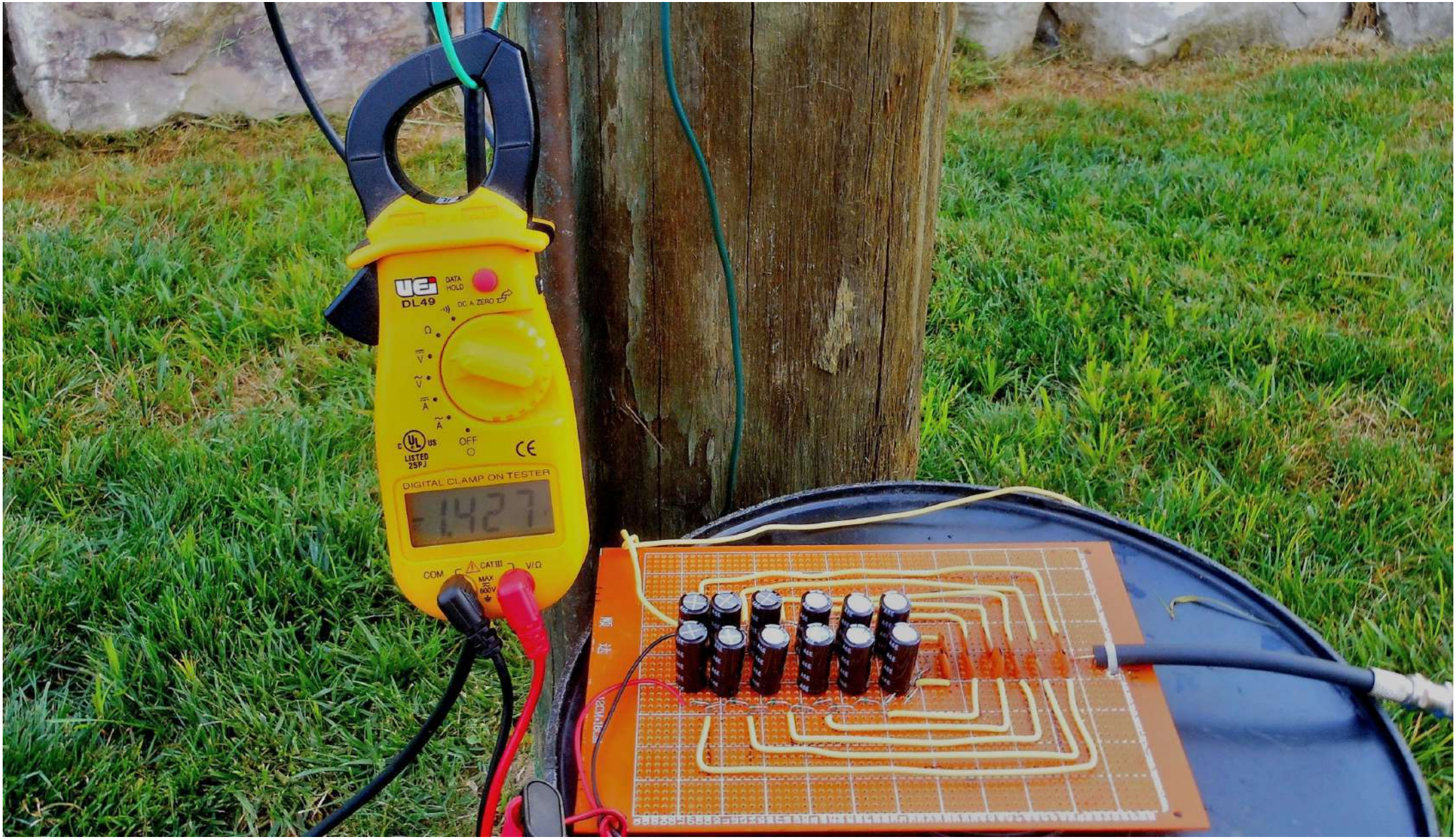


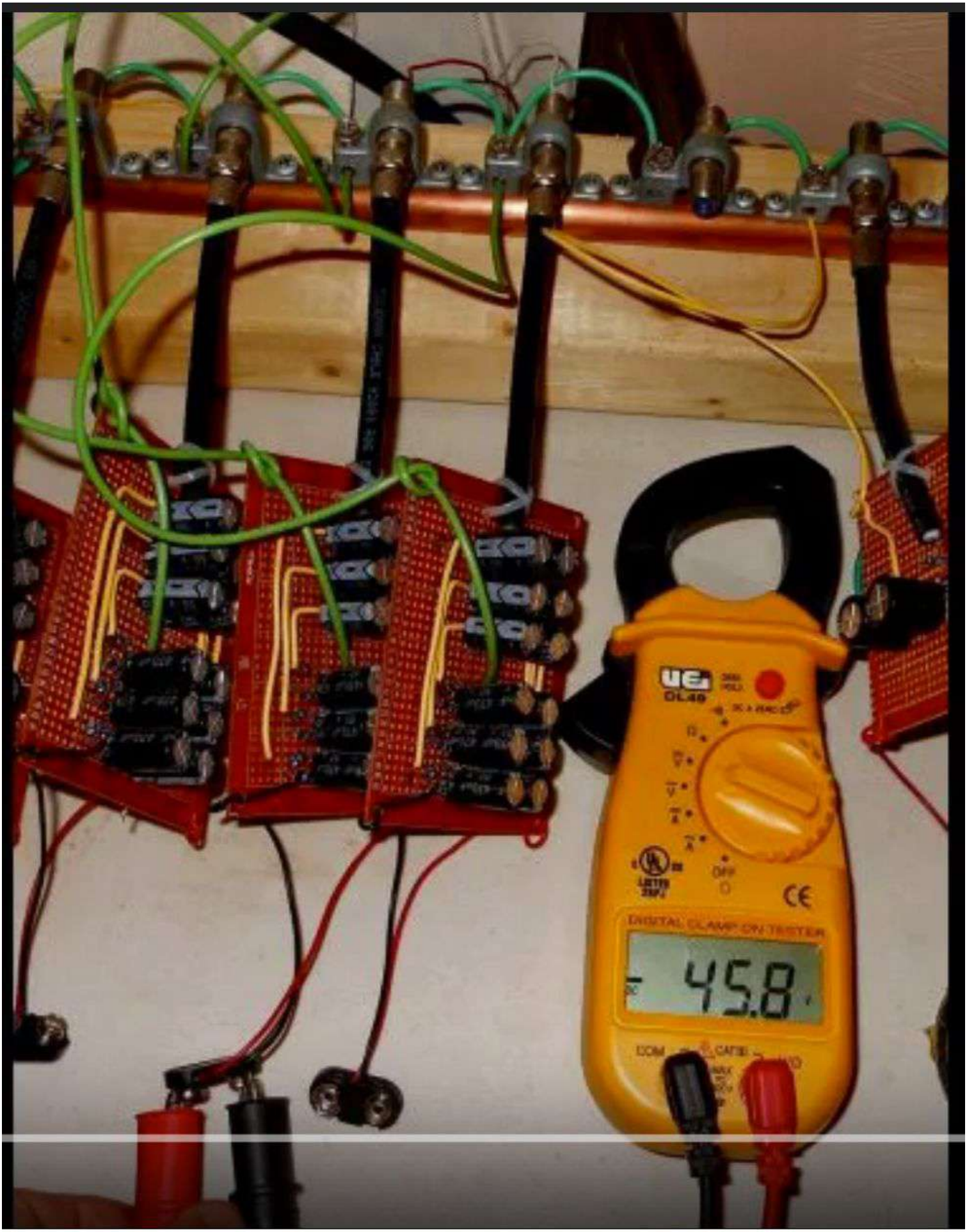


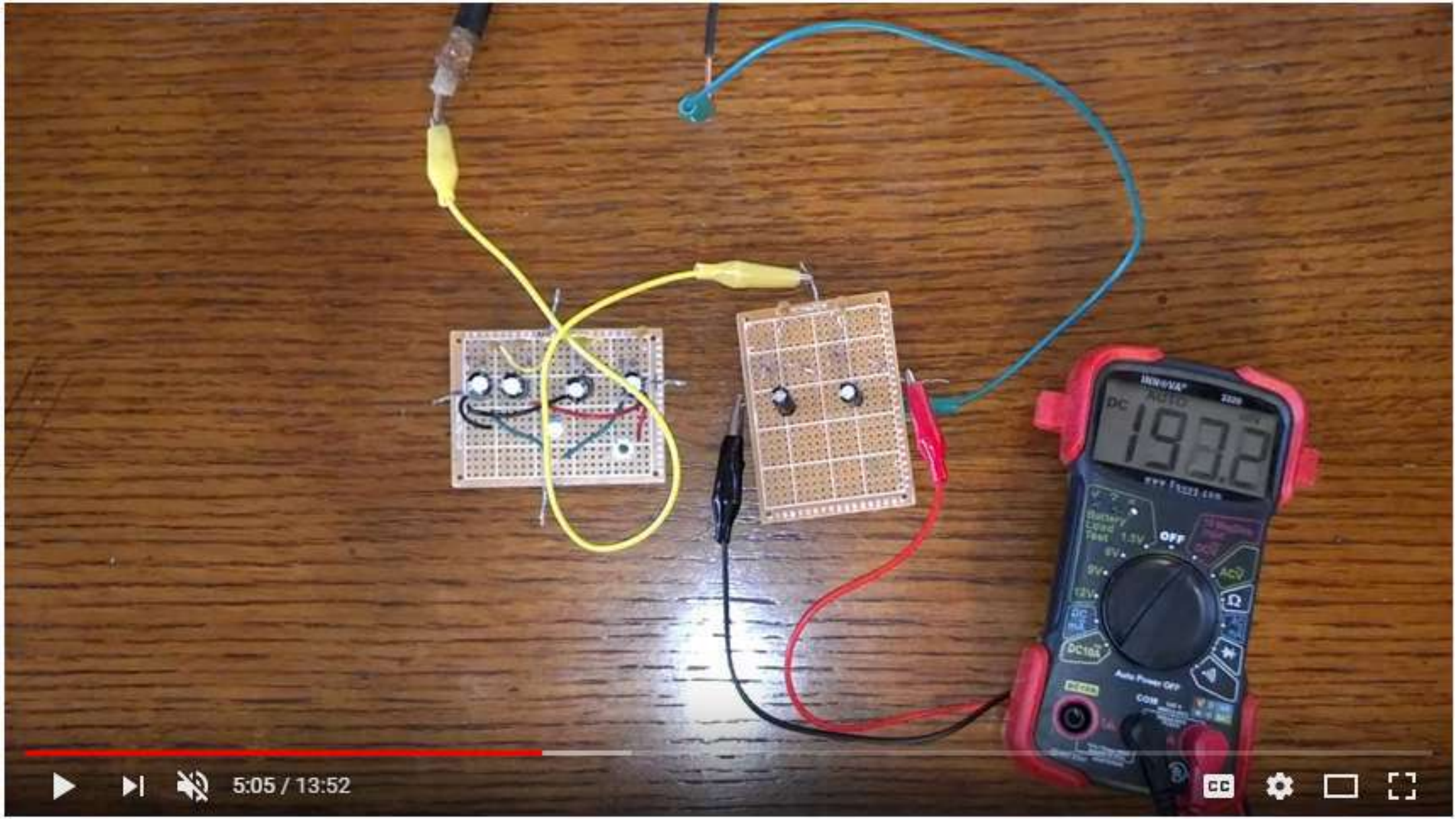




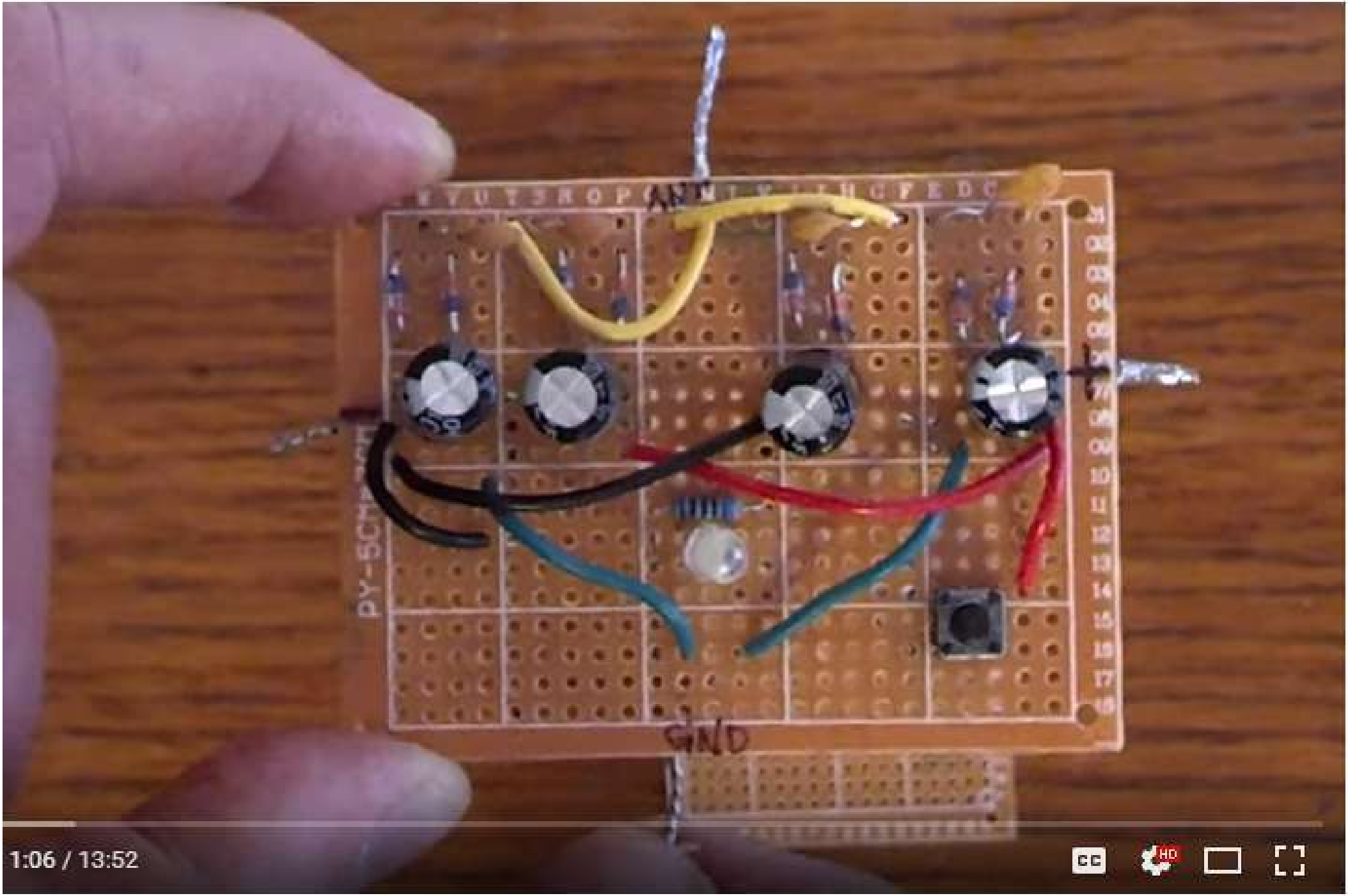

DL49
DATA HOLD
DC A ZERO
OFF
DIGITAL CLAMP ON TESTER
1.427
COM
CAT III
V/Ω

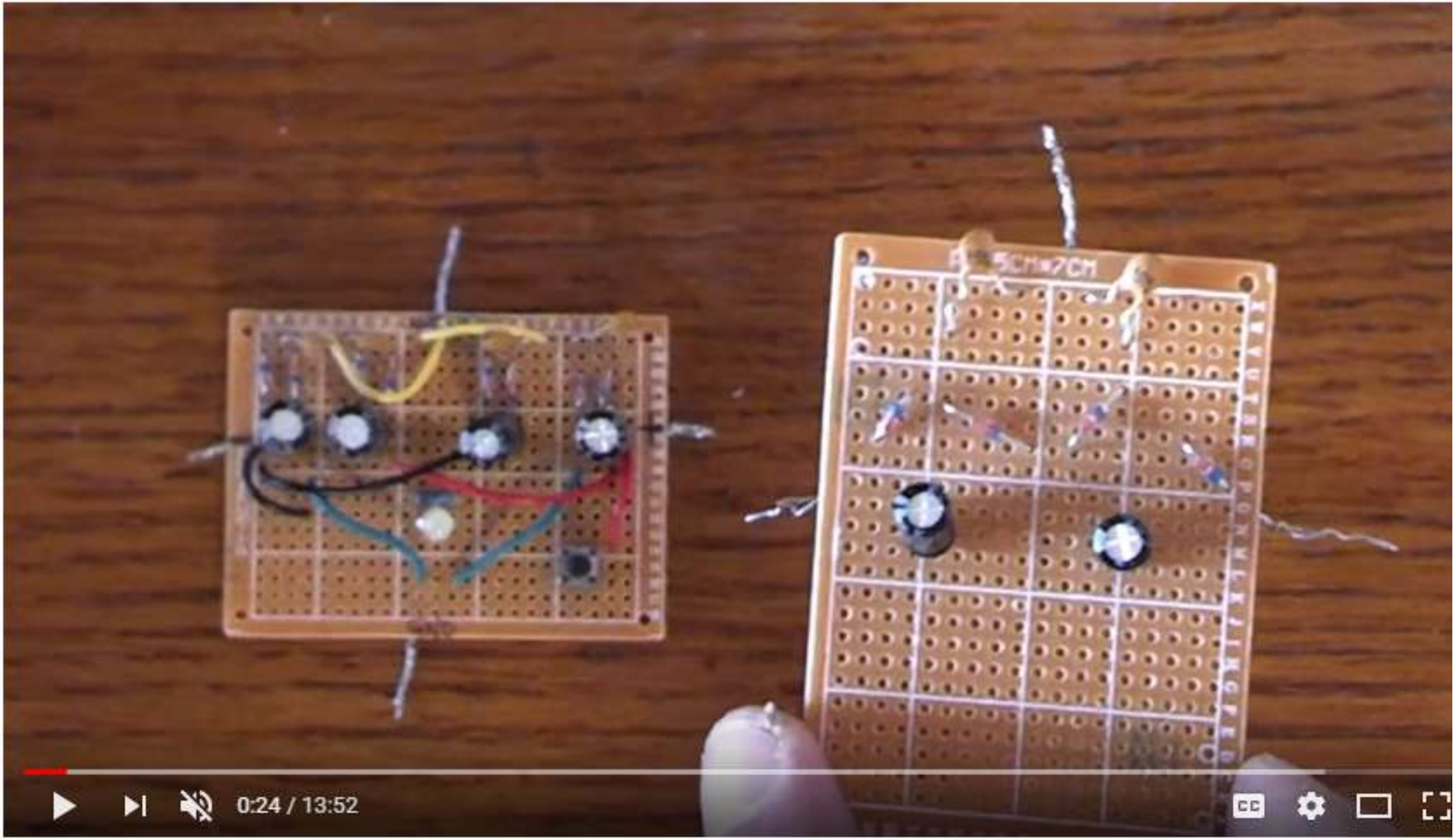

DL49
DATA HOLD
DC A ZERO
OFF
DIGITAL CLAMP ON TESTER
1.427
COM
CAT III
V/Ω


DIGITAL CLAMP ON TESTER
45.8

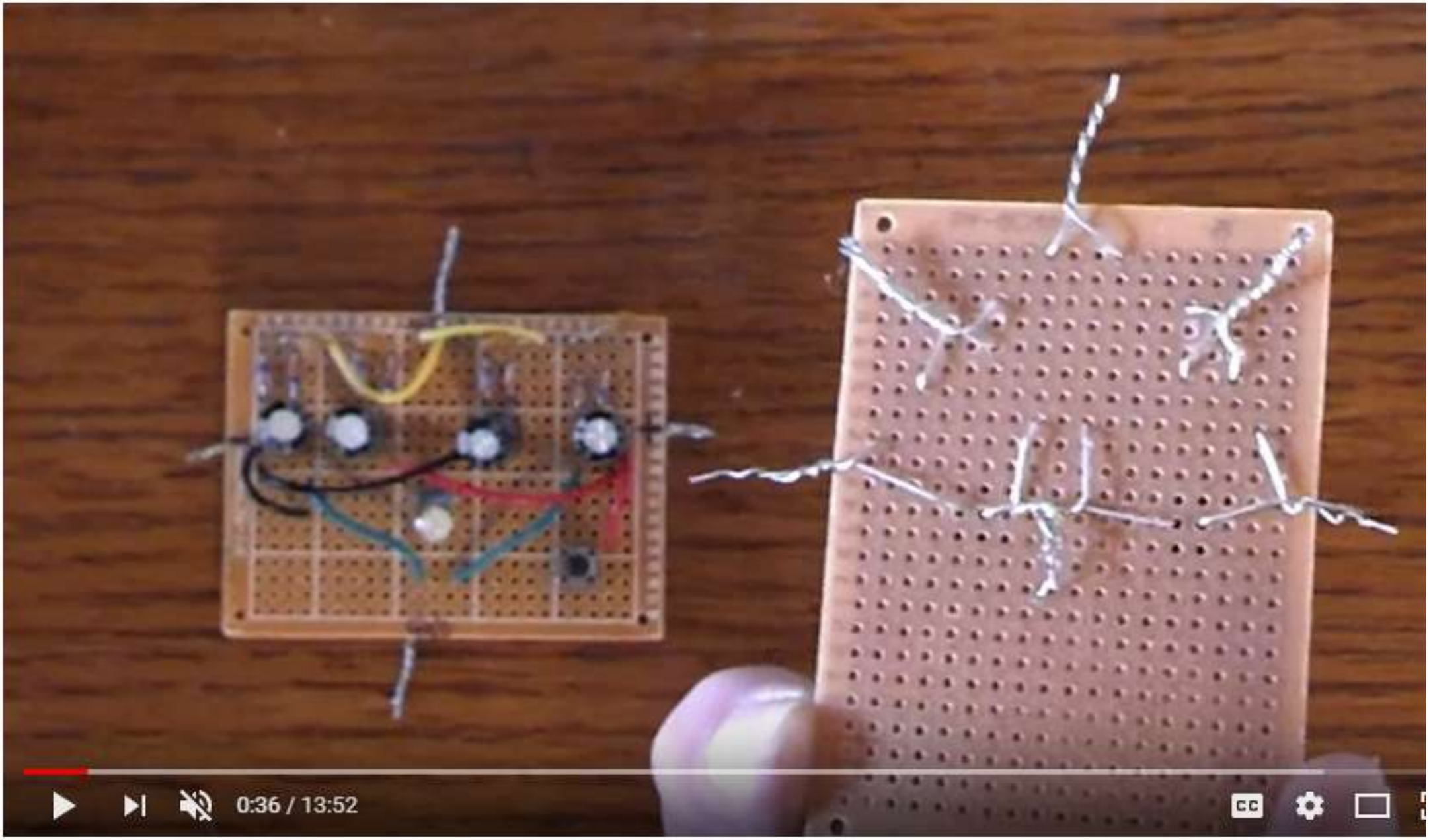


Tesla Free Energy Air Circuit

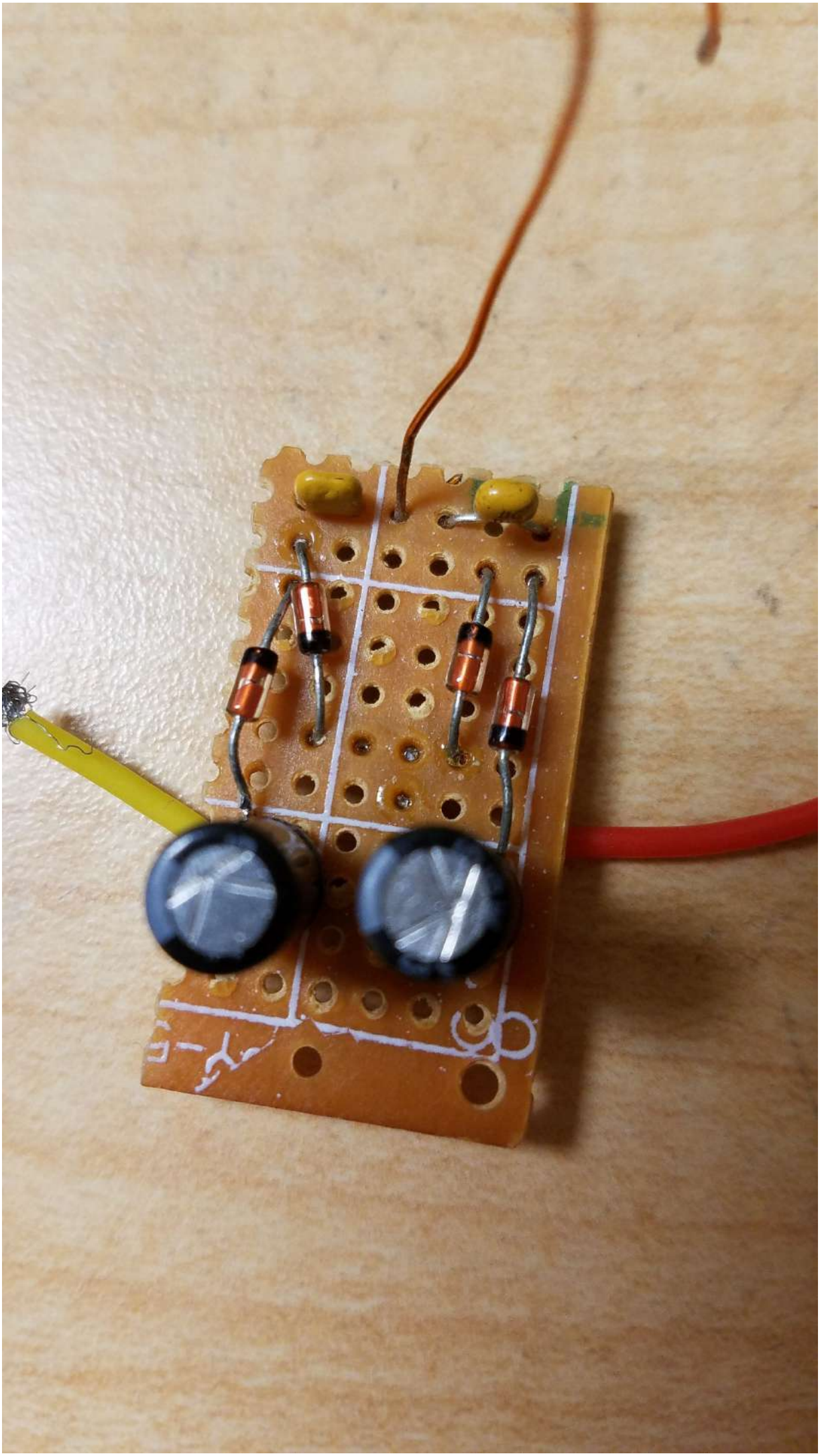

GND
1:06 / 13:52

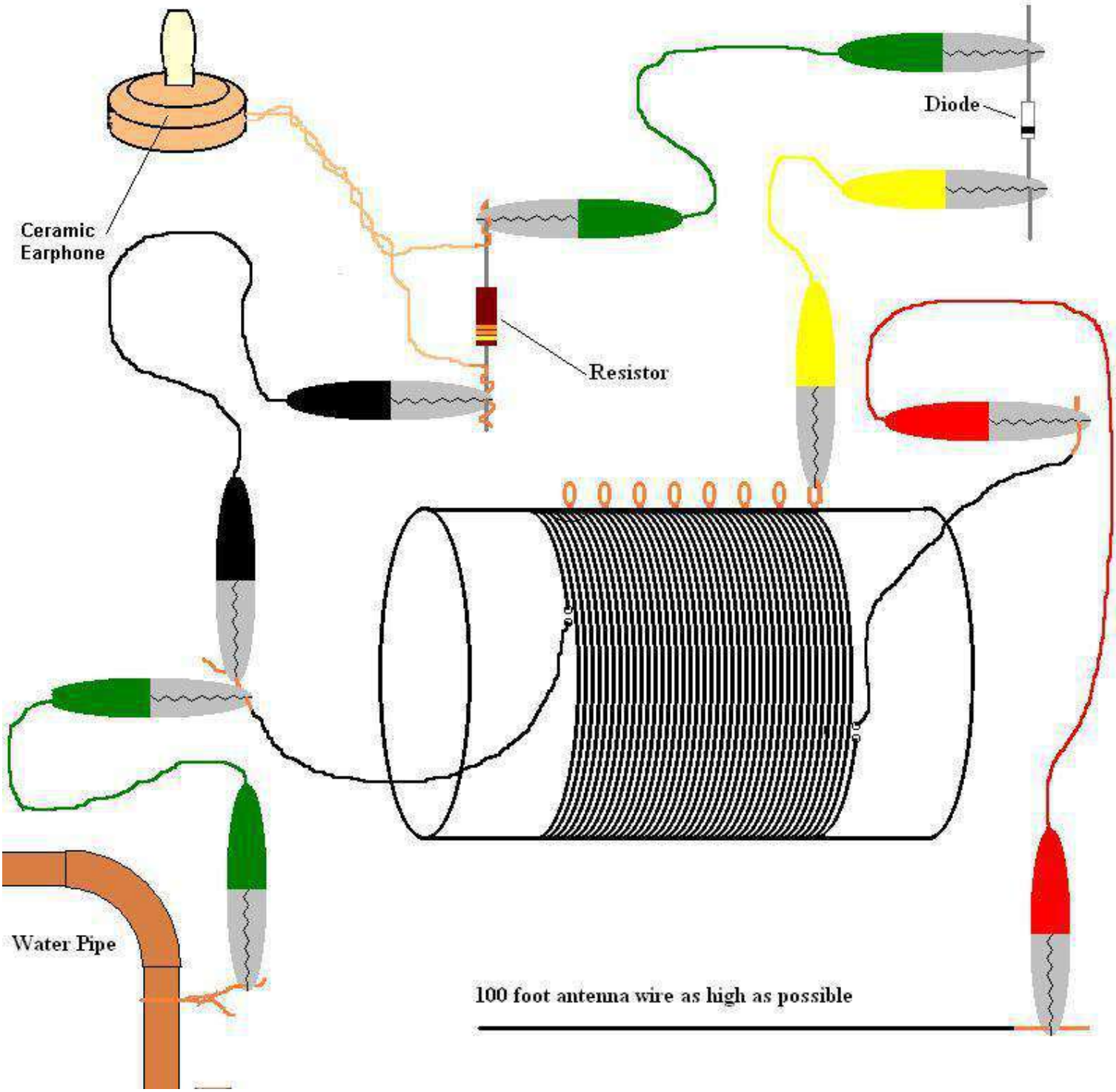


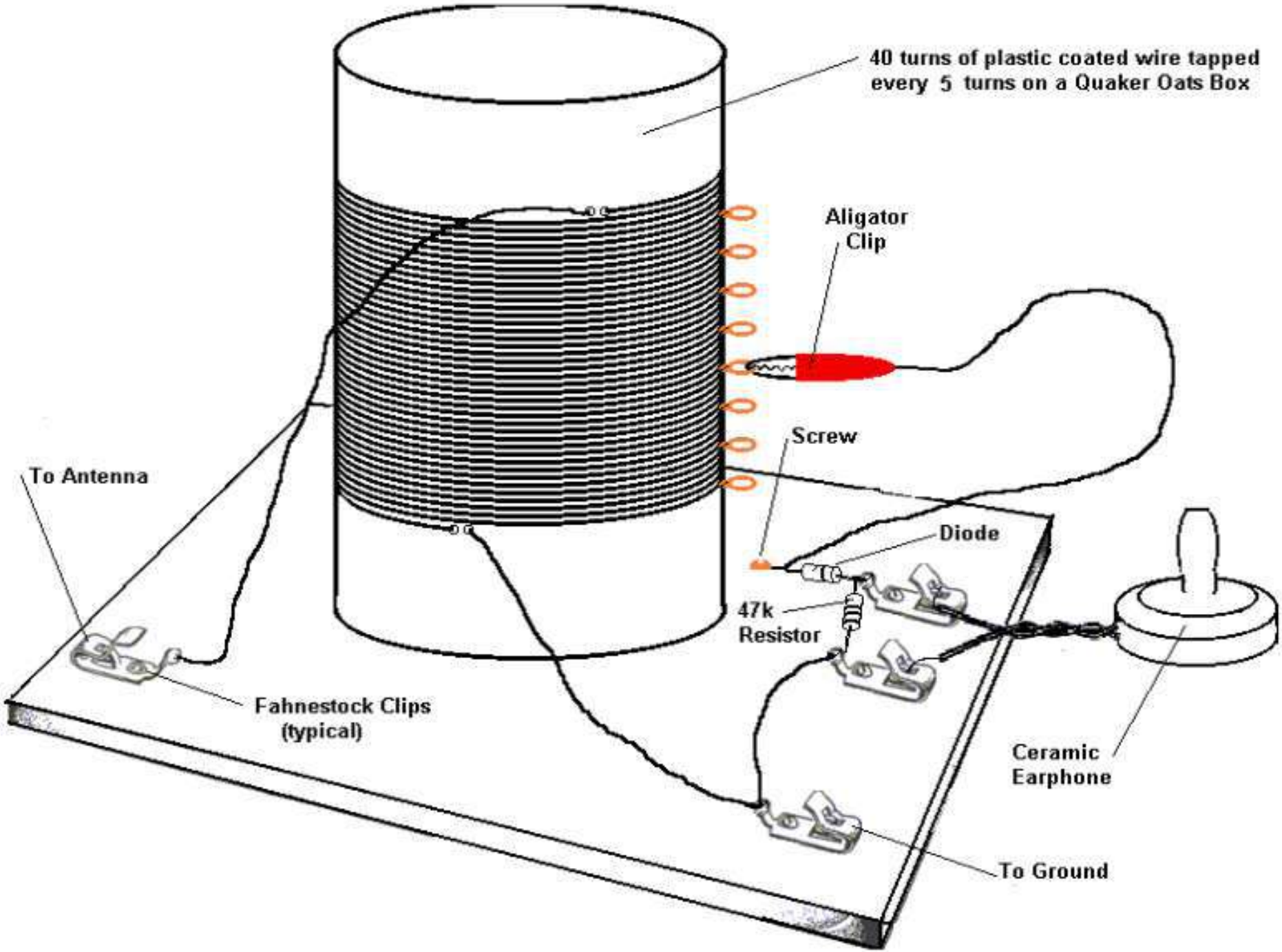
Tesla Free Energy Air Circuit

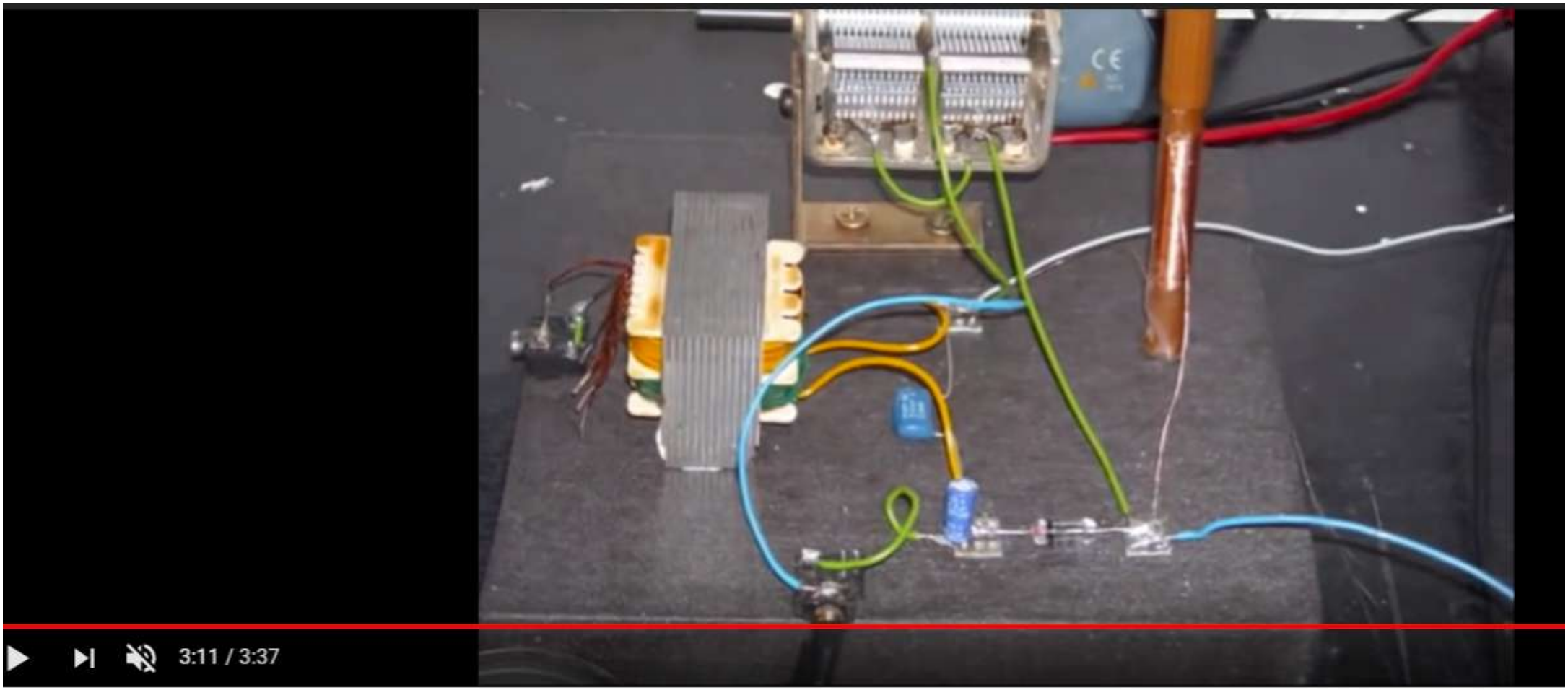


Tesla Free Energy Air Circuit



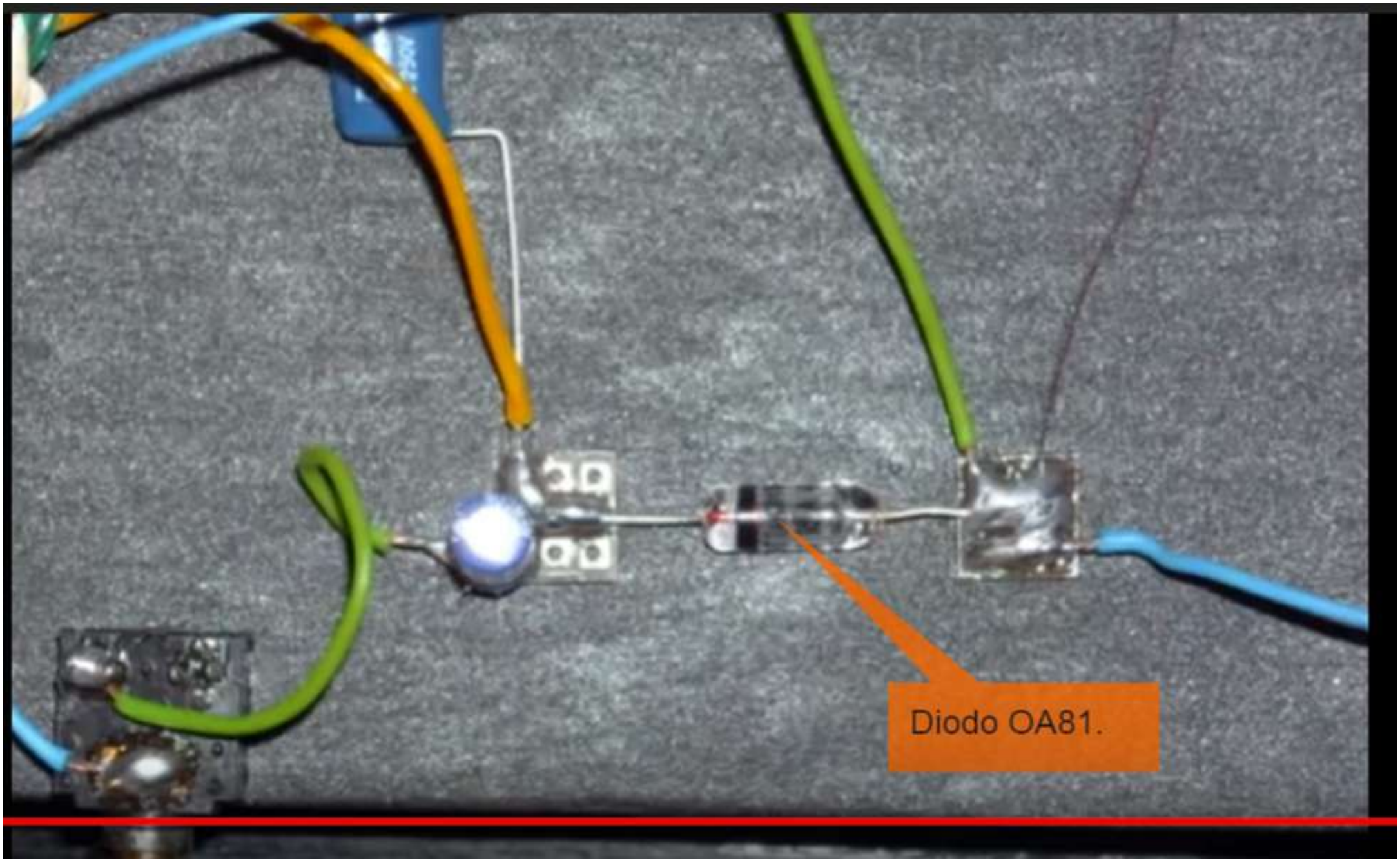

Diode
Ceramic
Earphone
Resistor
Water Pipe
100 foot antenna wire as high as possible

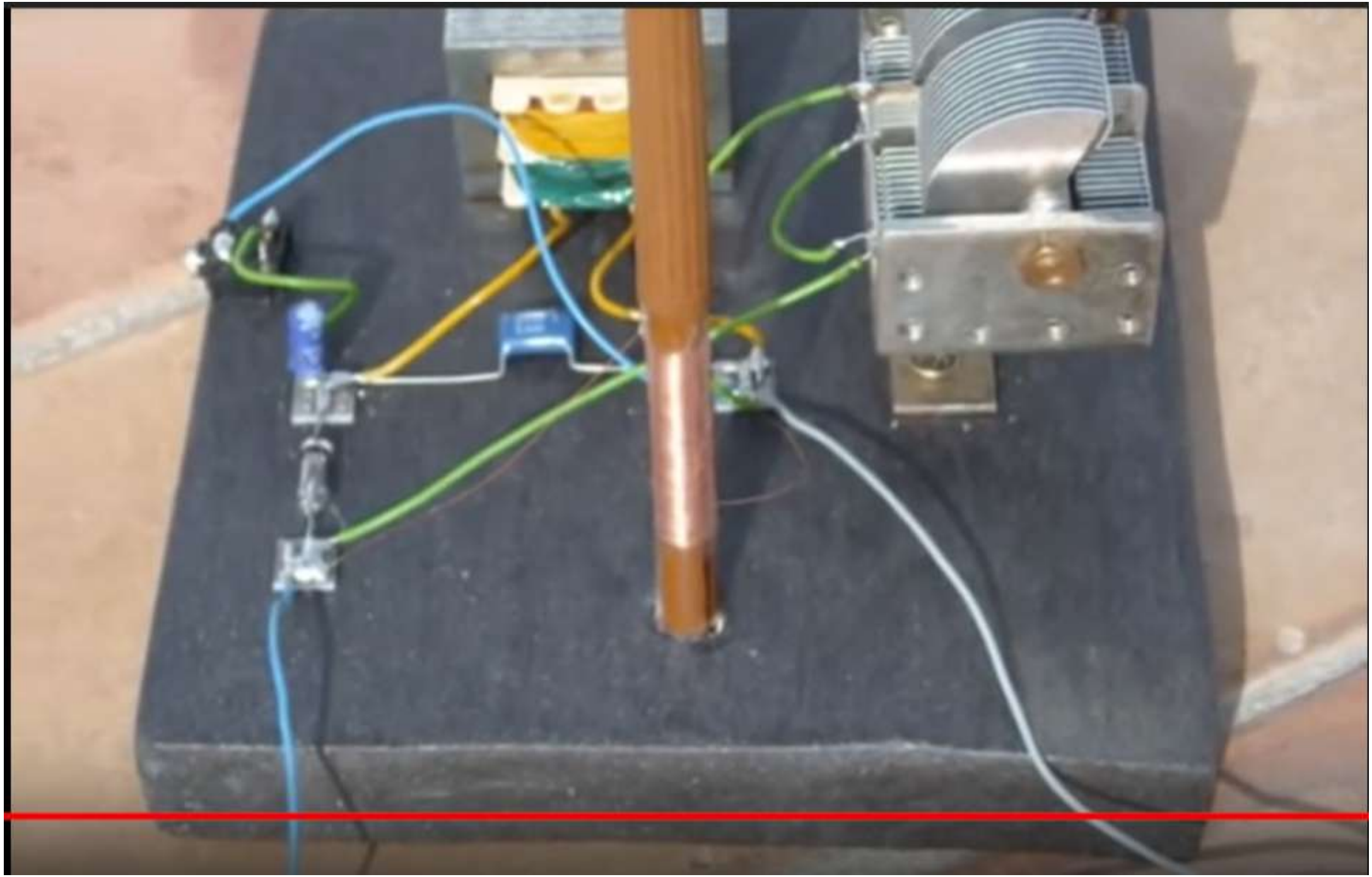

40 turns of plastic coated wire tapped every 5 turns on a Quaker Oats Box
Aligator Clip
Screw
To Antenna
Diode
47k Resistor
Fahnestock Clips (typical)
Ceramic Earphone
To Ground

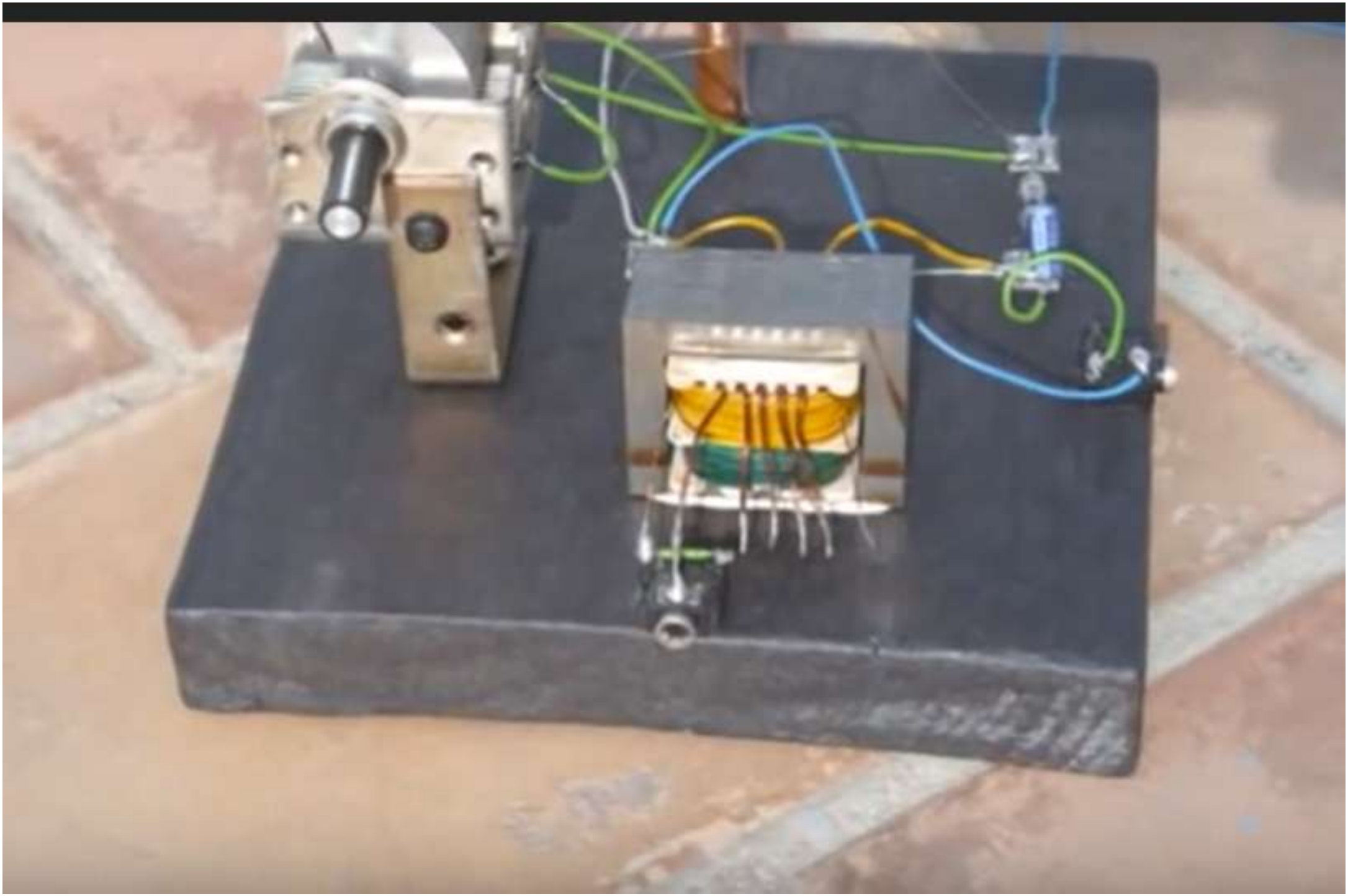


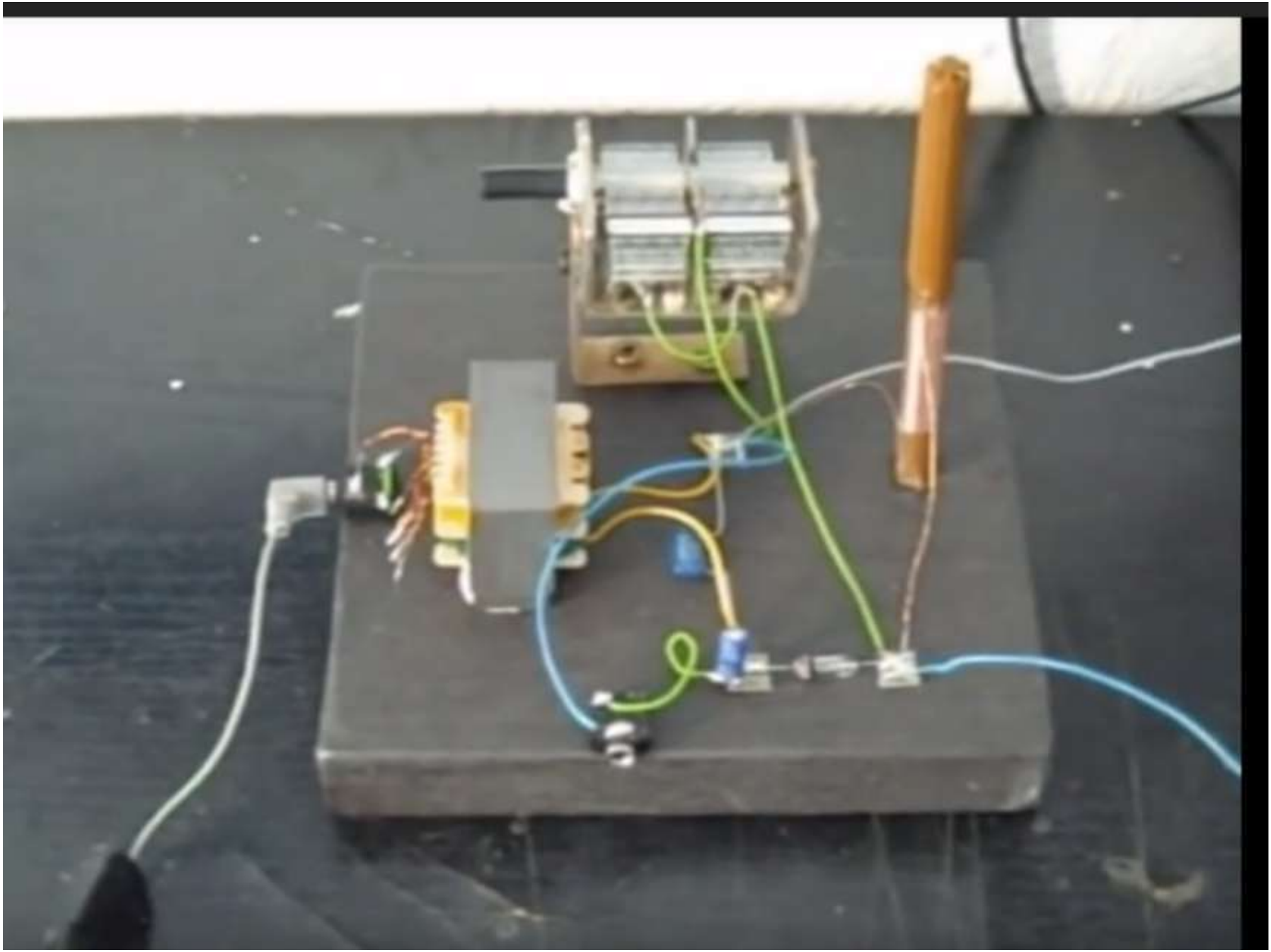
Radio Galena

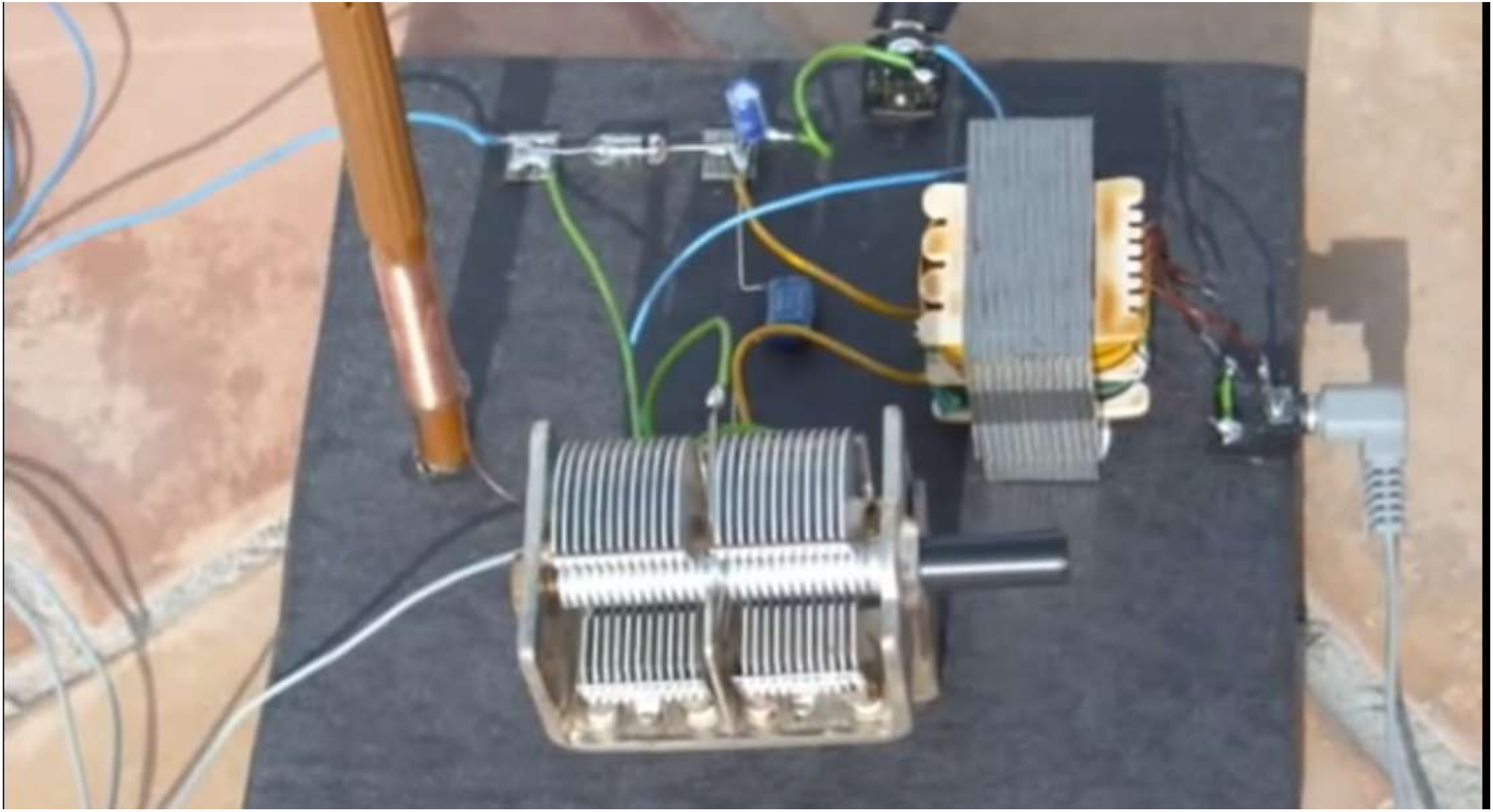
Up next

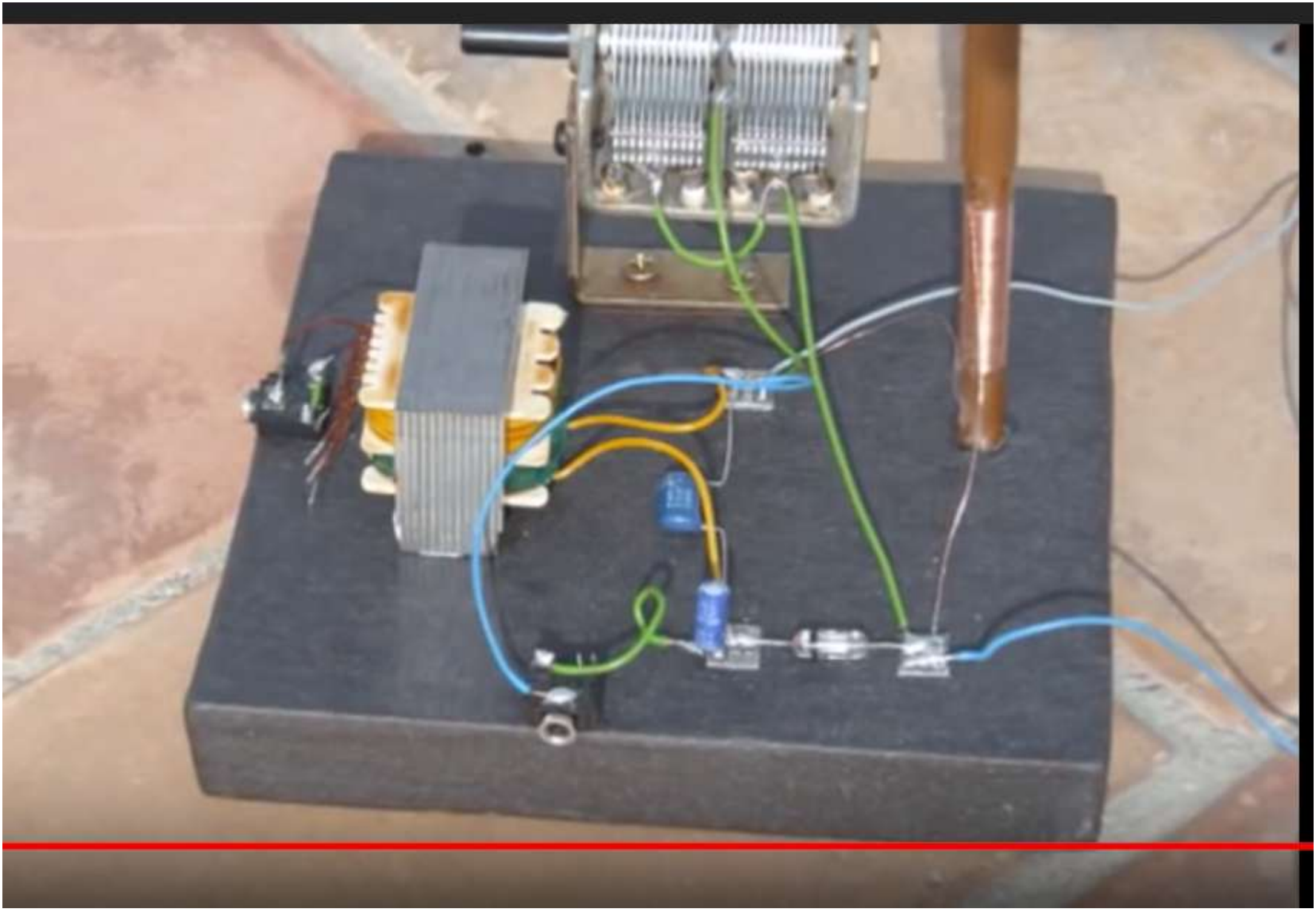

Diodo OA81.



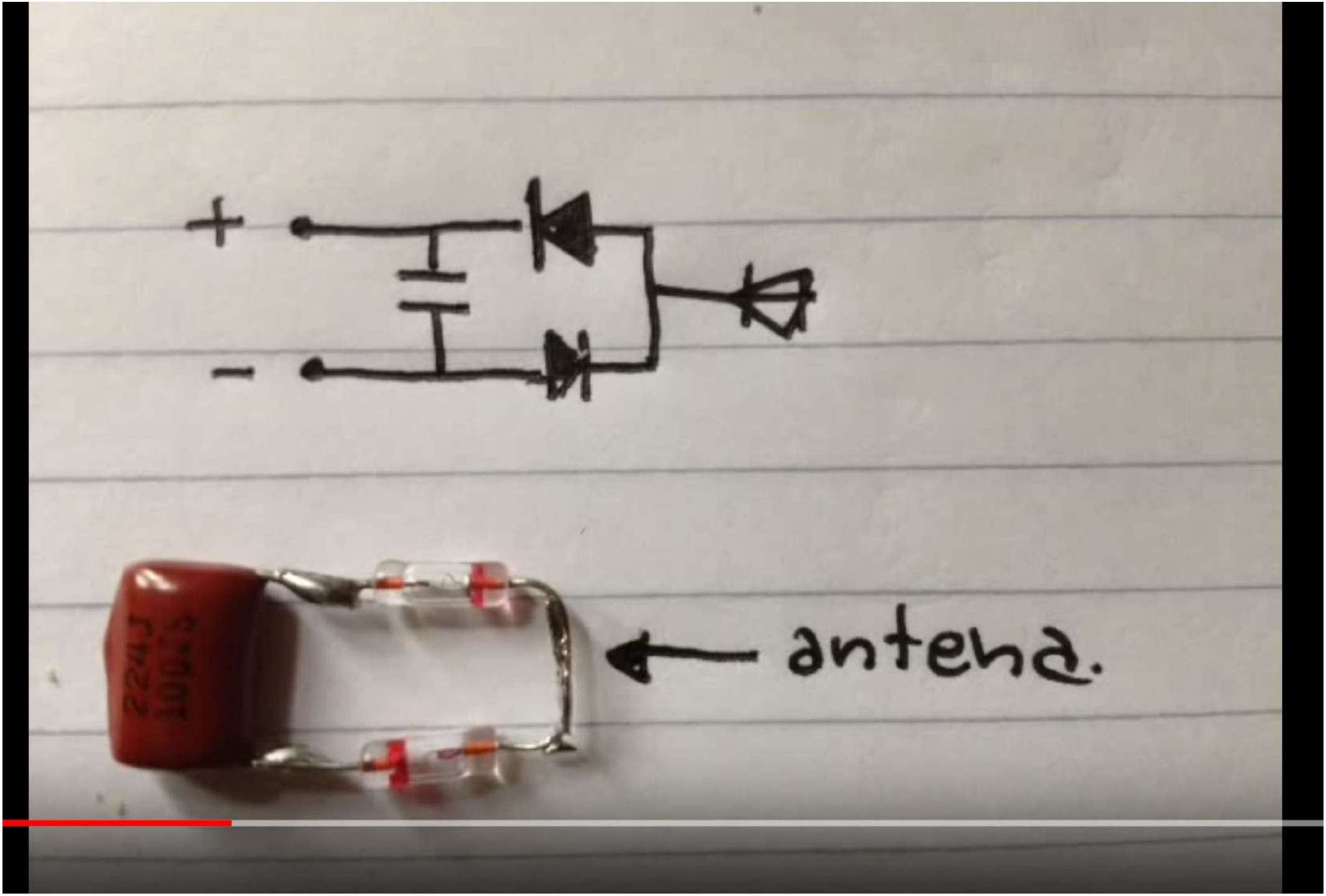


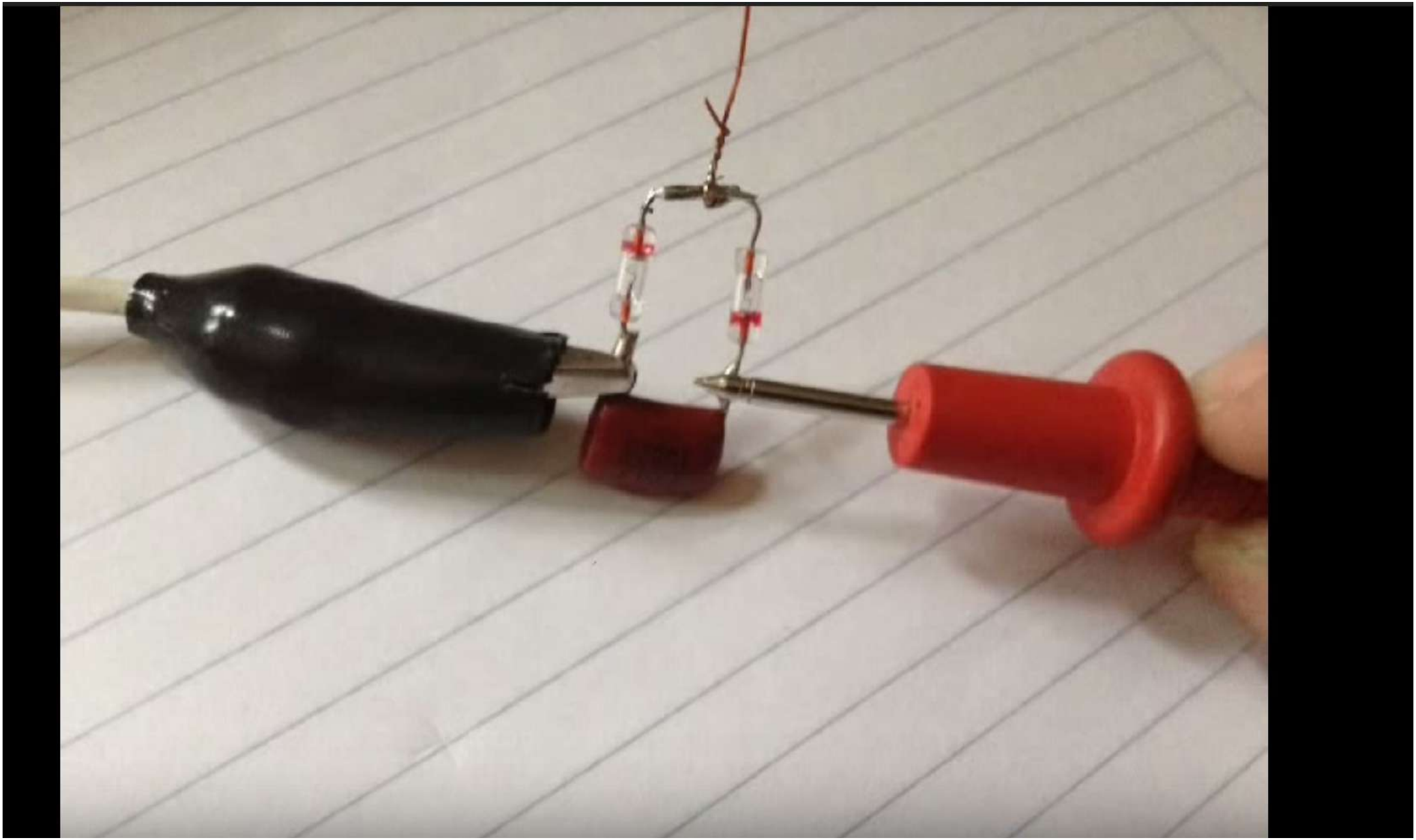






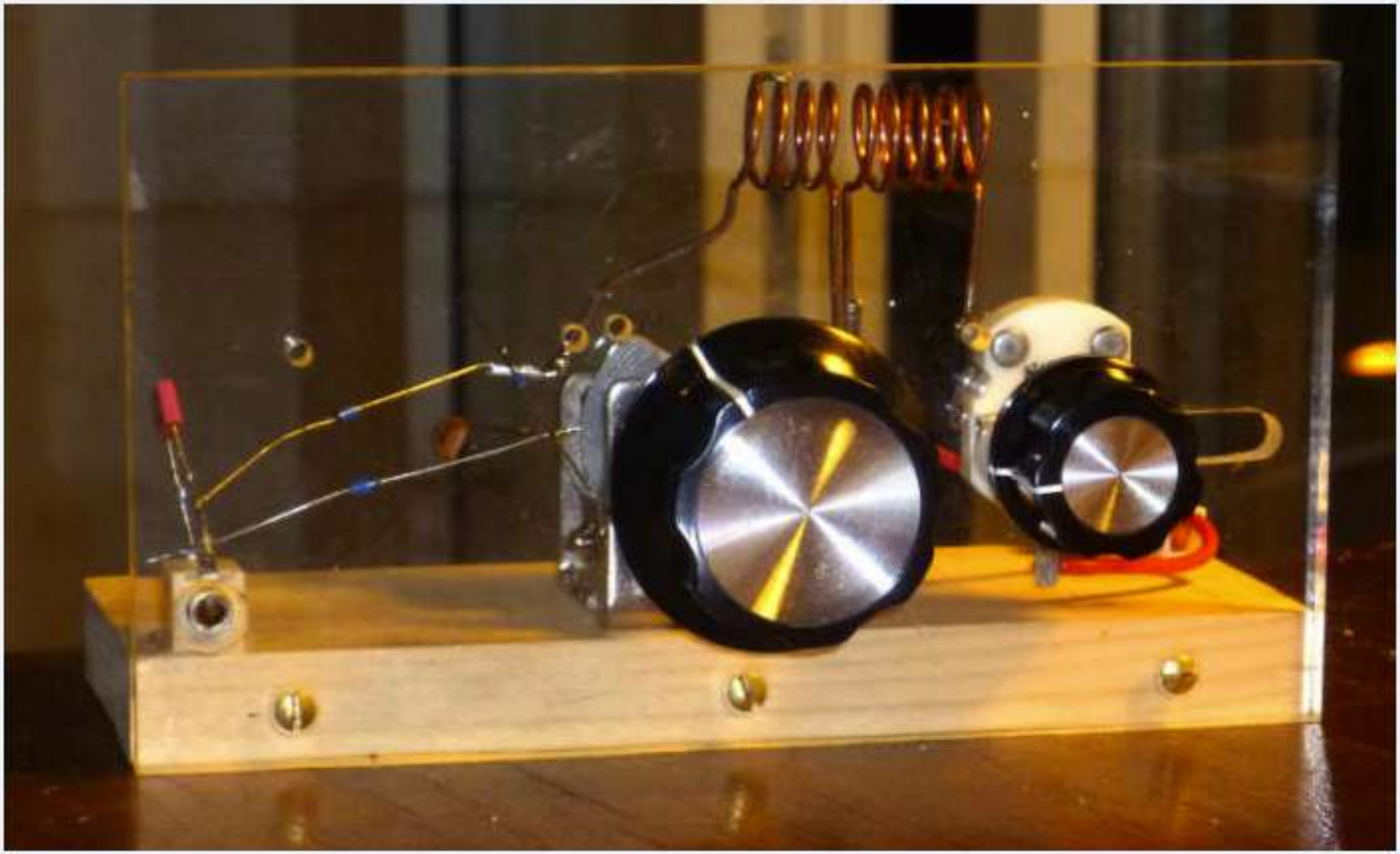

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+
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antena.

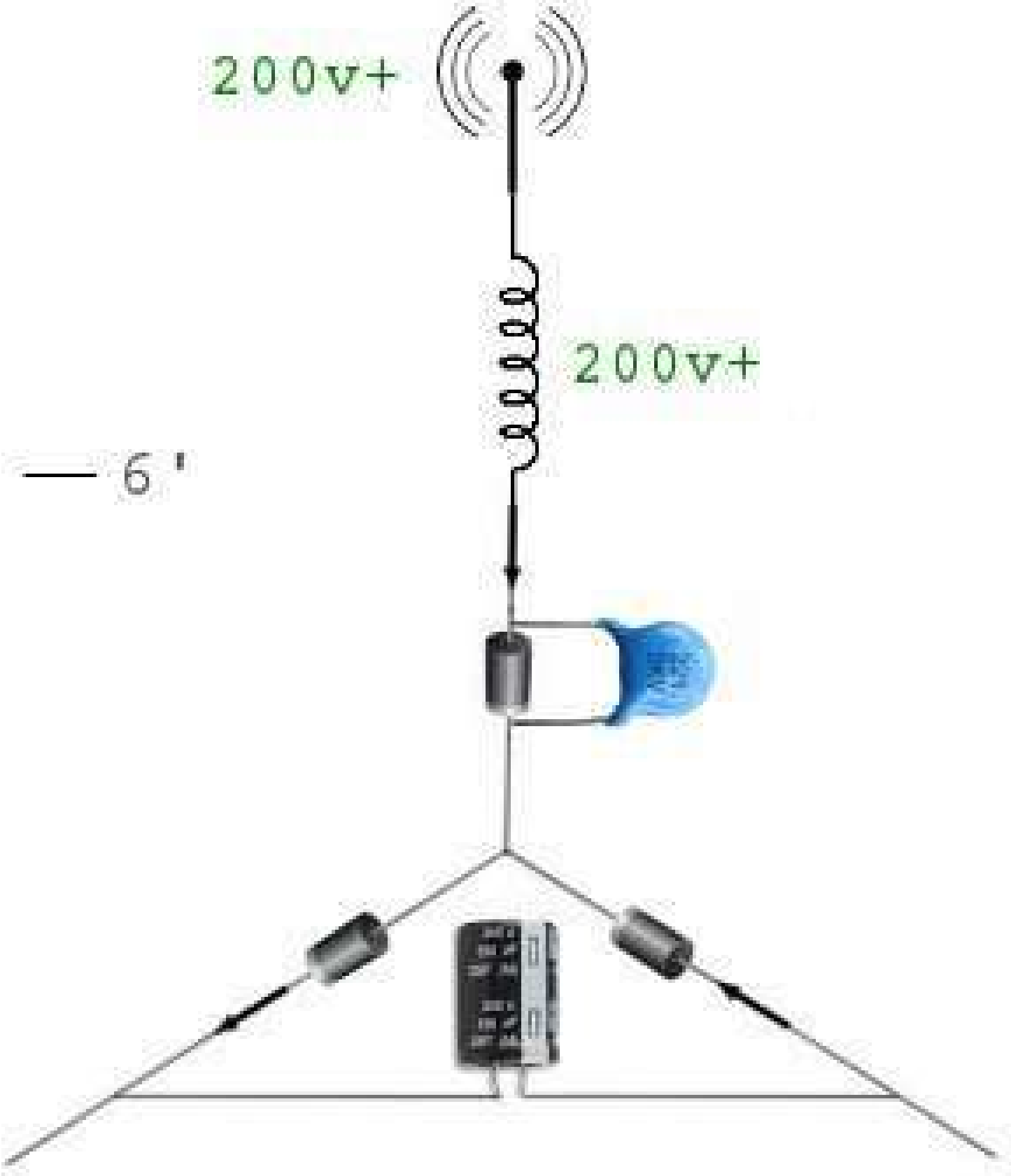


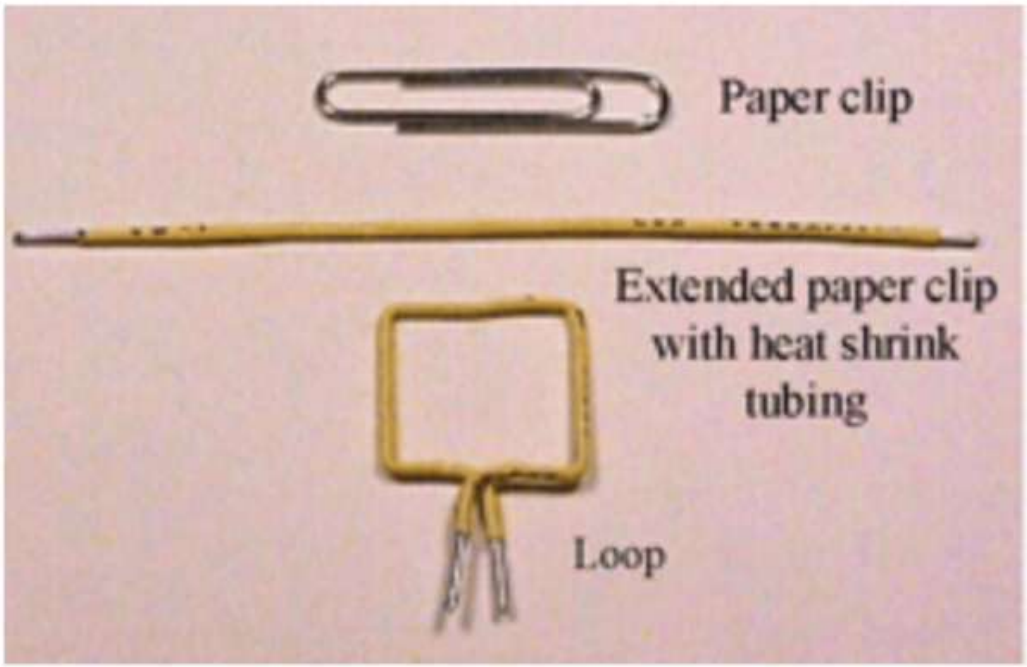
Ricevitore a cristallo per FM

Un progetto di Giacomo Cavuoti



Seguendo l'invito di Leonardo ho realizzato questo semplice ricevitore a cristallo per FM (fare clic sullo schema qua sotto per vederlo ingrandito).


200v+
200v+
6'



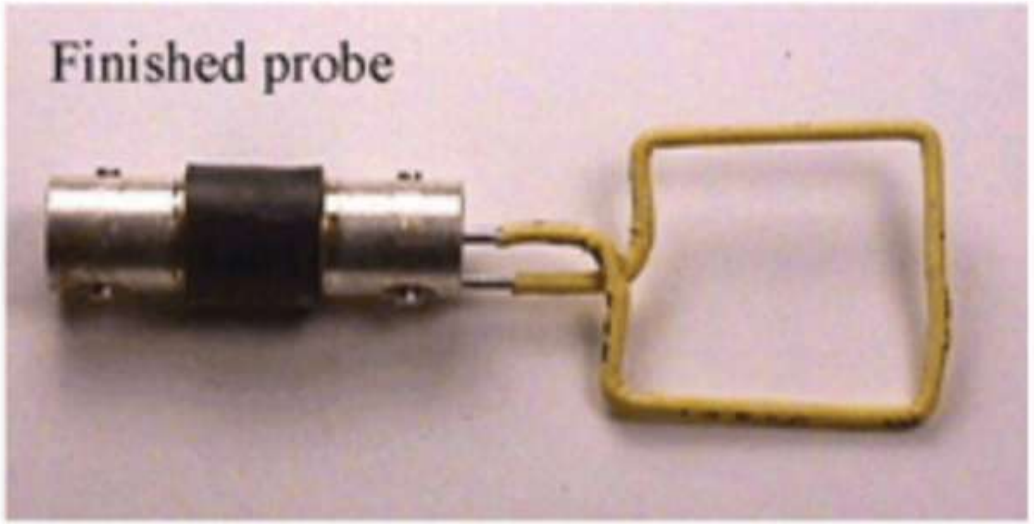
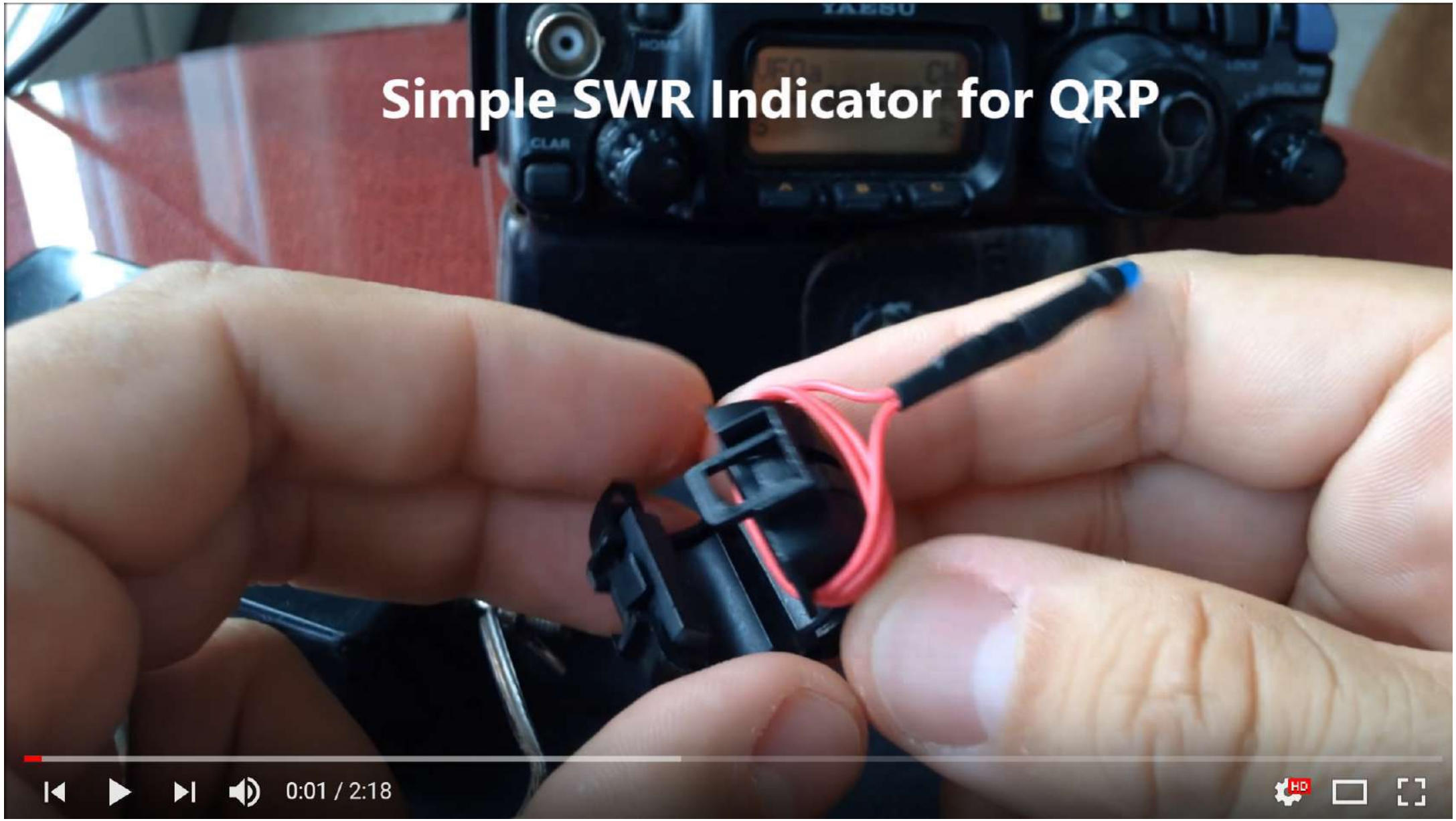
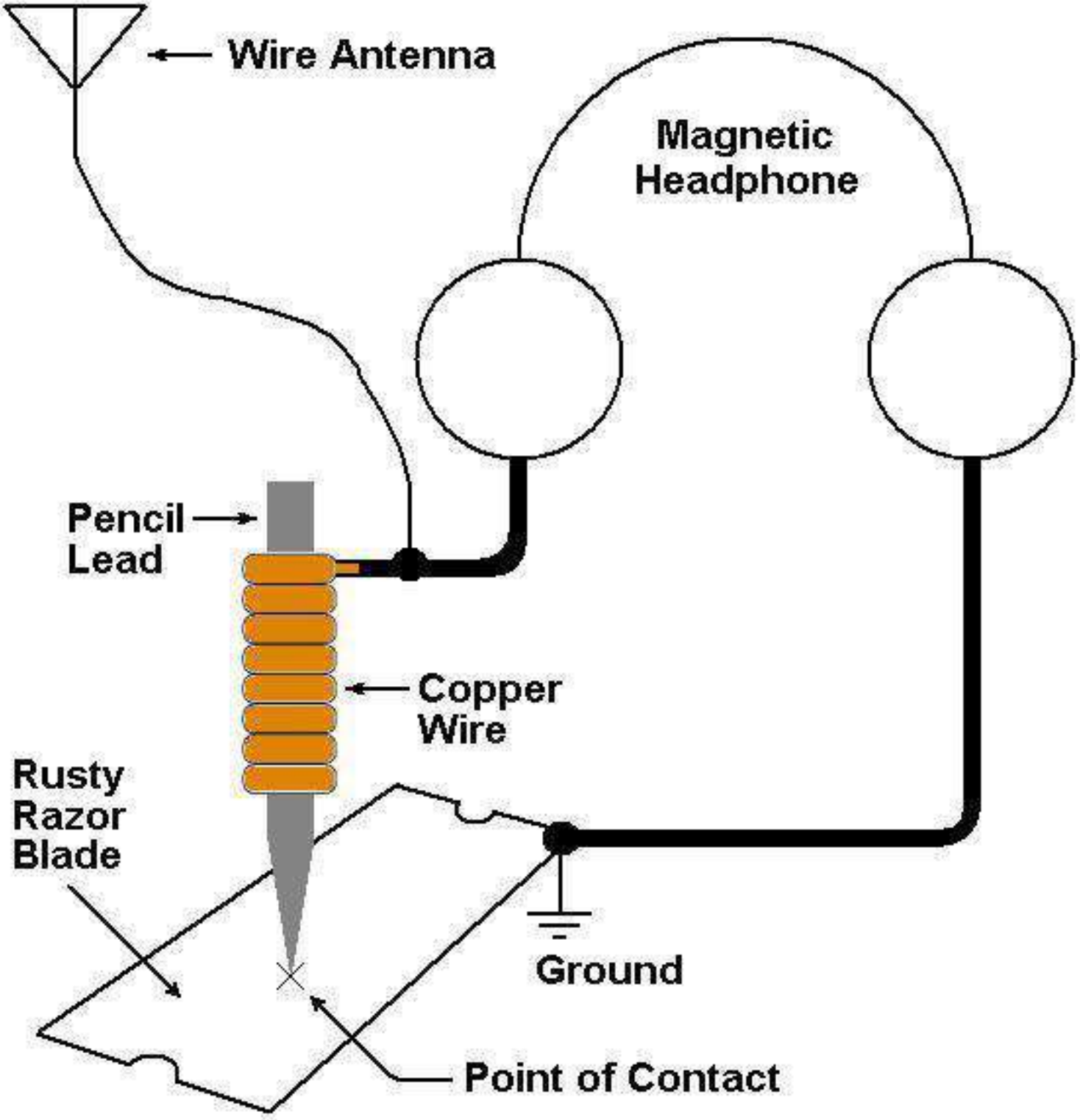


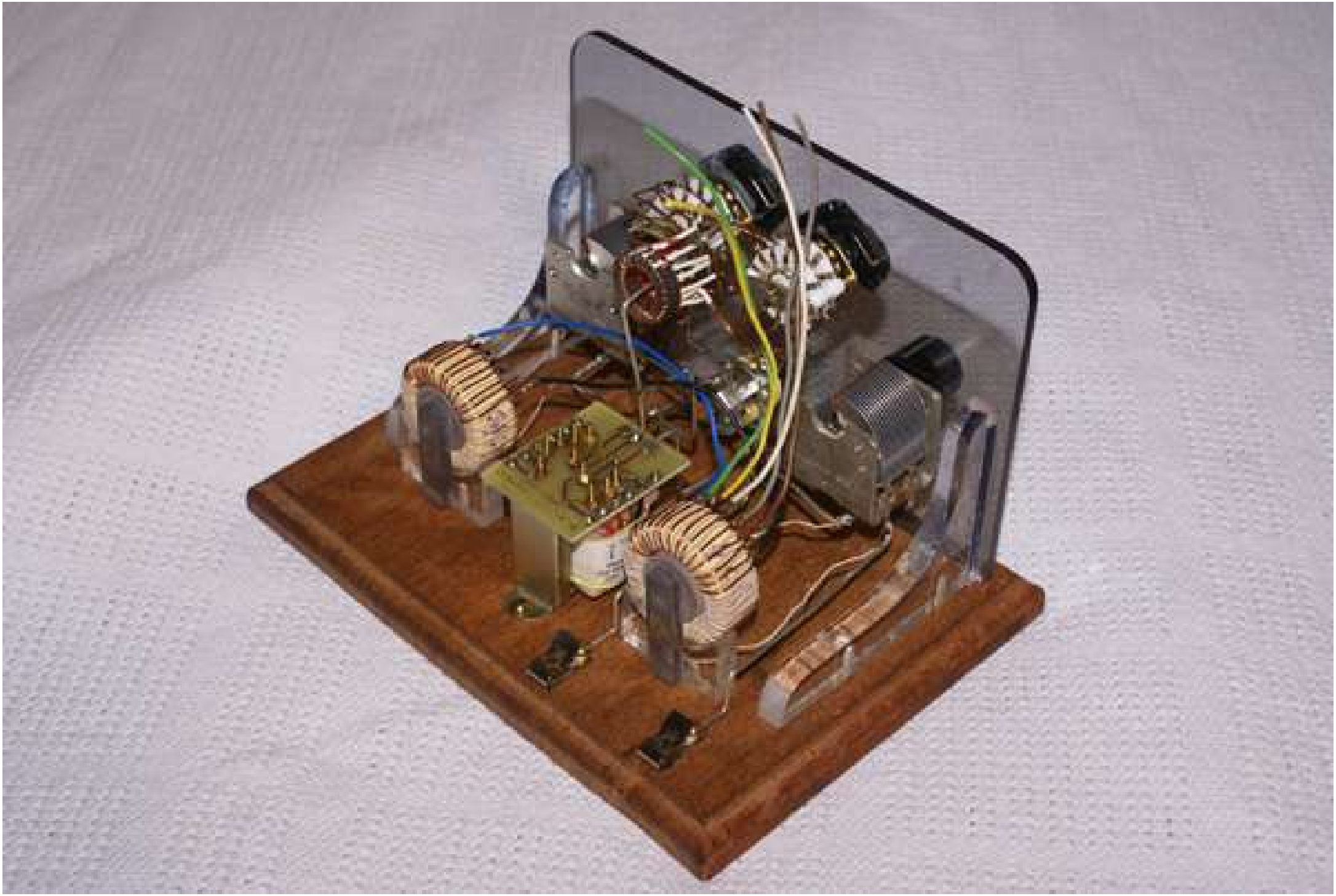
Figure 1: Magnetic field probe build from a paper clip.


YAESU
HOME
SEL
CLAR
VFOa CW
14.054.00 R
SW
A B C
V/M LOCK PWR
AF-SQL/RF
C-POISE
ANT
1:54 / 2:18

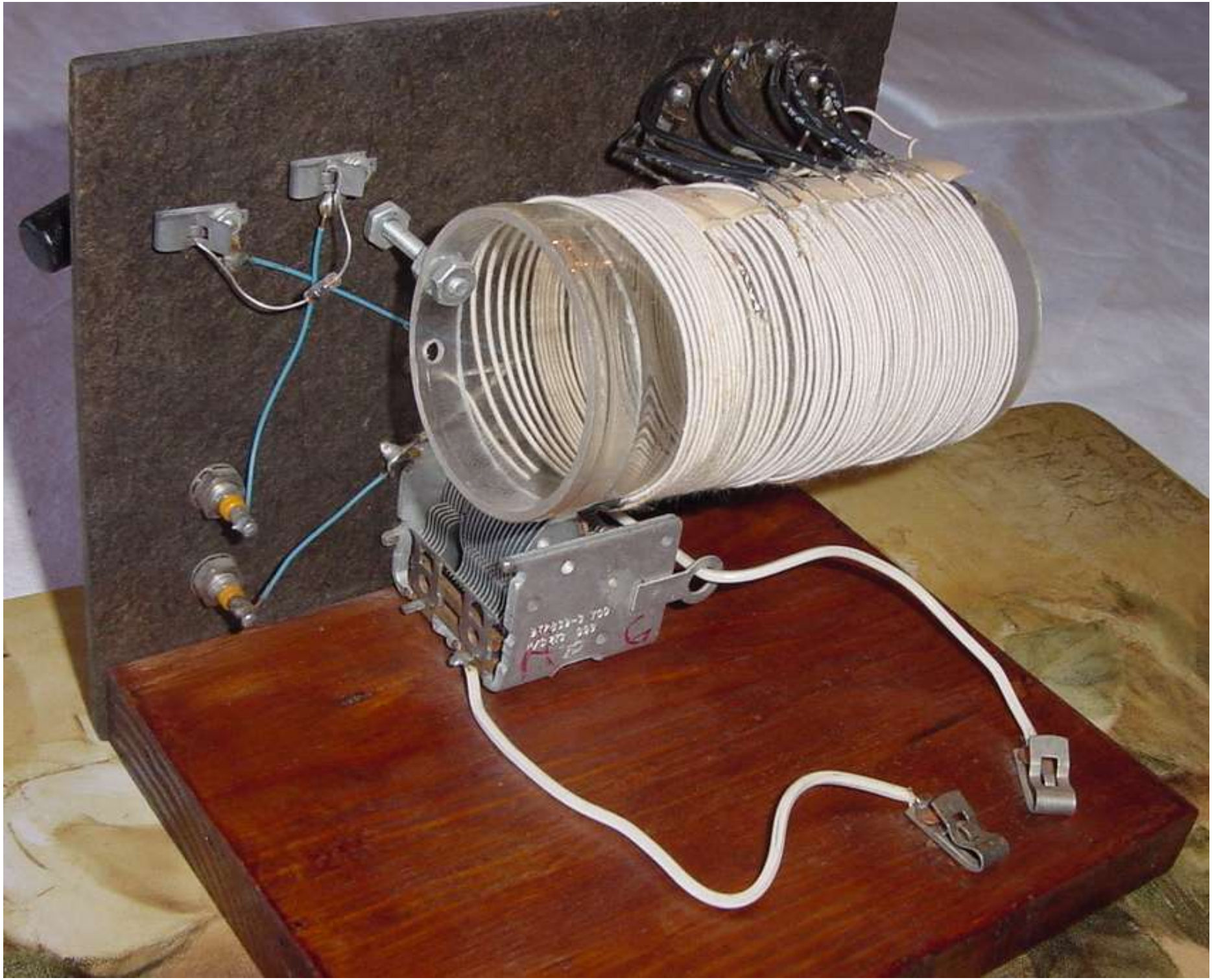

Simple SWR Indicator for QRP
0:01 / 2:18


Wire Antenna
Magnetic Headphone
Pencil Lead
Copper Wire
Rusty Razor Blade
Ground
Point of Contact



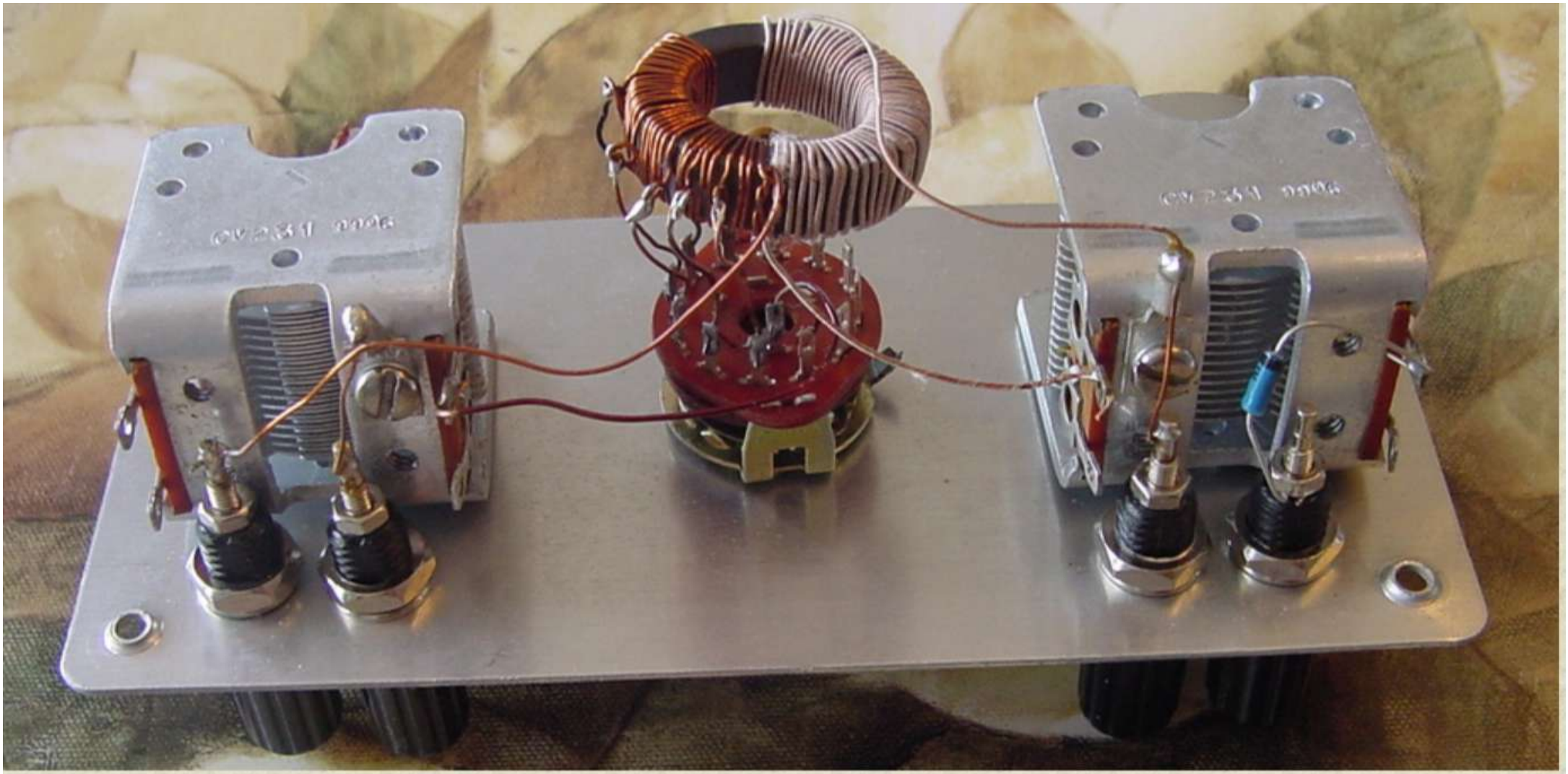




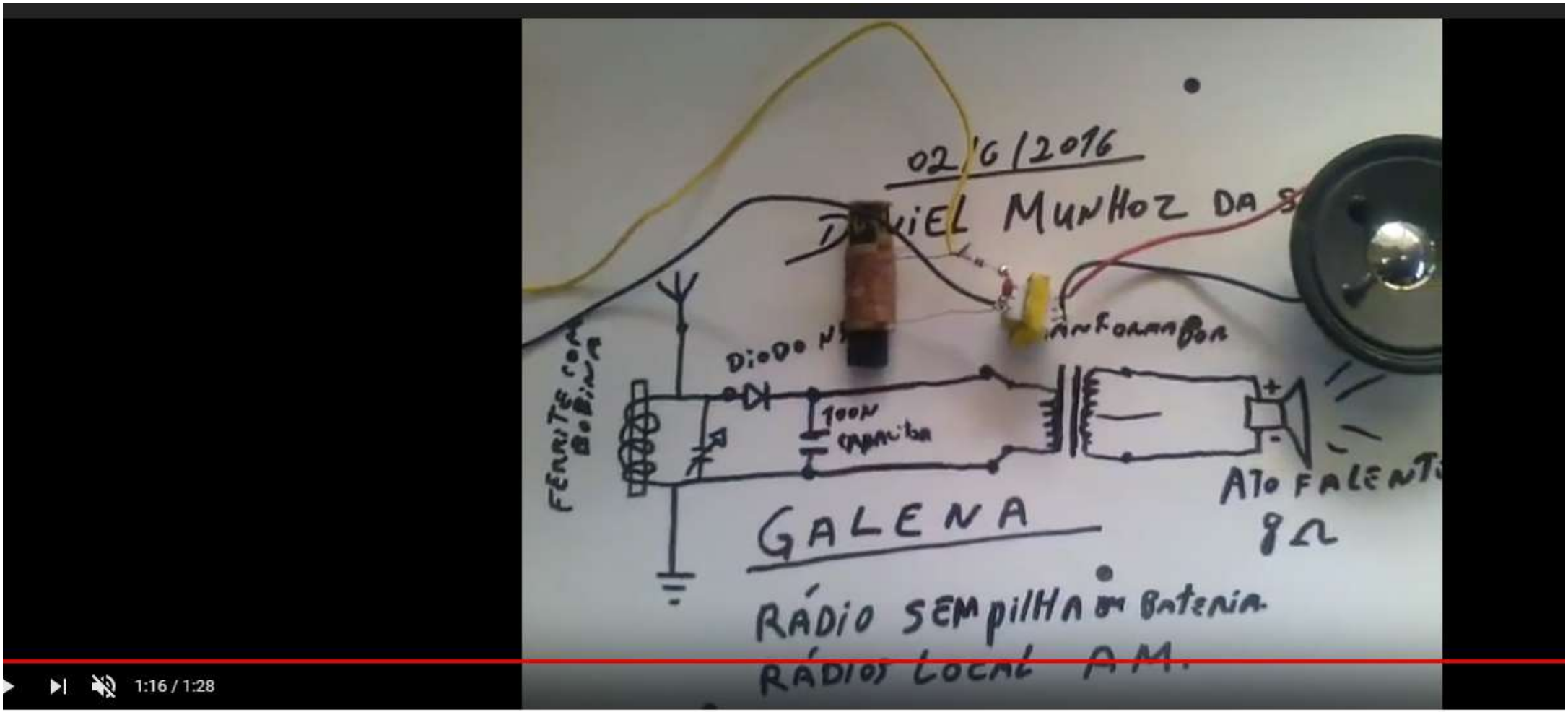


Another Prototype similar to the Heathkit using toroid coil





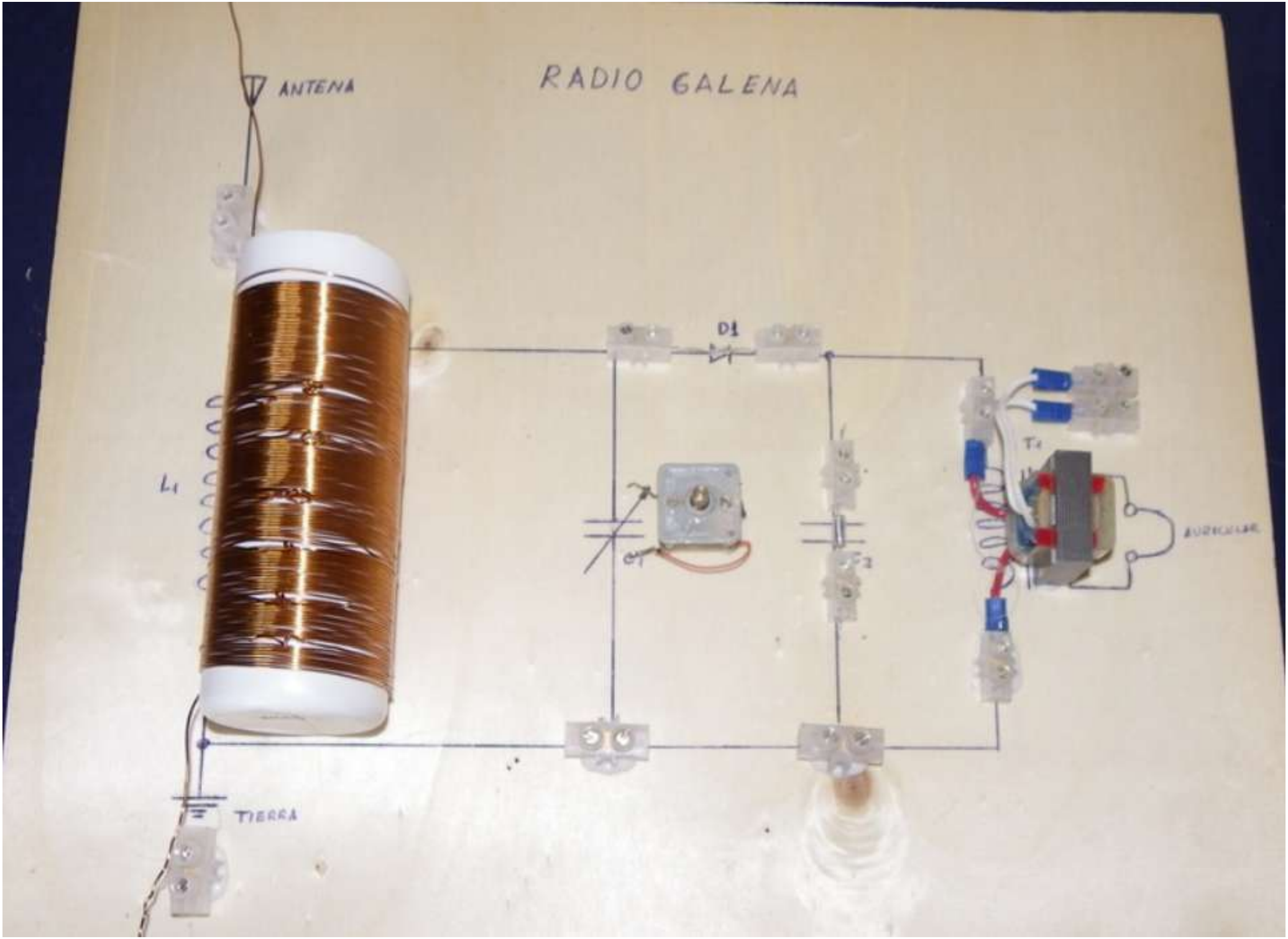
This is a dual tuned crystal set made in a box like the CR-1, just a fun prototype I made a few years back. It pulls in AM stations loud and clear.

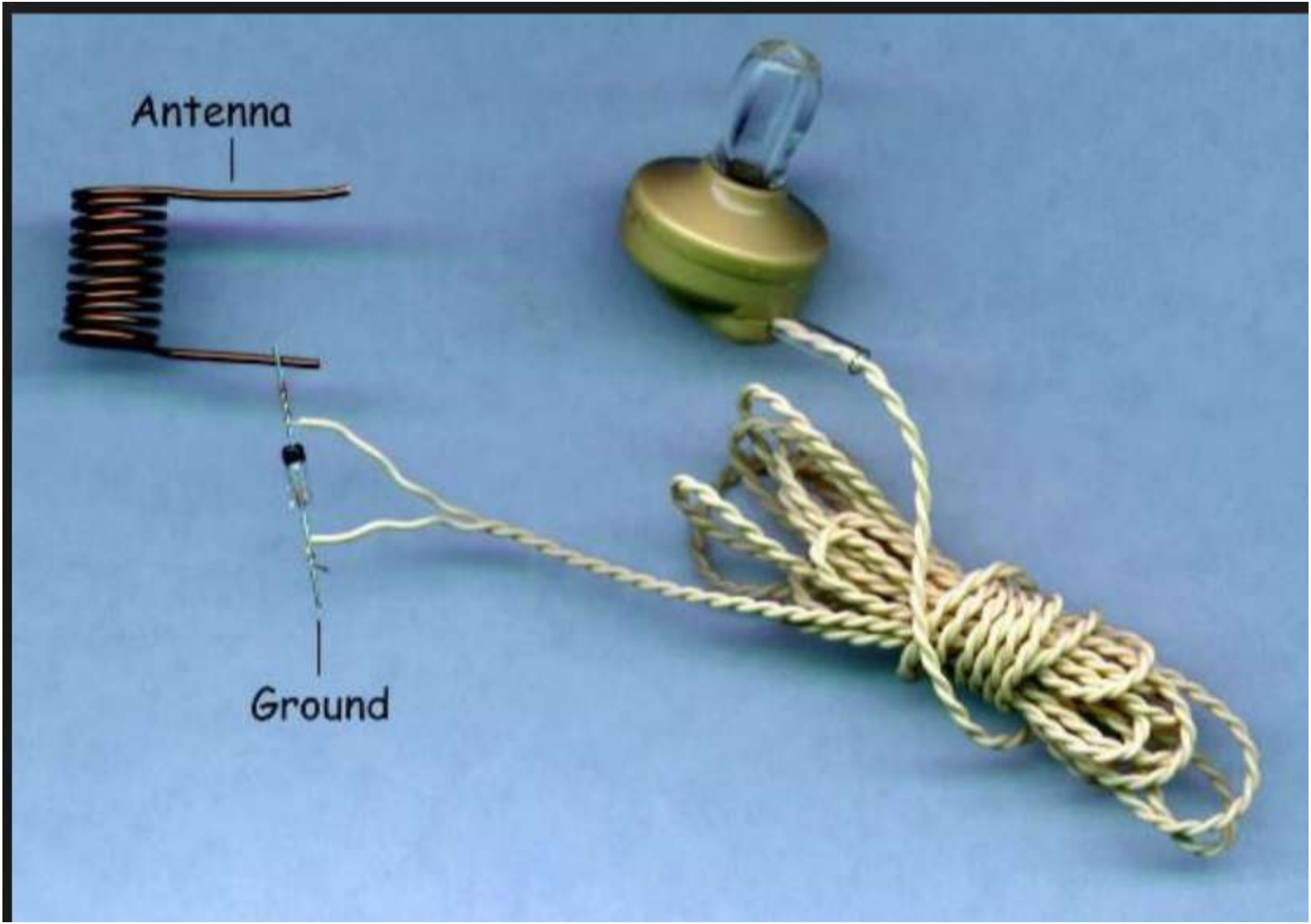


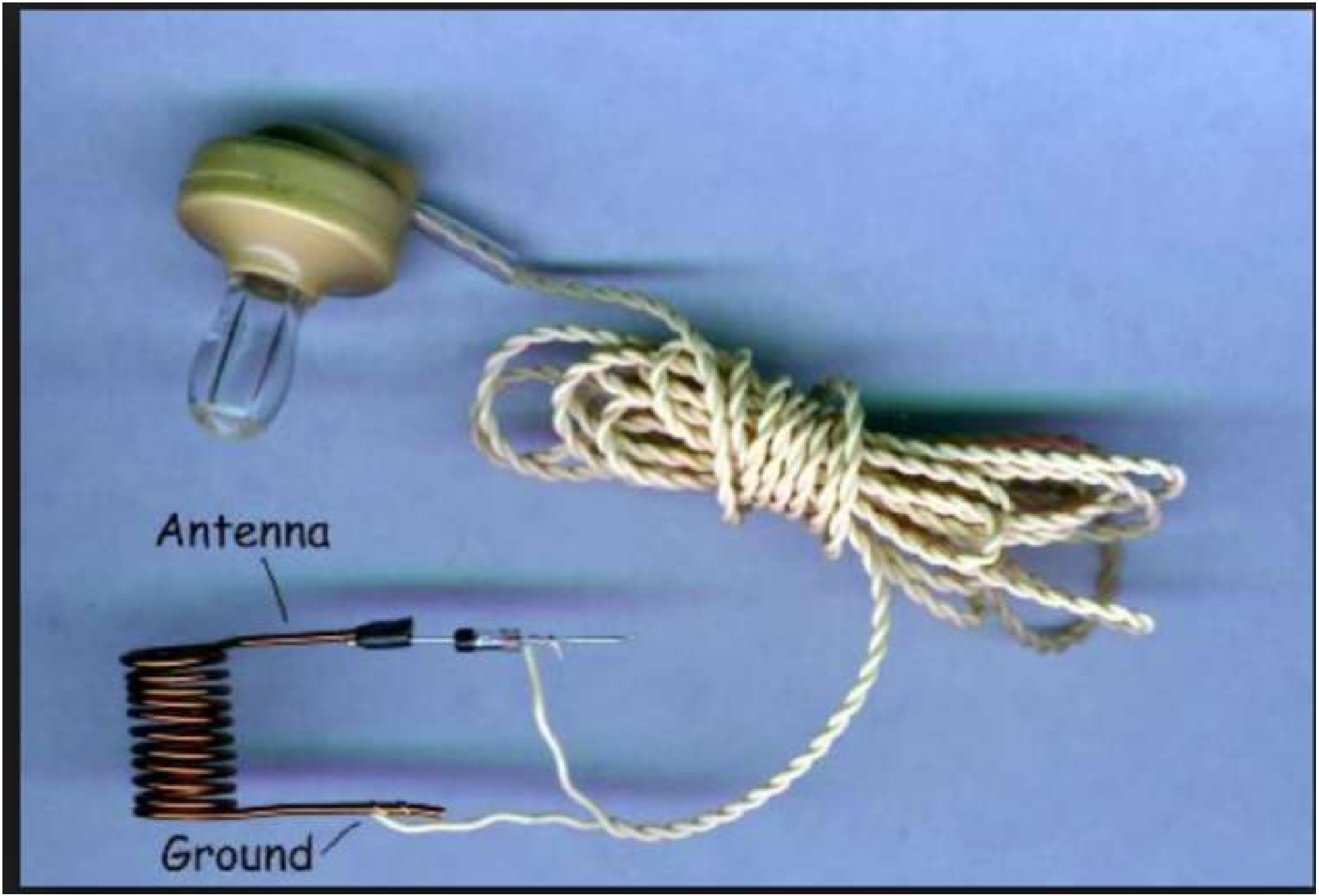
1:16 / 1:28

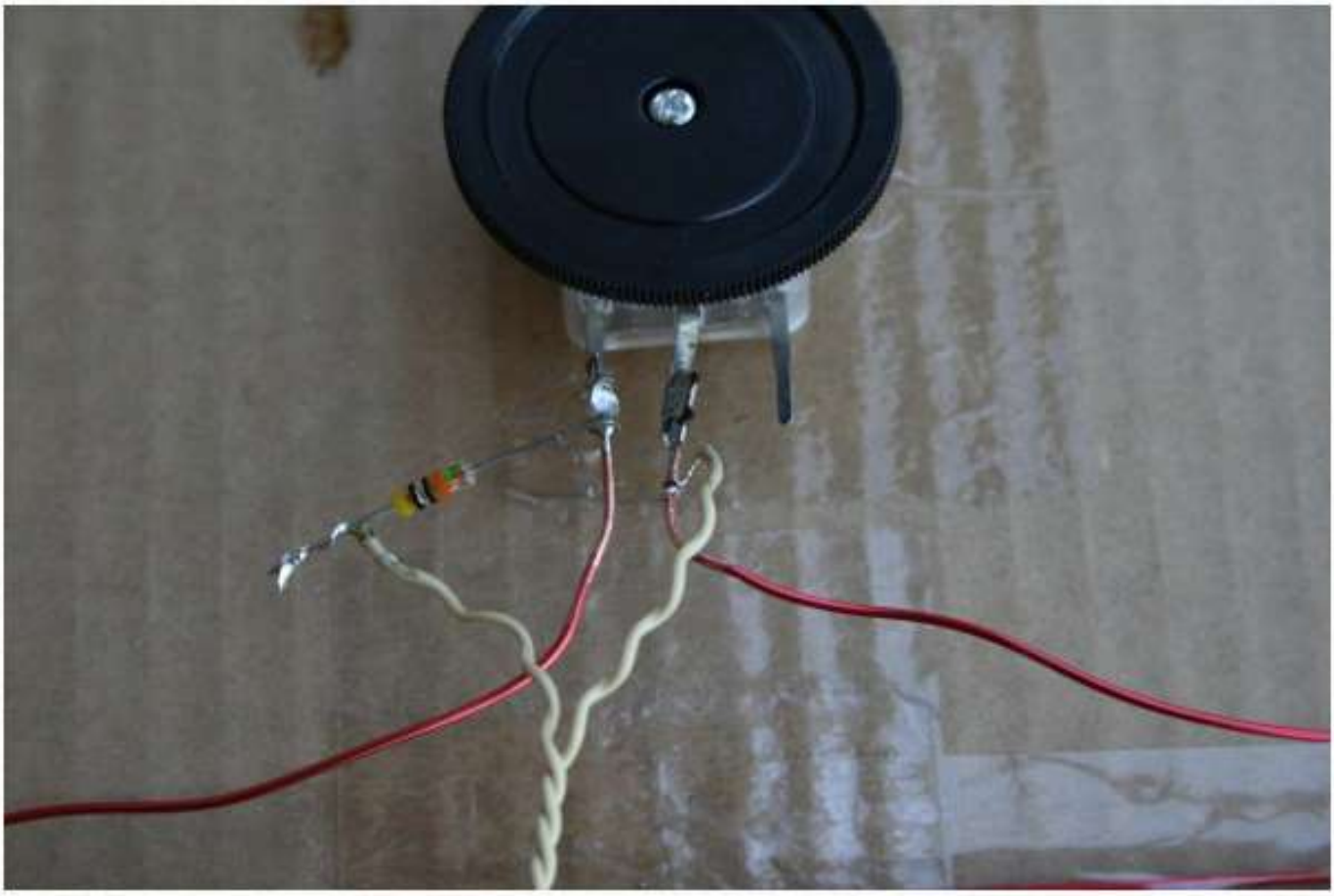
GALENA , Rádio AM ,sem pilha.

Up next

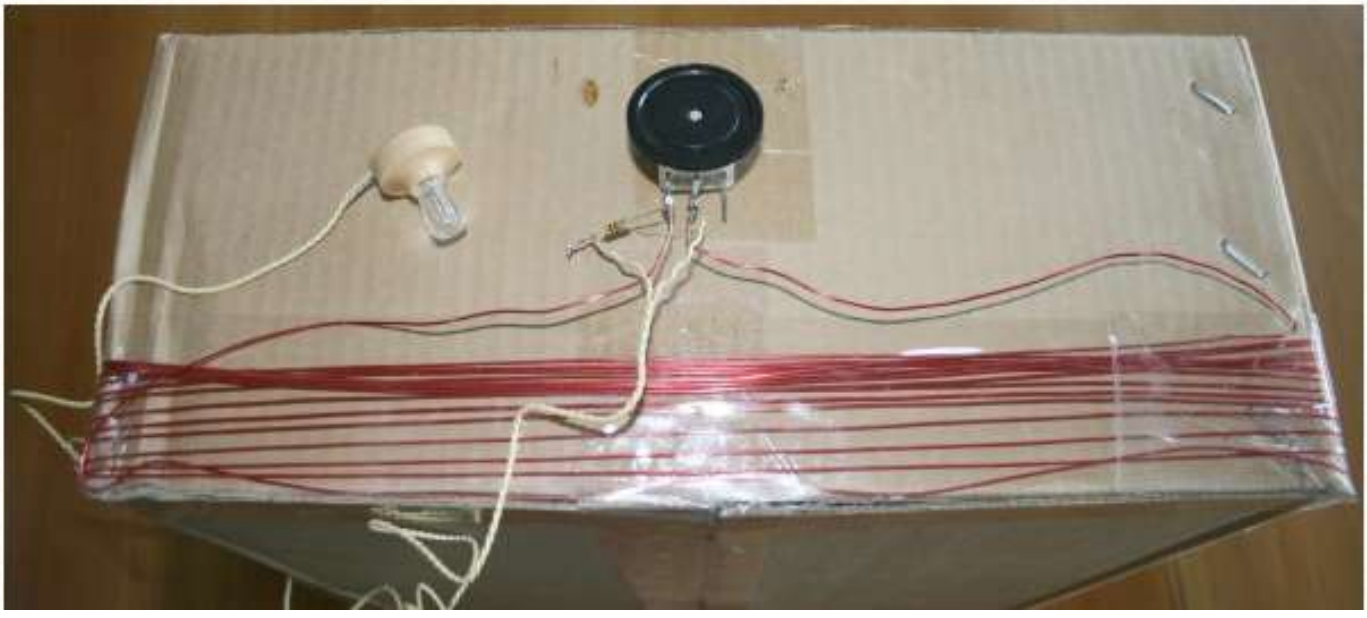

RADIO GALENA
ANTENA
L1
D1
C1
C2
T1
AURICULAR
TIERRA

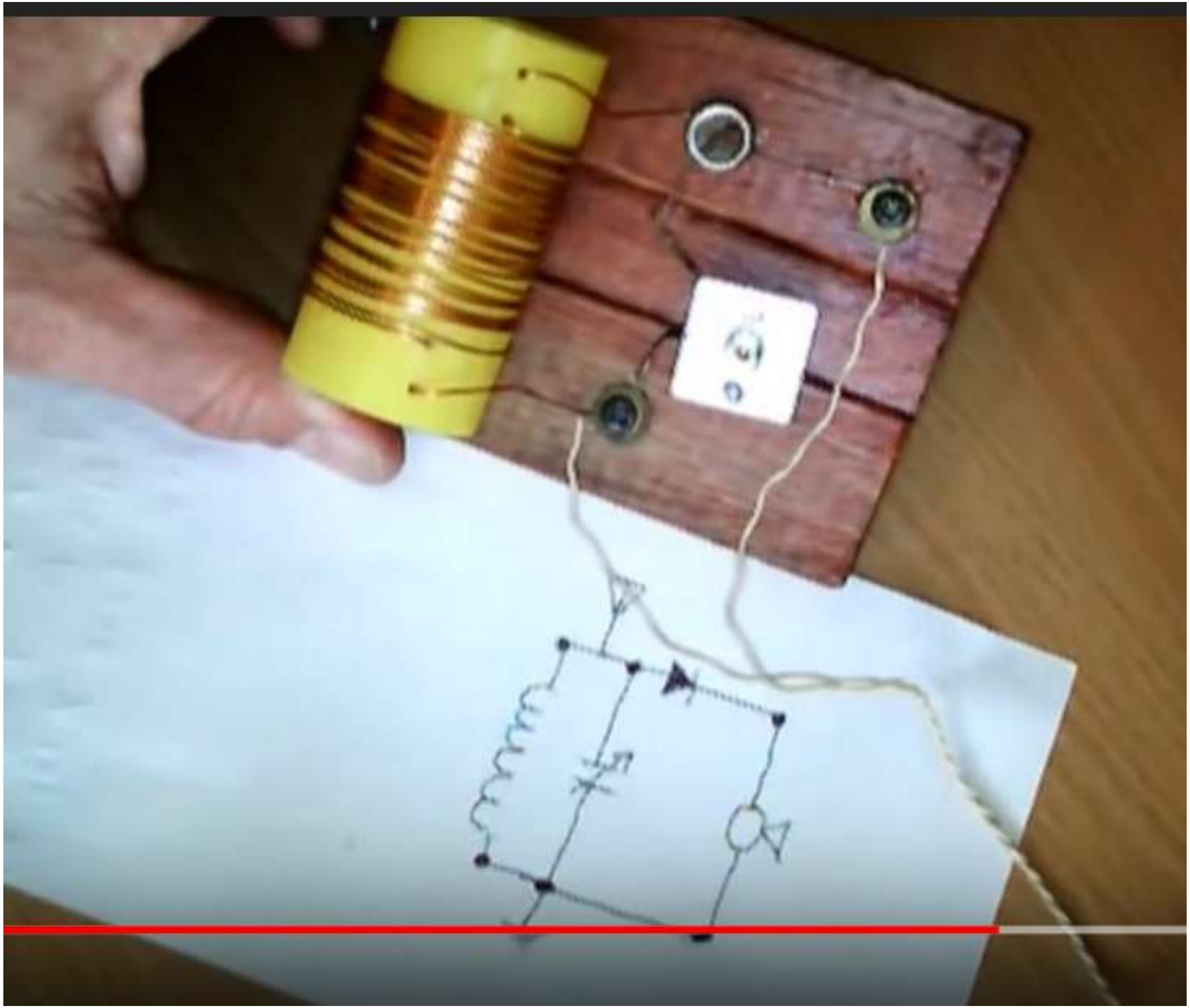

Antenna
Ground

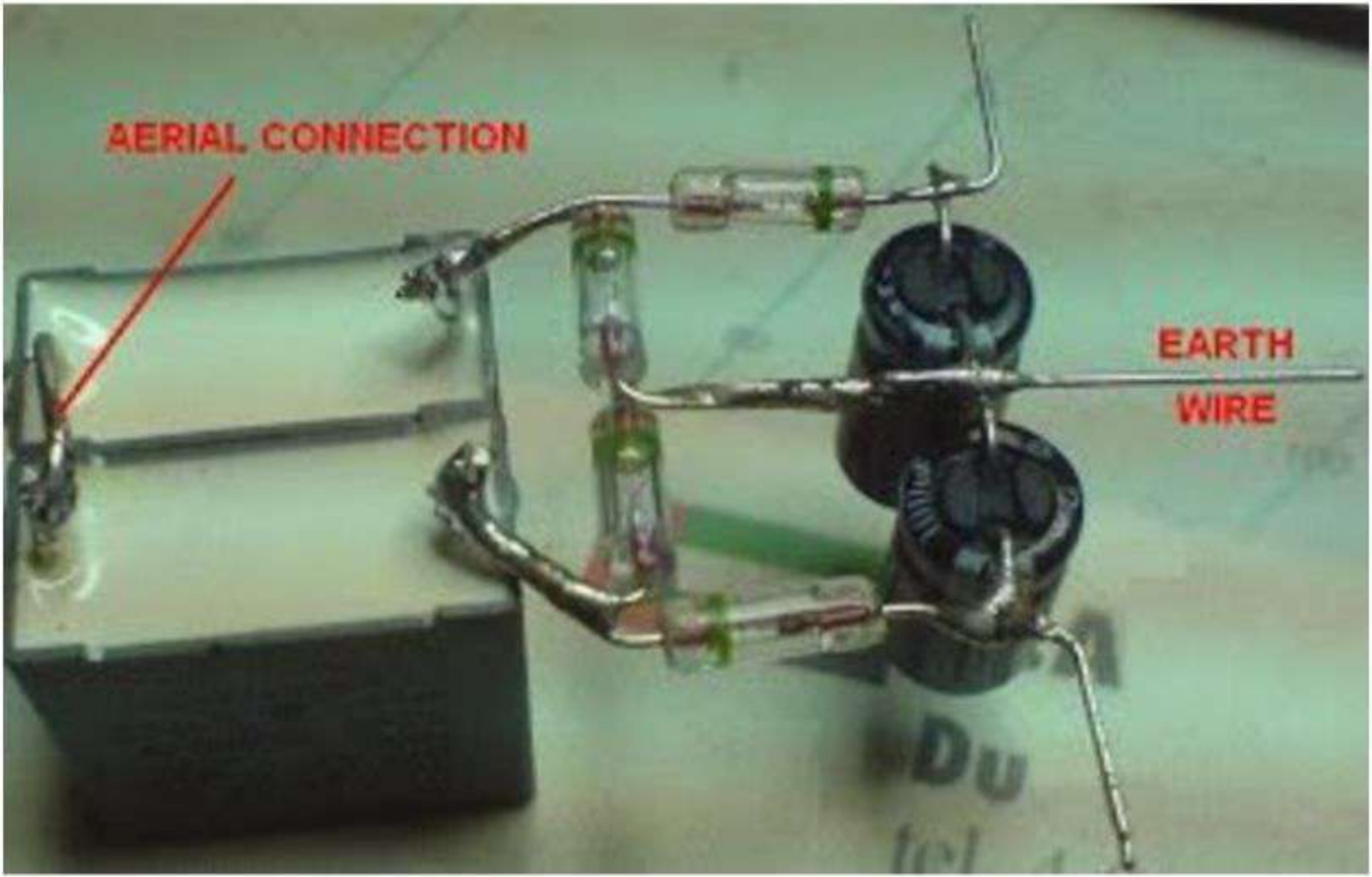

Antenna
Ground

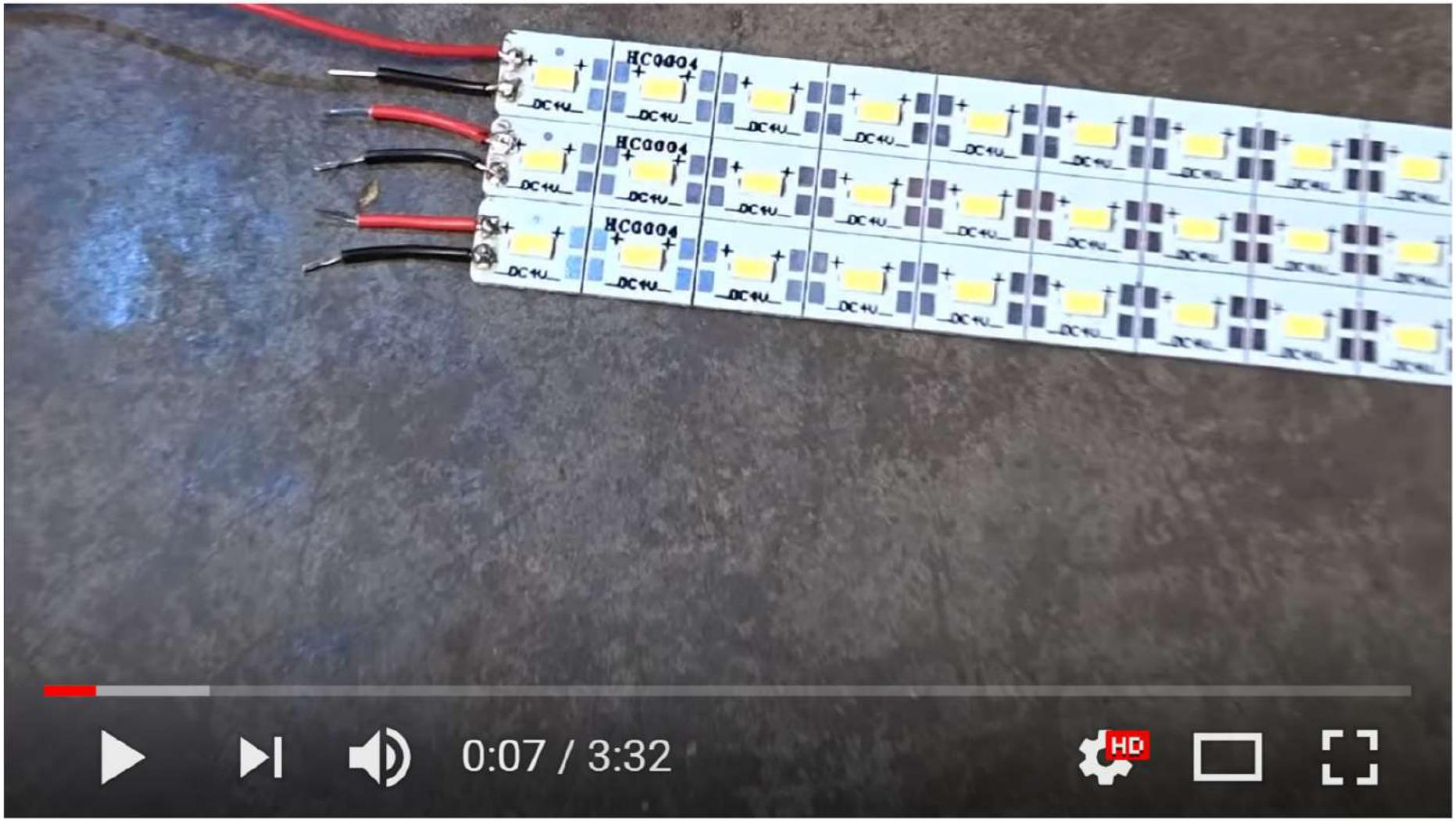


Click on photo for a larger picture

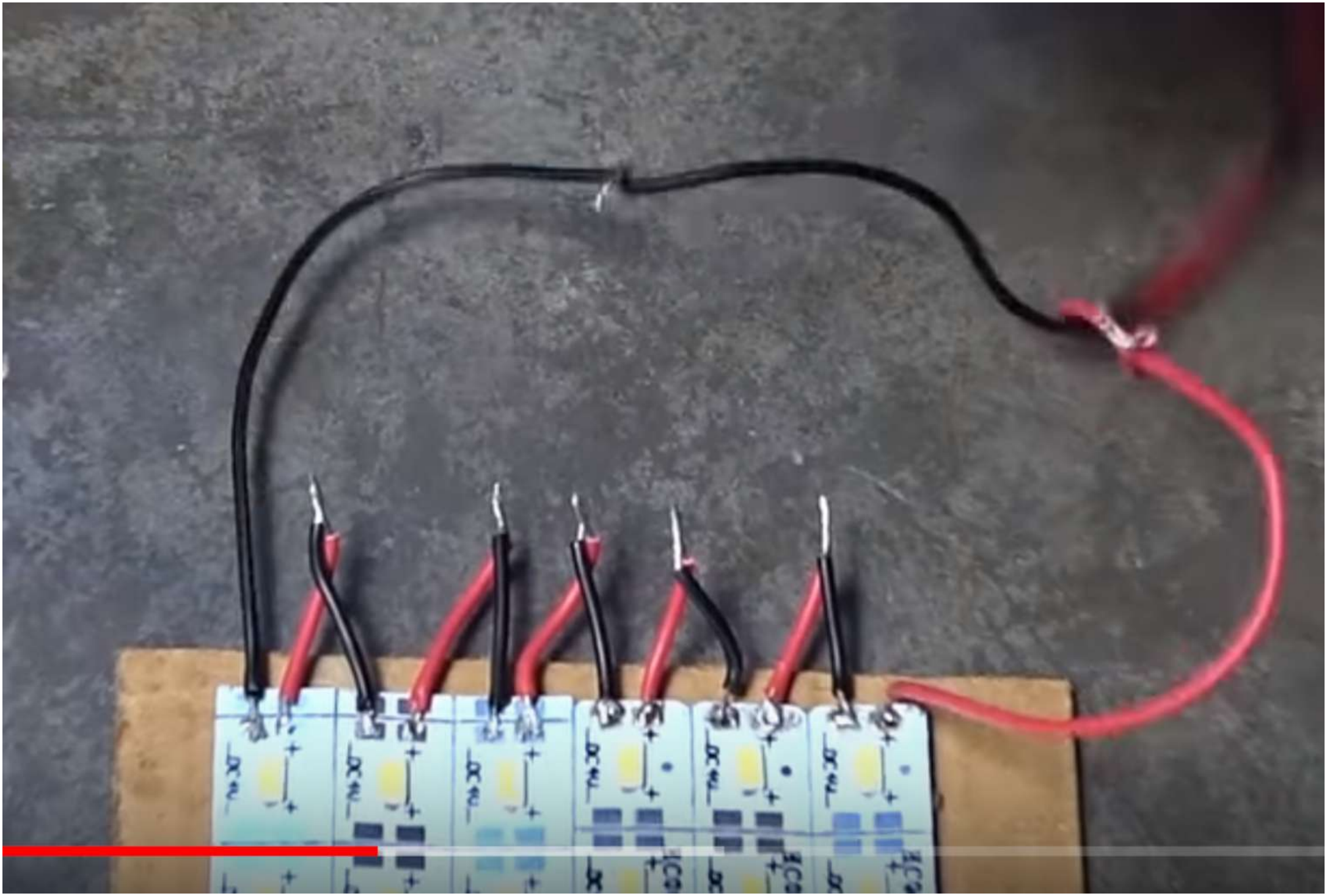


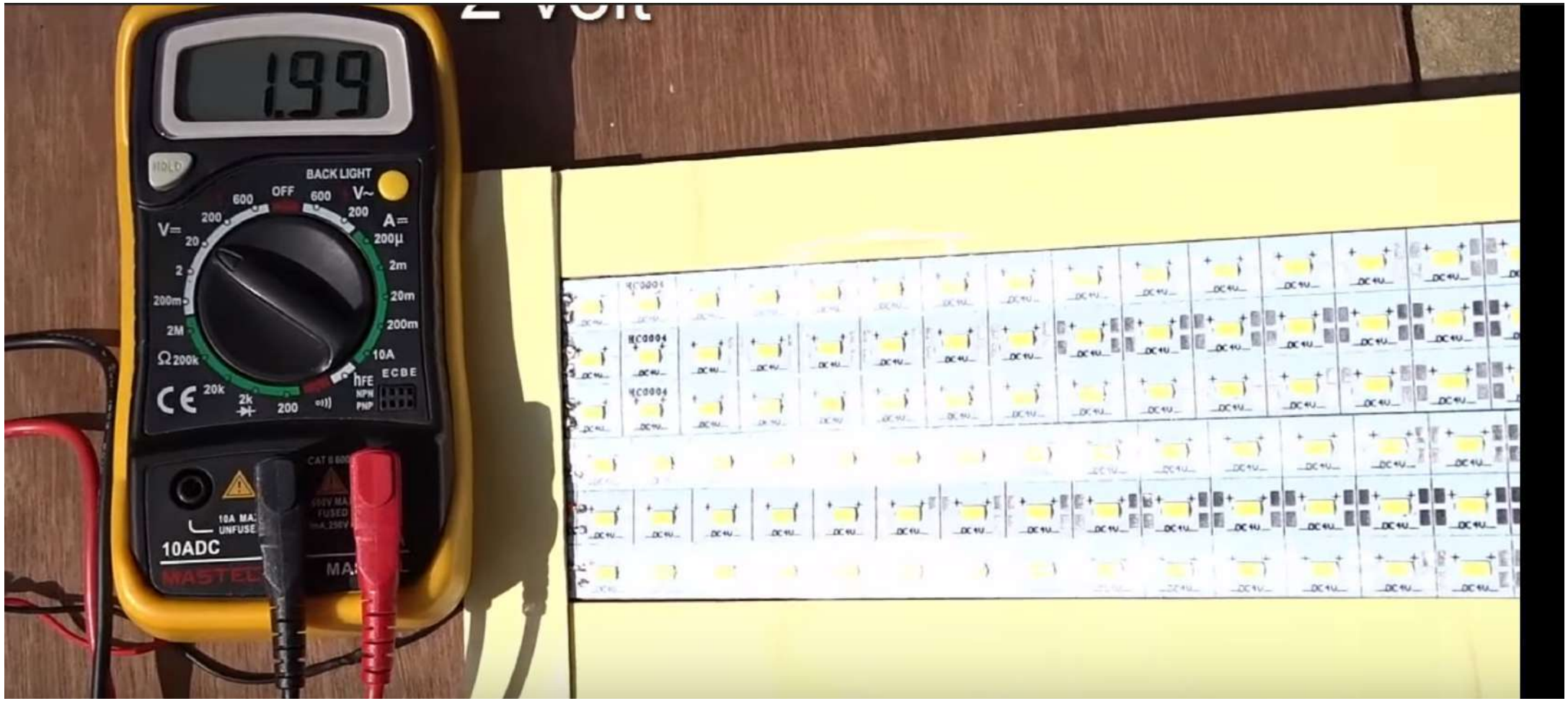



AERIAL CONNECTION
EARTH
WIRE

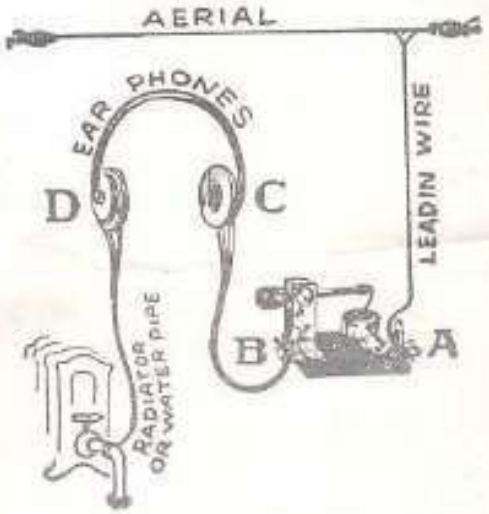


New idea - You can make Solar Cell from LED (Free Energy)




1.99
HOLD
BACK LIGHT
OFF
V~
V=
A=
200µ
2m
20m
200m
10A
Ω200k
20k
2k
200
hFE
NPN
PNP
ECBE
10A MAX
UNFUSED
10ADC

Instructions for using
Philmore Crystal Radio Detector



This Detector is a radio in itself, as it is possible to get reception with it alone, provided you are within 25 miles of a broadcasting station. Under very favorable conditions reception is sometimes possible at much greater distances.

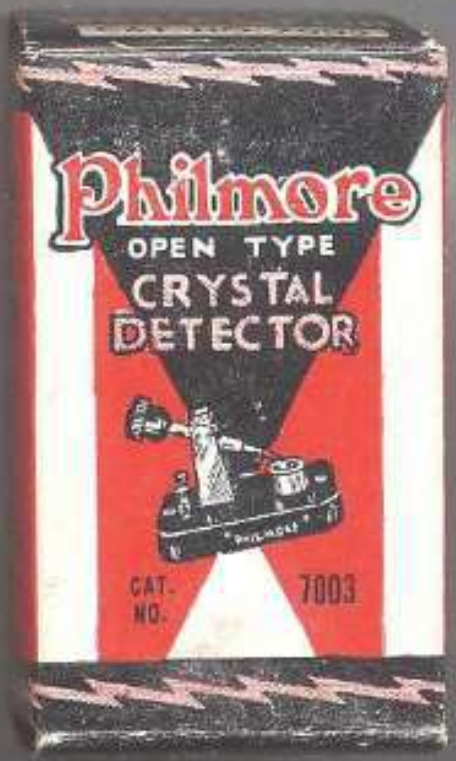
In order to get reception, you need an aerial wire and headphones. The AERIAL may consist of 100 to 125 feet of copper wire and two insulators. Attach insulators to each end of the wire. Stretch the wire allowing as little sag as possible. No part of this wire should touch any portion of the building or any other obstruction.

The LEAD-IN may consist of any desired length of covered wire which will reach from the aerial to the set. Scrape each end of the lead-in so that the wire is absolutely clean. Wind one end securely around the aerial wire. Place the other end in the clip marked "A".

There are two cords leading from the headphones. Connect the cord "C" as illustrated, from the earphone to clip "B" on the clip under the detector arm. The other wire from the earphone marked "D" is to be connected to water pipe, radiator or any other suitable connection to be used for the ground.

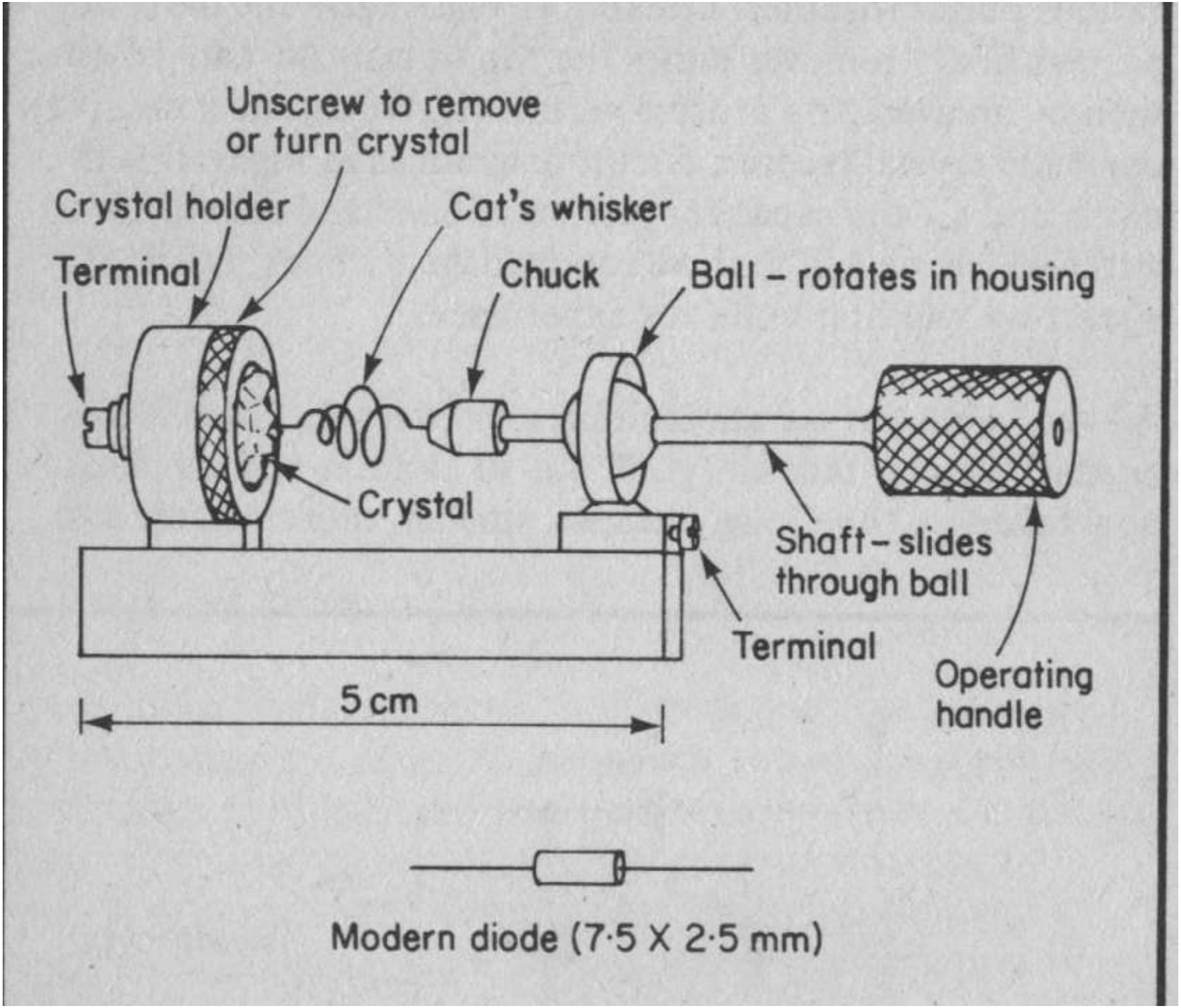
You are now ready to receive broadcast. Find a sensitive spot on the crystal by means of the cats-whisker. You may find it necessary to "hunt" for live spots on the crystal as only some parts of a crystal are sensitive, and unless you find these sensitive spots you will not hear anything.

If you do not at first get results, do not blame the detector, as every set is tested before being shipped and will positively get results under the proper conditions. Do not write in and ask what the trouble is for a personal examination of your entire hook-up will be necessary. Go over your aerial, ground, various connections, etc., and if necessary get someone who thoroughly understands radios to help you.








Unscrew to remove
or turn crystal
Crystal holder
Cat's whisker
Terminal
Chuck
Ball – rotates in housing
Crystal
Shaft – slides
through ball
Terminal
Operating
handle
5 cm
Modern diode (7·5 X 2·5 mm)

Majoritatea componentelor active folosite în circuitele electronice moderne sînt dispozitivele bazate pe semiconductoare.

Cel mai simplu dispozitiv este *dioda* punctiformă cu germaniu. Ea are proprietatea de bază de a se comporta ca şi cum este conectată direct la o sursă electrică de curent continuu (plusul sursei la plusul diodei) şi ca un izolator, cînd este conectată invers la aceeaşi sursă (plusul sursei la minusul diodei), ca în figura 2.9.

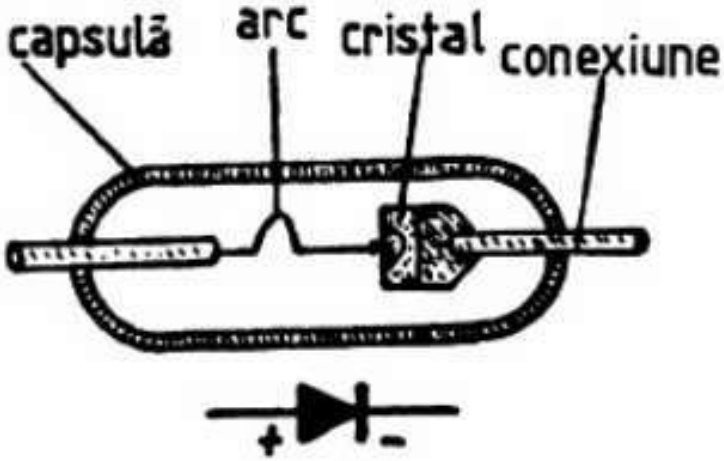


FIG. 2.9.

Dioda punctiformă cu germaniu



FIG. 2.10.

Tipuri de diode semiconductoare

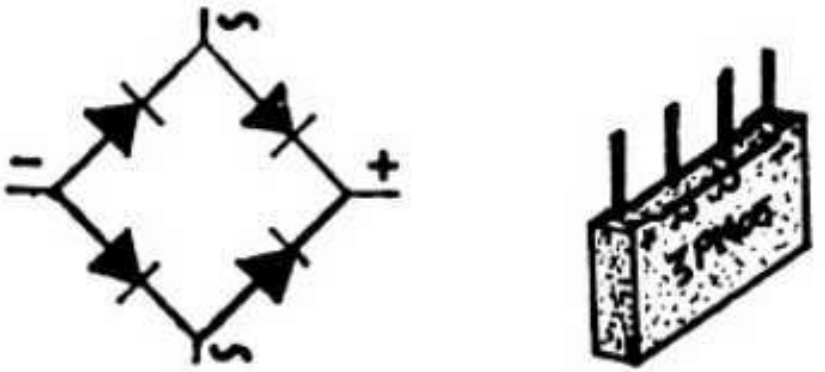
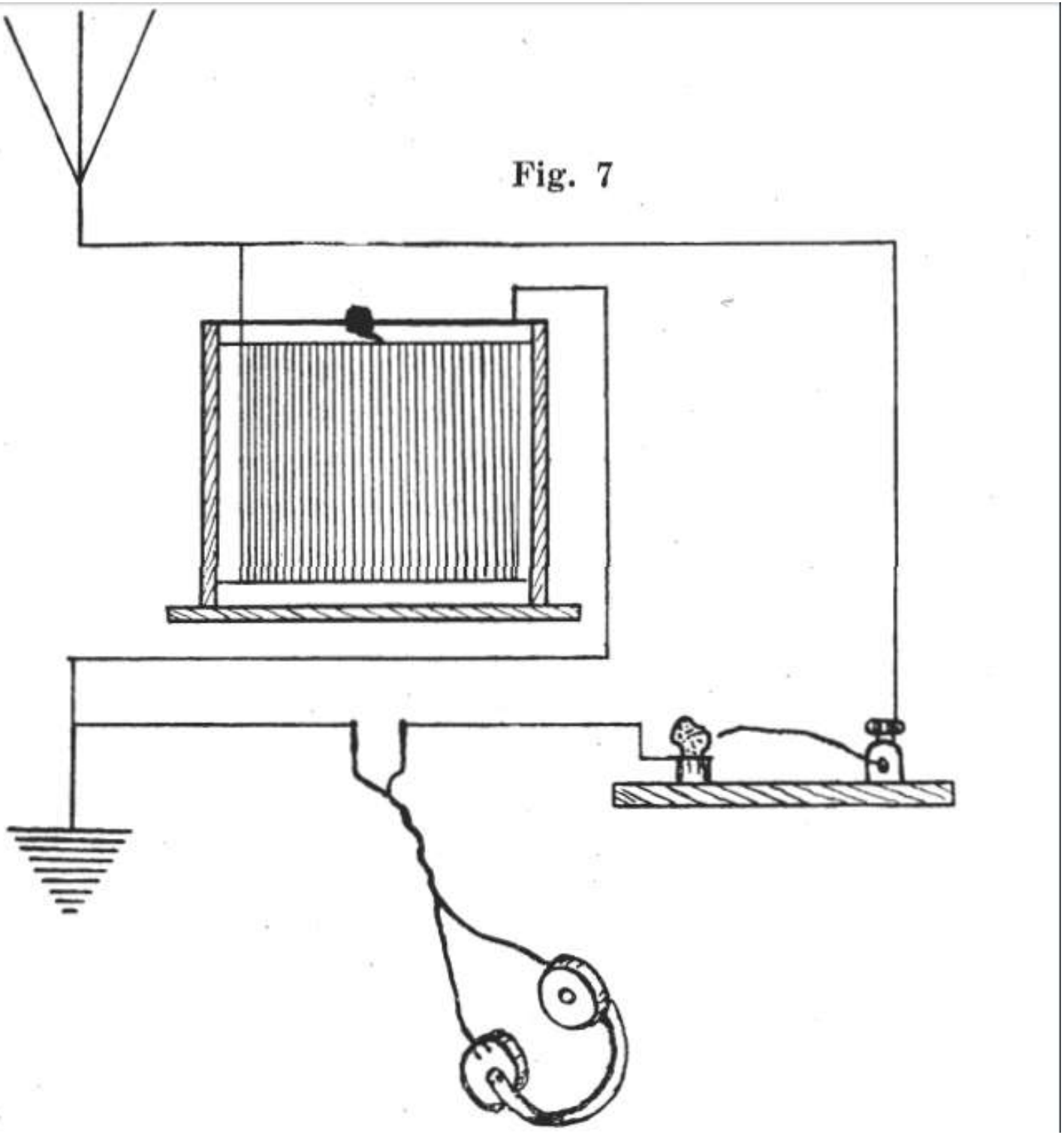
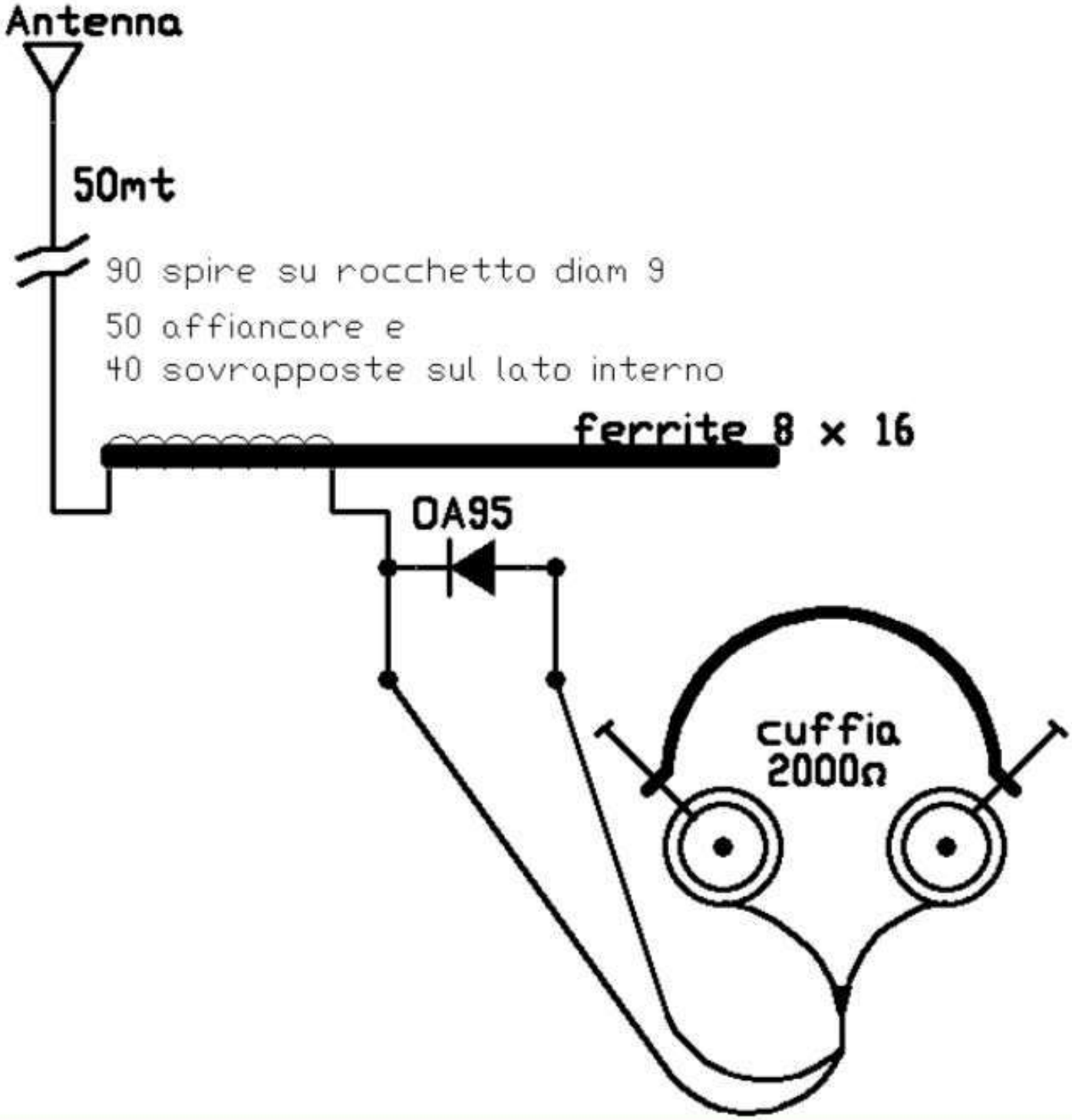


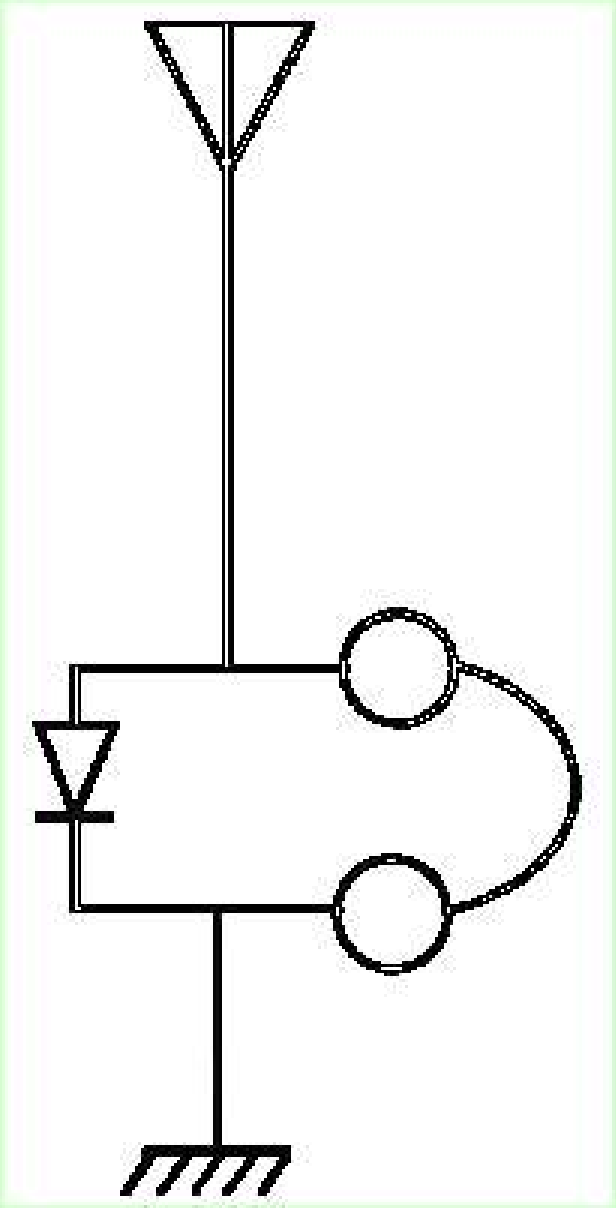
FIG. 2.11.

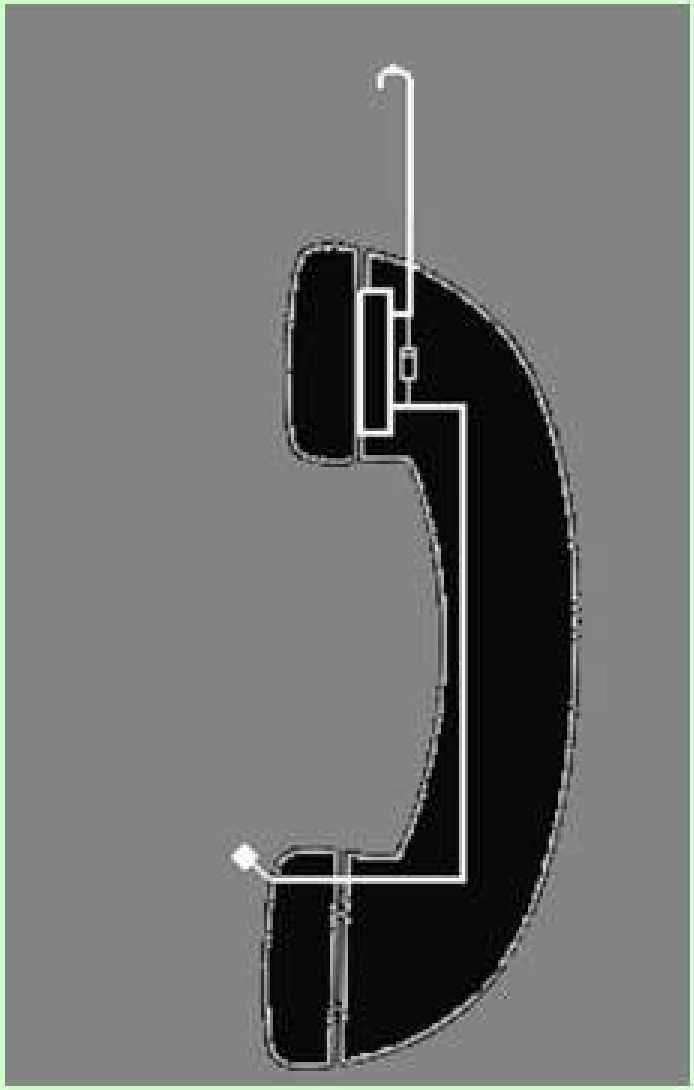
Puntea redresoare

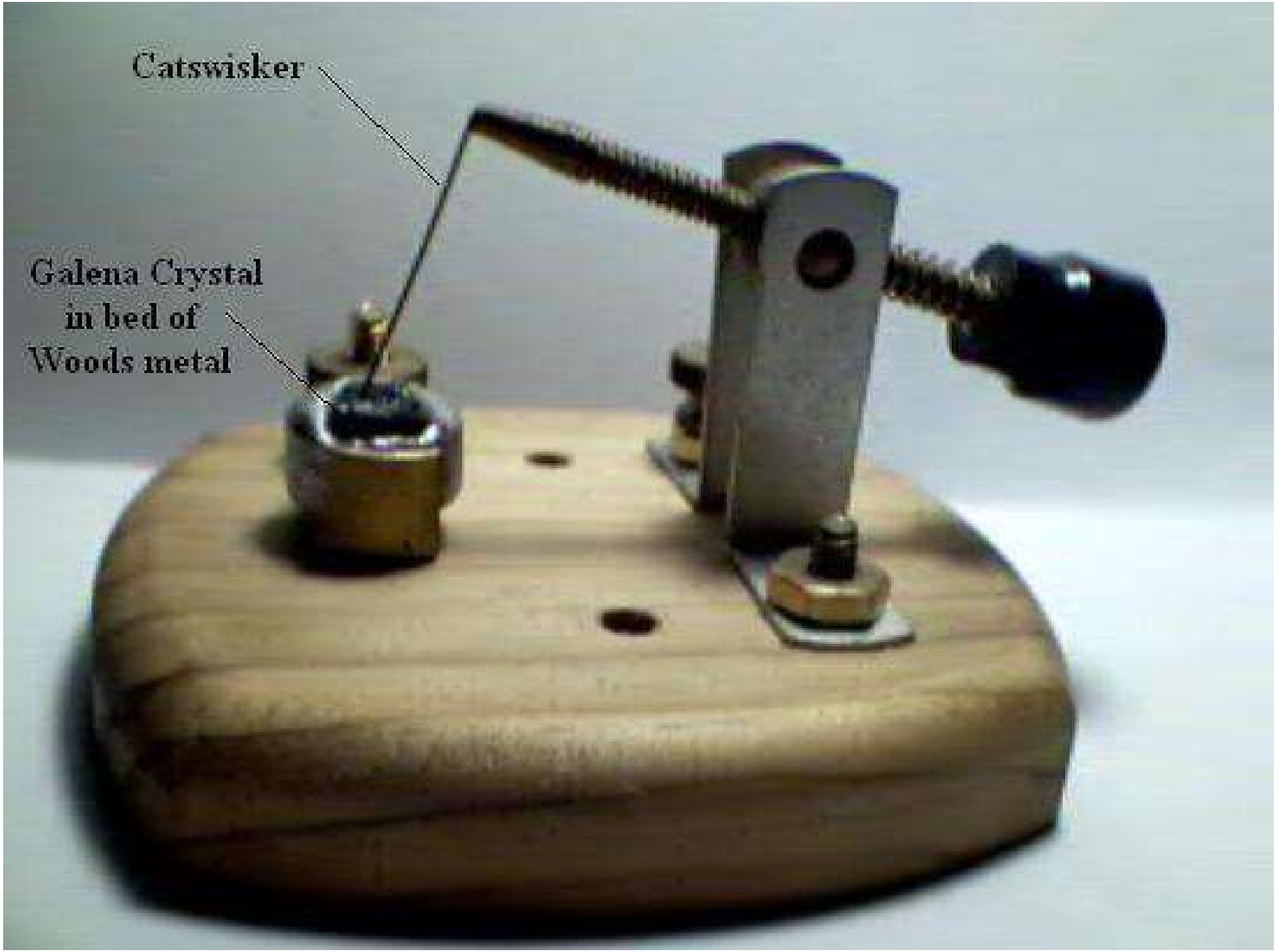
Fig. 7

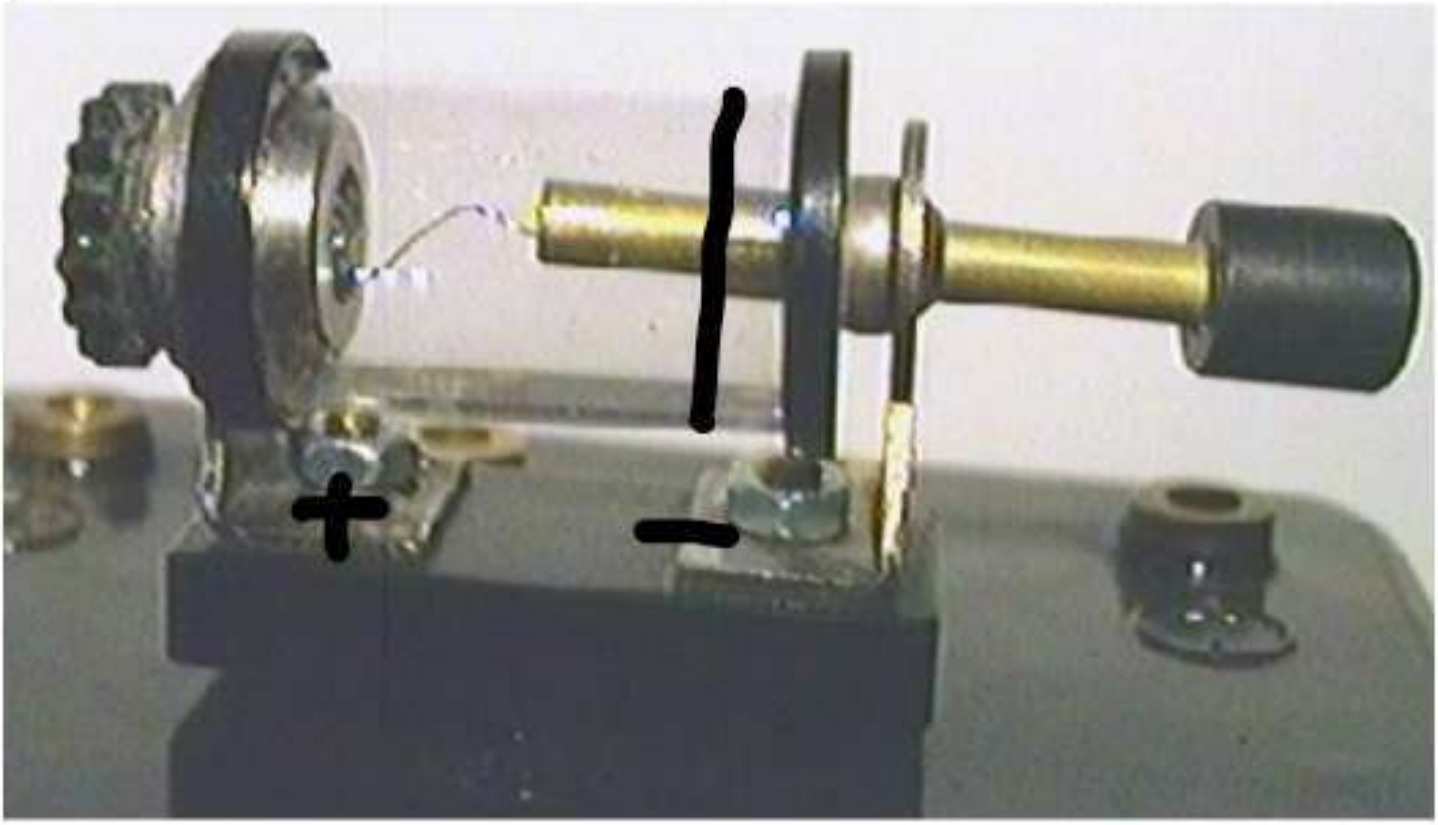


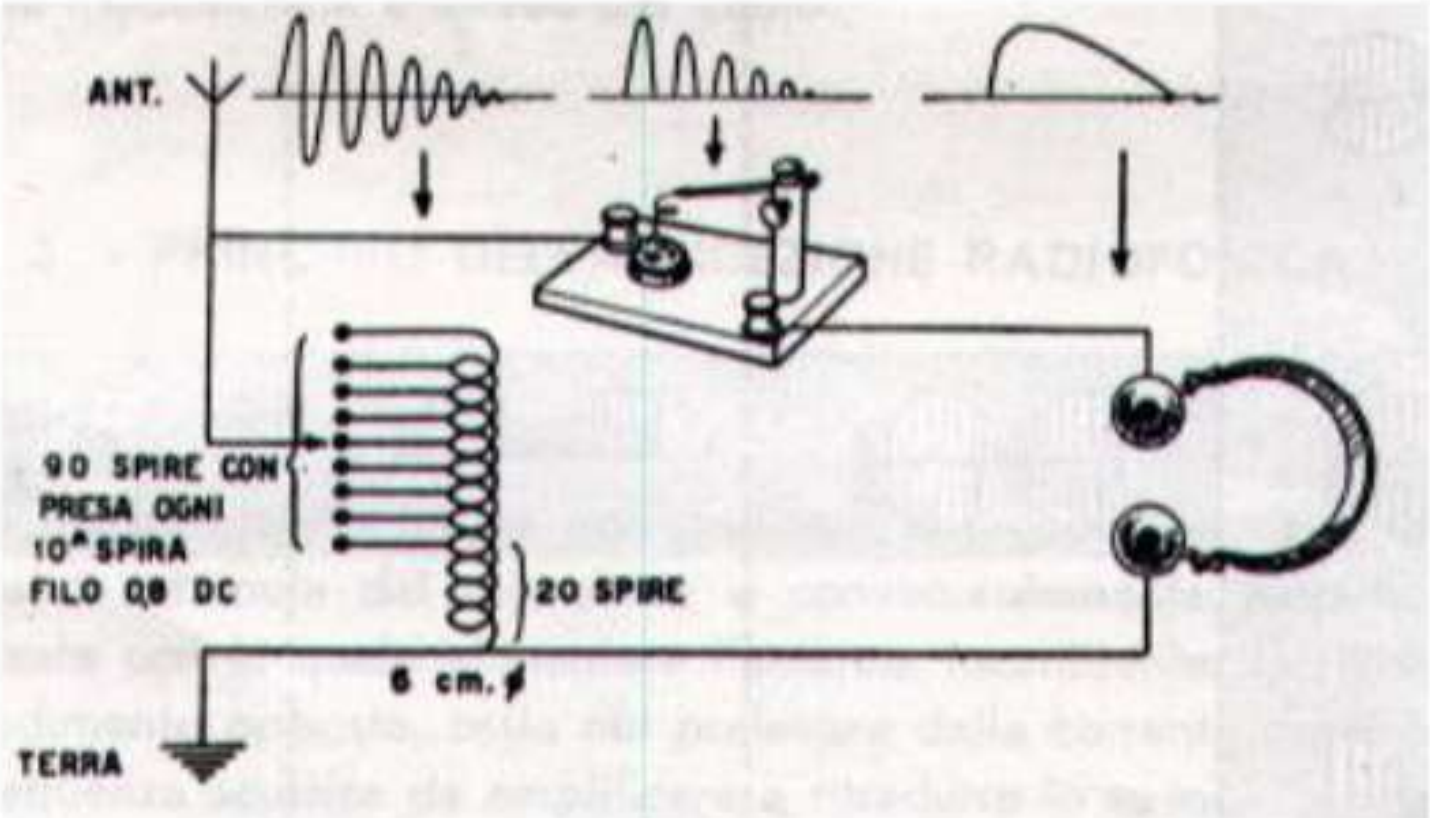

Antenna
50mt
90 spire su rocchetto diam 9
50 affiancare e
40 sovrapposte sul lato interno
ferrite 8 x 16
OA95
cuffia
2000Ω






Catswisker
Galena Crystal
in bed of
Woods metal


+
−


ANT.
90 SPIRE CON
PRESA OGNI
10ª SPIRA
FILO Ø8 DC
20 SPIRE
6 cm. ϕ
TERRA

Lead sulfide crystals, also called "galena"



Crystal detector, the lever was used to position the spring contact on a crystal face capable of performing the radio signal detection.

Yeah , but how does a galena radio work? Here is the constructive scheme of a receiver of this kind, obtained from a book of popular radio commu to the knowledge of the radio, ed.Hepep 1943):

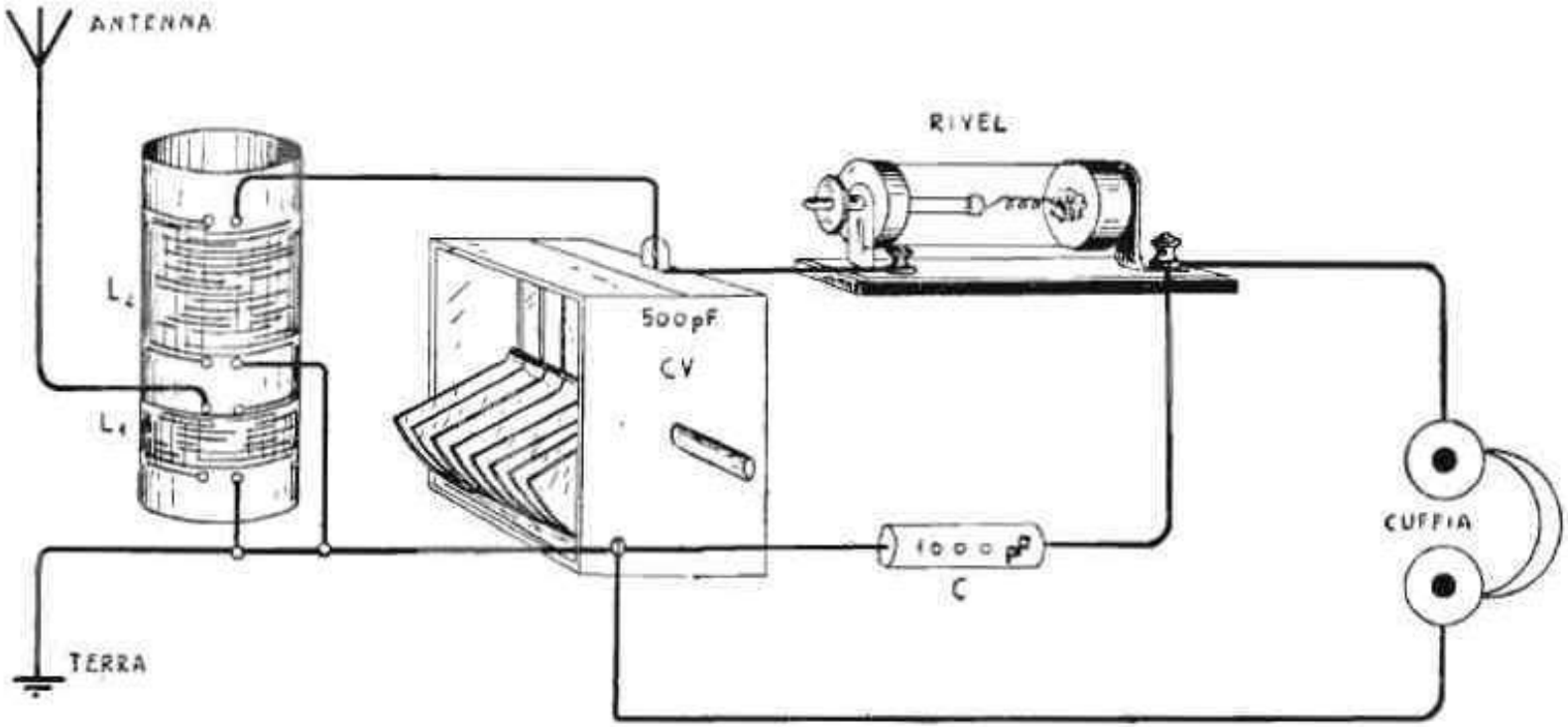
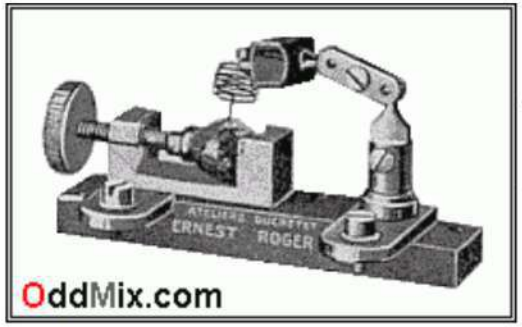


Fig. 13.5. – Realizzazione pratica dello schema di fig. 13.3 con aggiunta della bobina d'antenna.



Picture 1. "Ernest Roger" Crystal detector from 1920

Many of the **younger generation** never had the pleasure to have, or to even see a real beautiful crystal detector as shown on **Picture 1**. A detector like that was the product of the early 1920's, and it was an expensive, quality, well made product. They were usually hands assembled with machine made components.

This particular "**Ernest Roger**" detector device is built on an insulated base, either wood or most likely of Bakelite, the most widely used and only available plastic material at the times.

Many of the younger generation never had the pleasure to have, or to even see a real beautiful crystal detector as shown on **Picture 1**. The new generations are much too involved with technology and playing on their computers or going to an **online University**. This excellent detector holder used copper, brass and bronze generously for the crystal holder and for all of the **electrodes**.

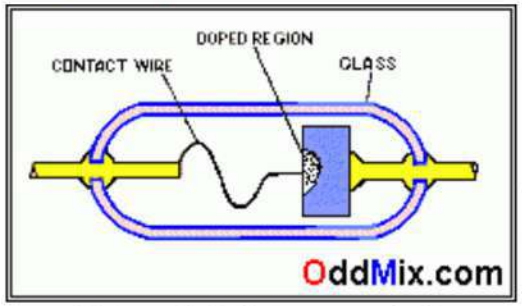
The most often used crystal in this and similar detectors - then and now - was **pyrite** or galena as shown in the 1925 listing in a table in the **"American Mineralogist"** publication, that has a listing of thirty three minerals catalogued with rectifying detector properties.

Among the very first commercially produced diodes is the 1N21B shown on **Picture 2**. It is more than curious, that this "diode" is enclosed in a case on which there is a slotted screw-head is just visible on the wide side (lower right). That screw is connected to a fine "cats whisker" steel wire, a few turns of a spring-like device, terminating in a point that is in touch of the germanium semiconductor material connected to the top left diode terminal.



Picture 2. Early point contact diode with adjustable srew

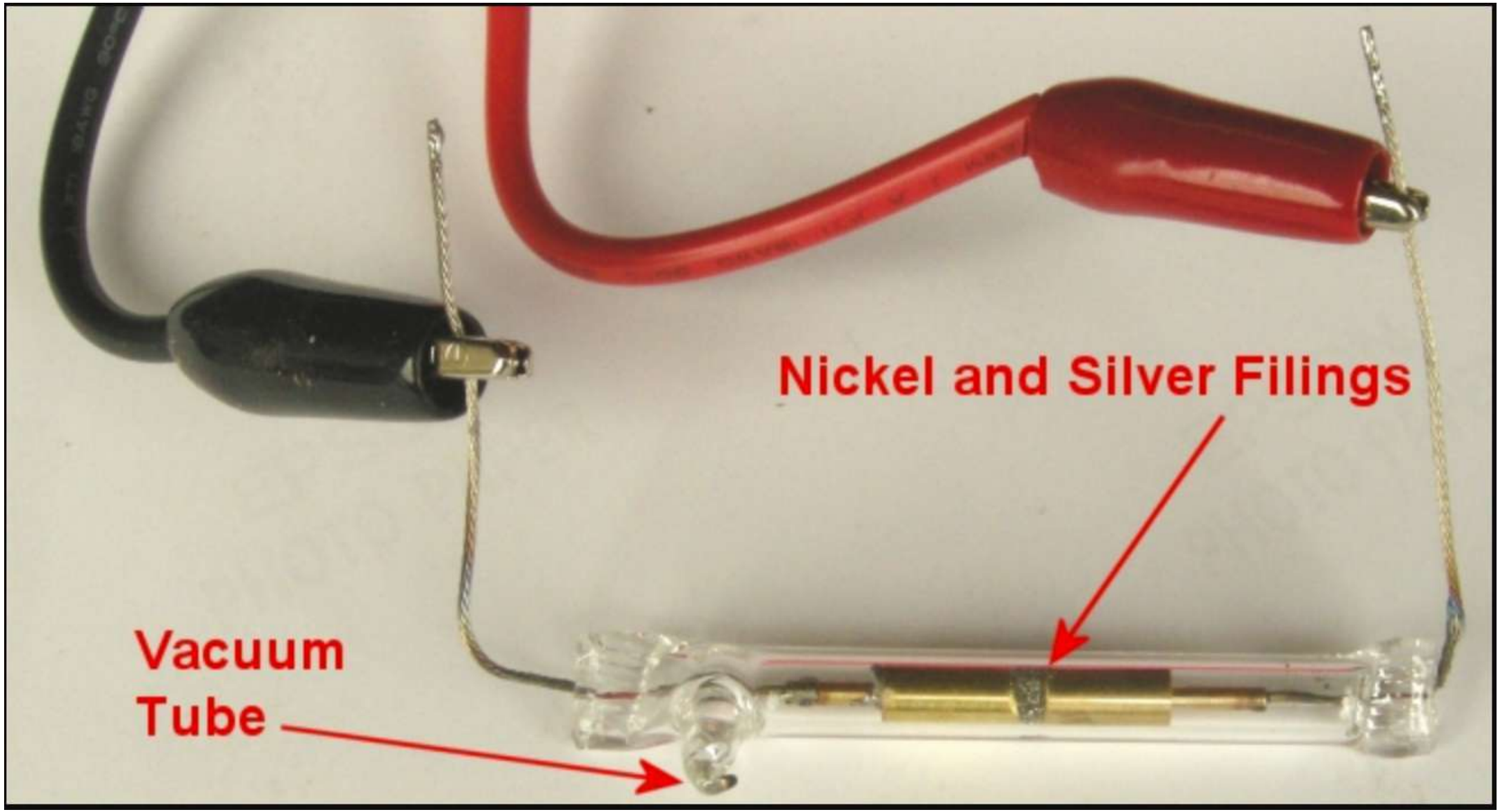
The arrangement is much smaller, and more diode like, then the detector on **Picture 1**., but it made in a very similar arrangement, which has became known as the point contact diode. From these and similar germanium diodes, evolutionary progress leads us to current PN junction Silicon, Gallium Arsenide or other more exotic semiconductor materials which are the achievement of the latest scientific age and many years of steady experimentation, research and development.



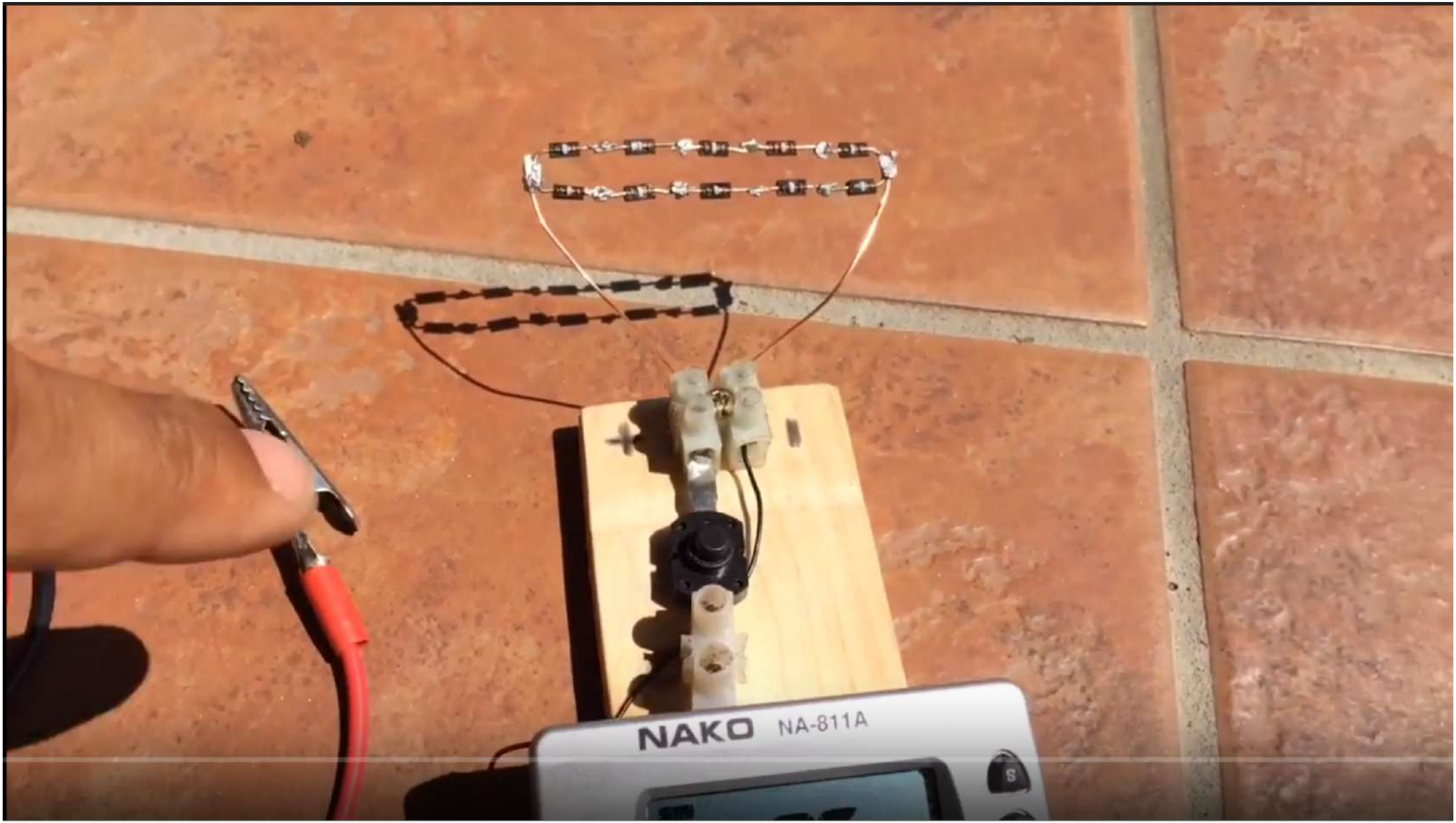
Picture 3. Point contact diode

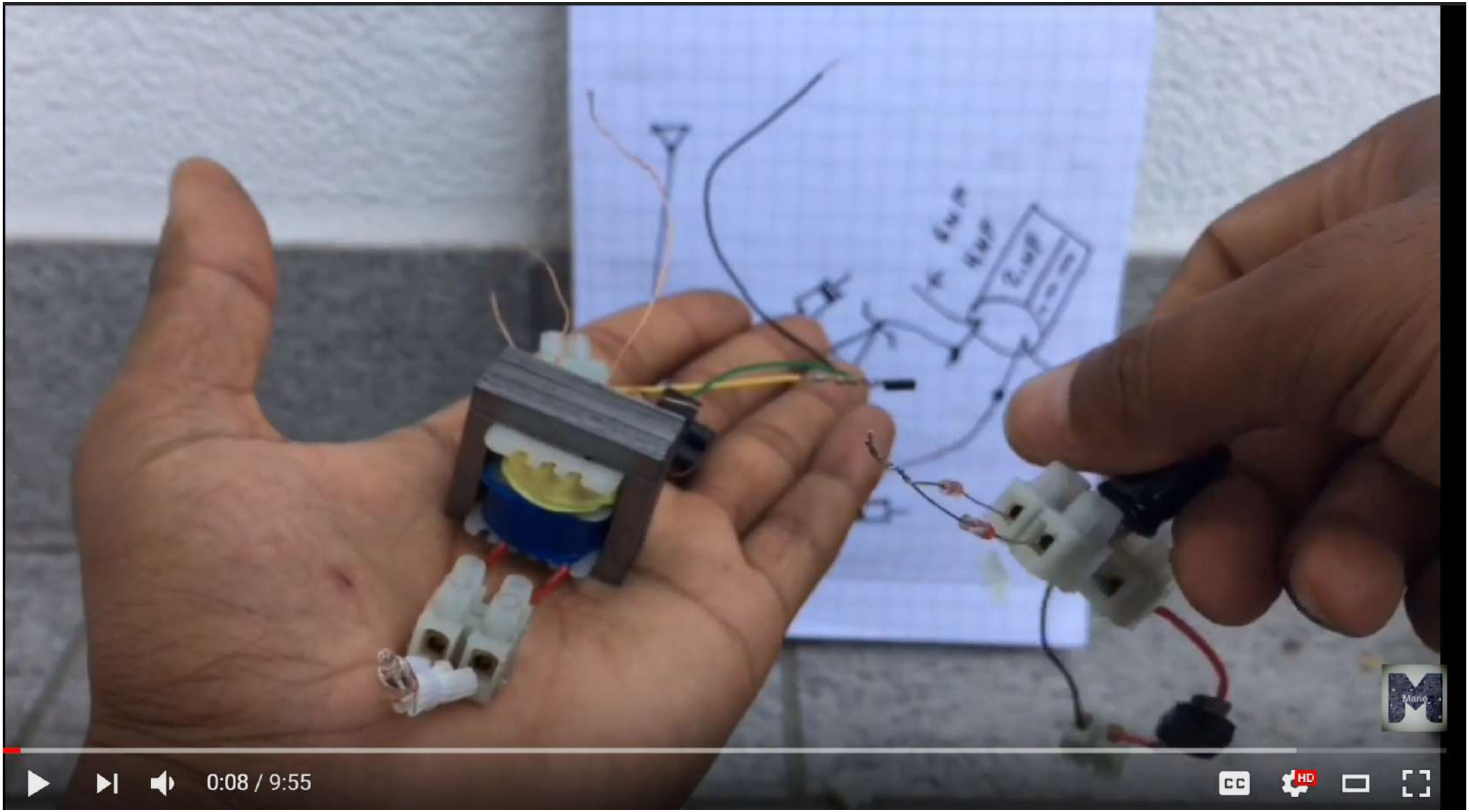
Picture 3 shows the cross section of a hermetically glass enclosed, point contact diode. If the left side, point contact terminal would be attached to a screw and a short spring, and the glass envelope would have a threaded metal part in it, the **Picture 2** and **Picture 3** devices would be nearly identical.

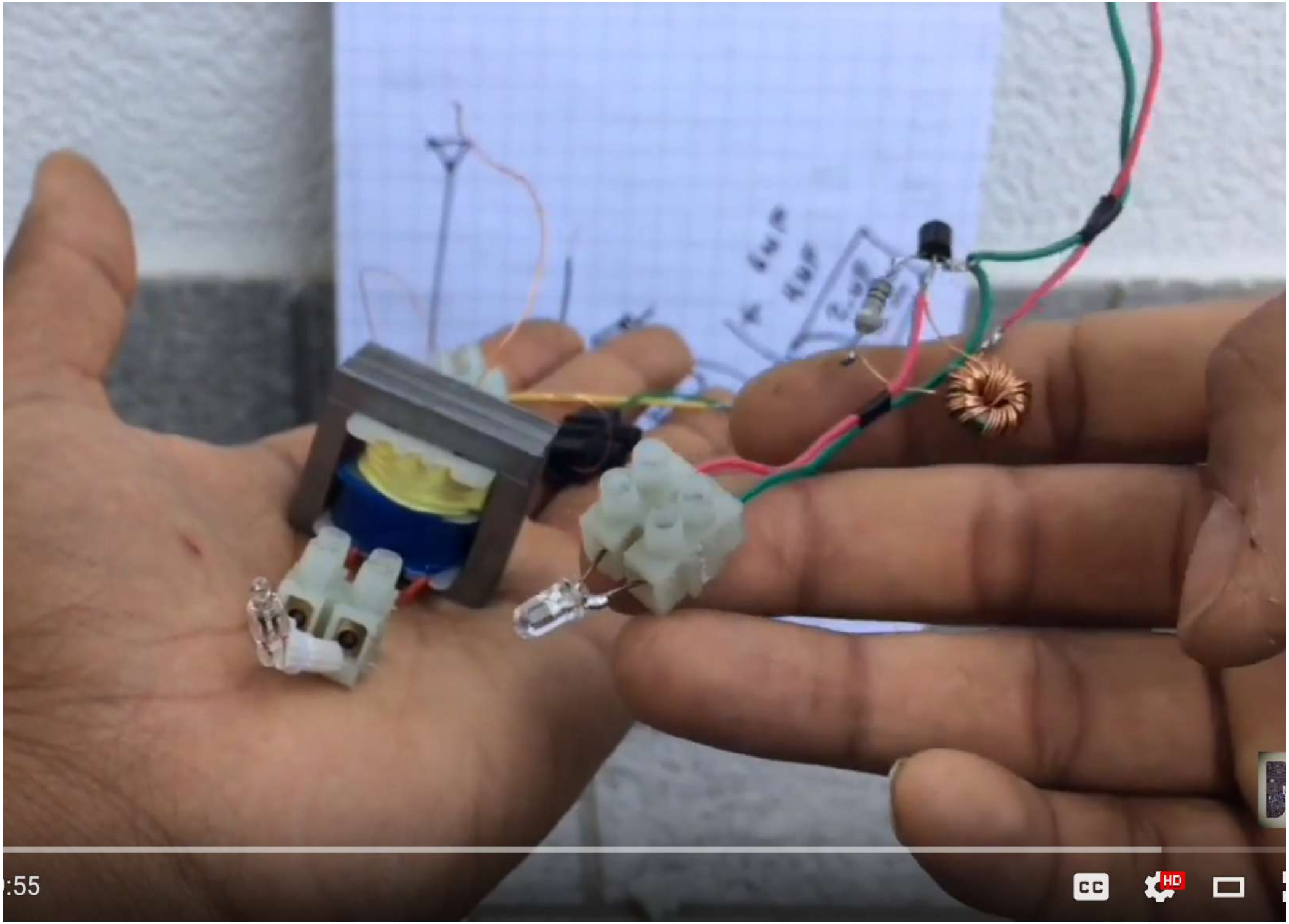
These point contact "cat's whisker" devices, are still made occasionally because of their very small capacitance. As it was discovered early on, they are highly useful in high frequency electronics. All the way up to microwave frequencies they useable. The simplest radar detectors usually made with a simple horn **antenna**, a diode similar to **Picture 2** and **Picture 3** and a transistor amplifier. If the designer keeps it simple, and don't use a local oscillator, such radar detectors

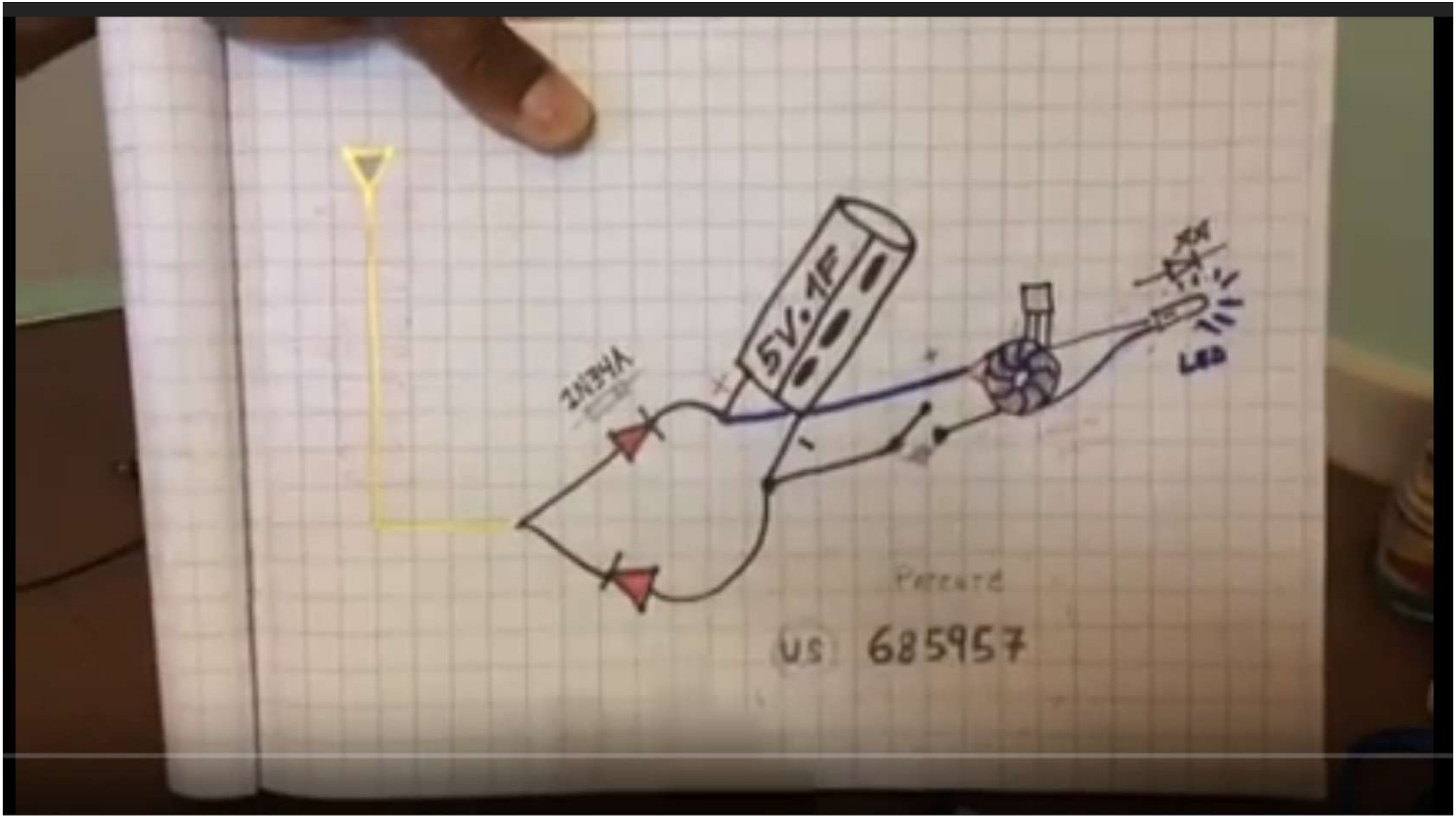

Nickel and Silver Filings
Vacuum
Tube


Meter on 200 Ohm Range
Display Indicates Activation = 11.2 Ohms
Coherer Detector
Press to Spark
Spark Gap
11.2
DCV
ACV
DCA
OFF
ON
10ADC
COM
CEN-TECH
DIGITAL
MULTIMETER
NPN
PNP
hFE

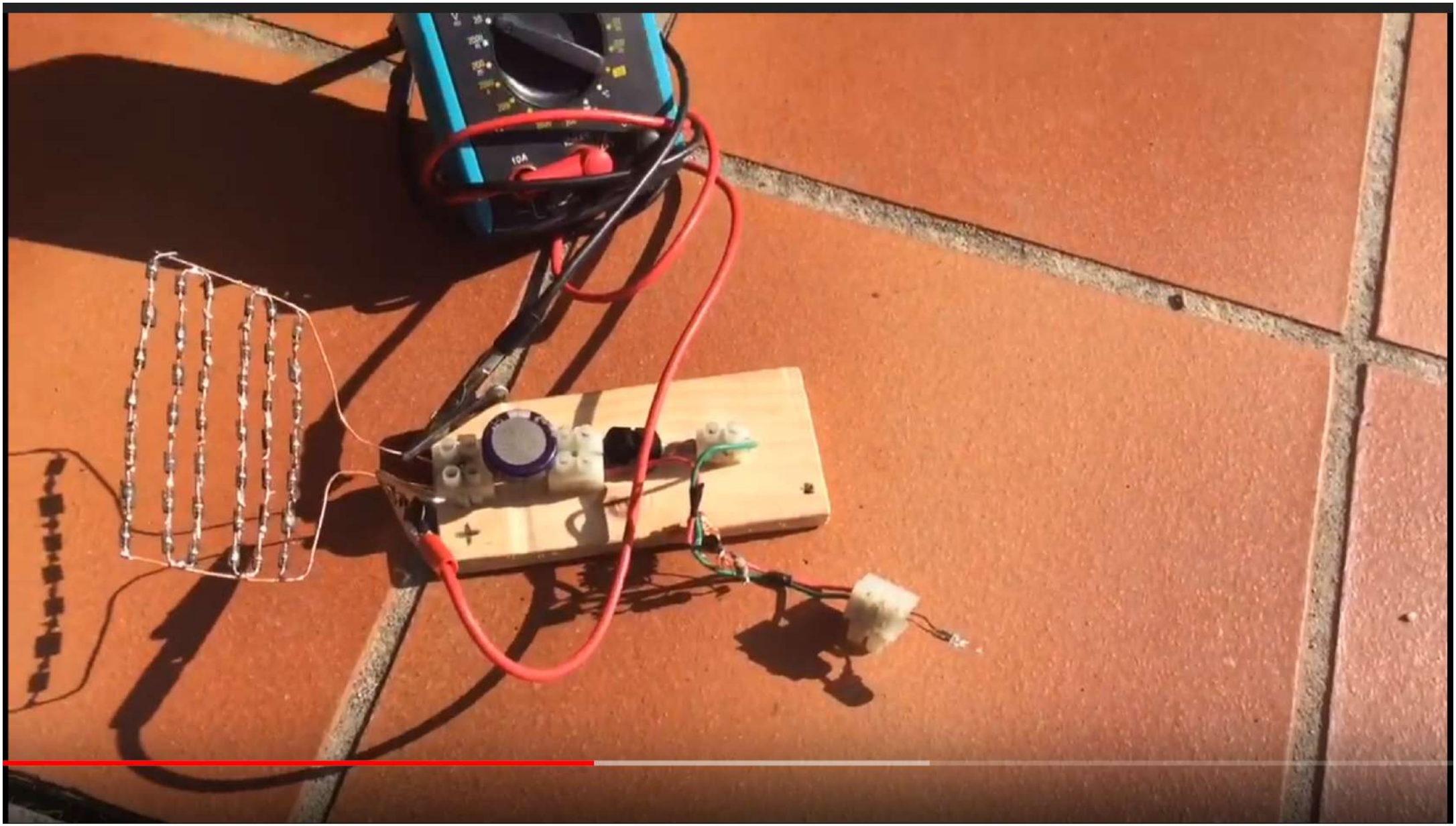

NAKO
NA-811A

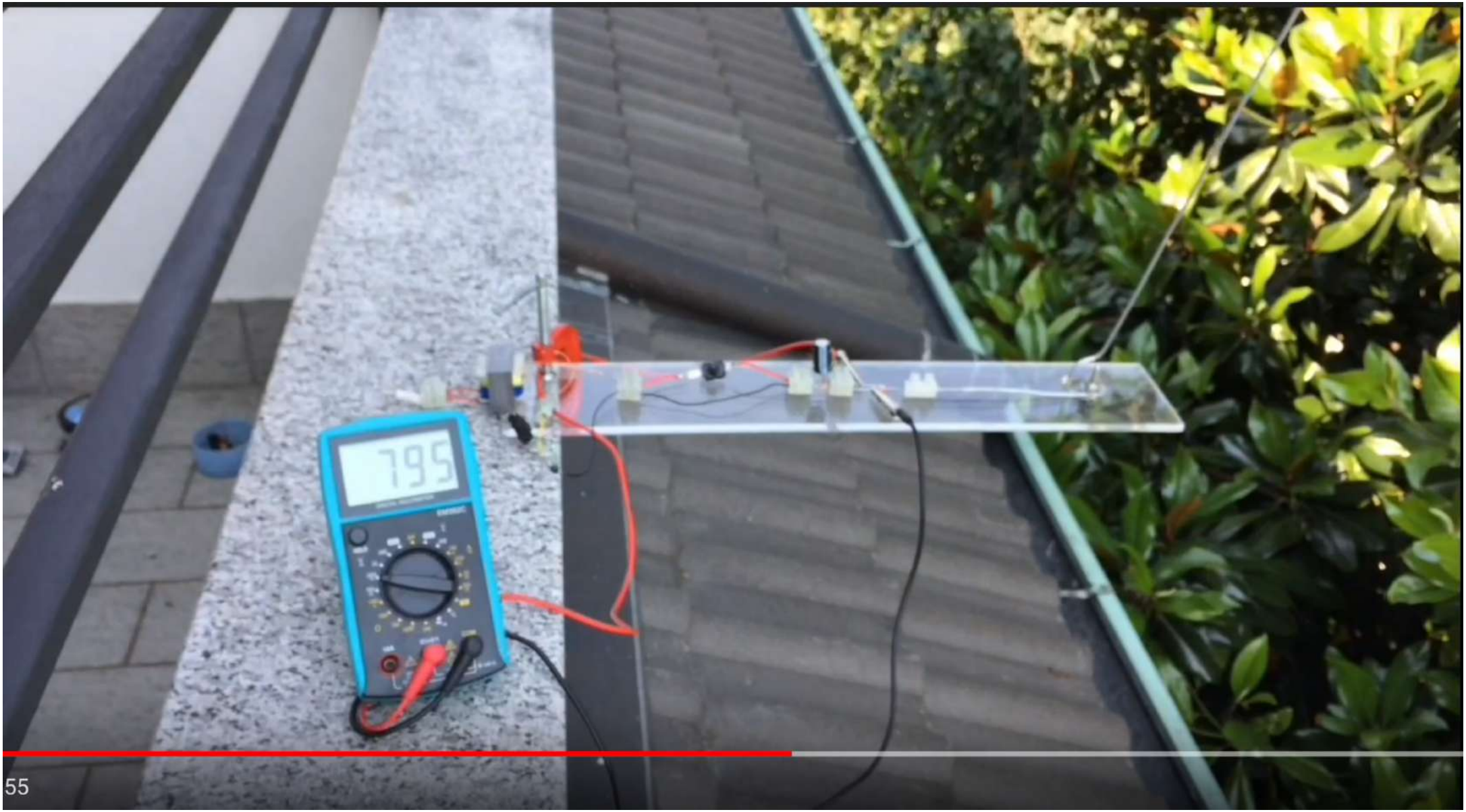

0:08 / 9:55

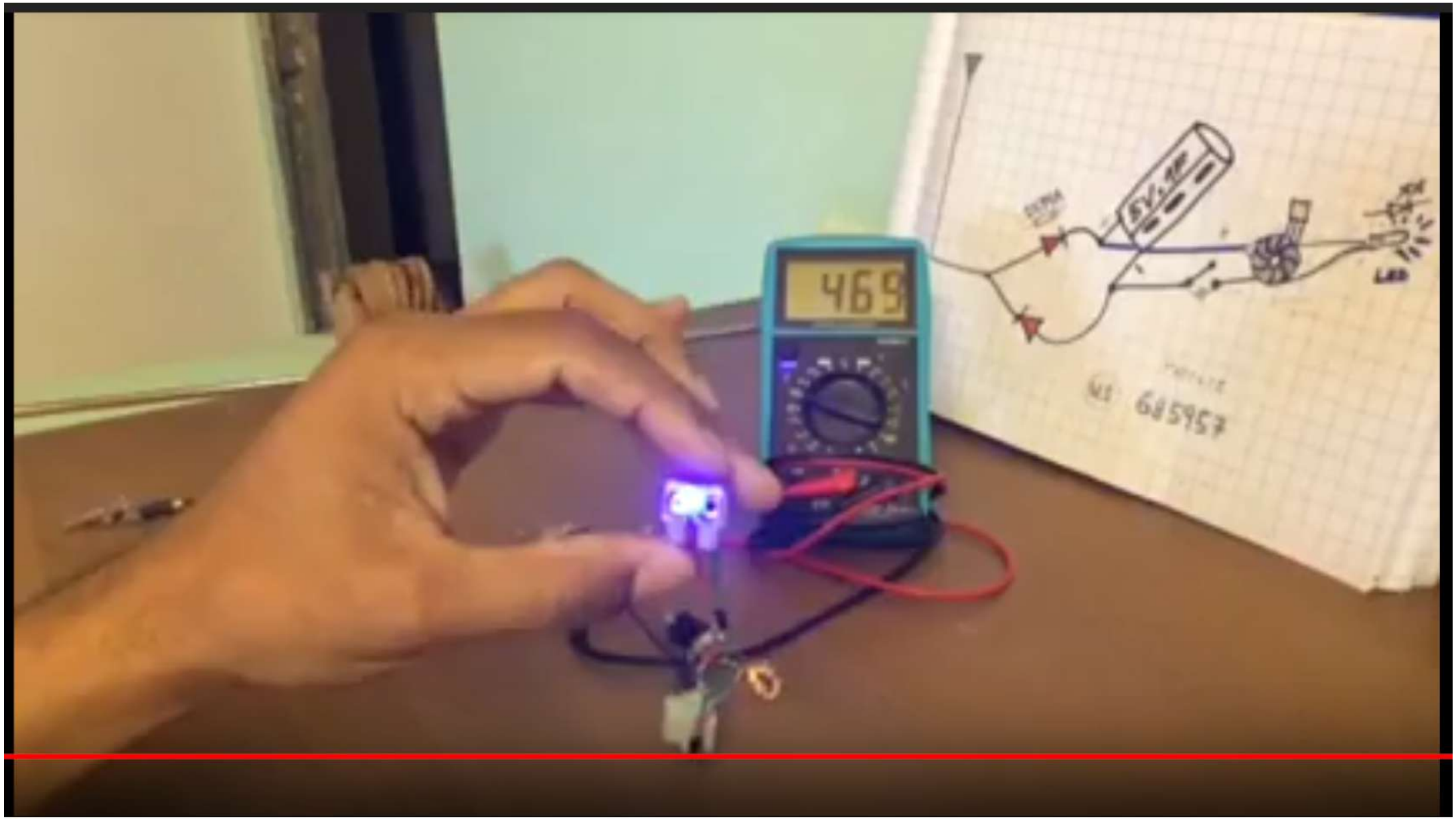

:55
HD


5V. 1F
ANTENA
LED
PATENTE
US 685957

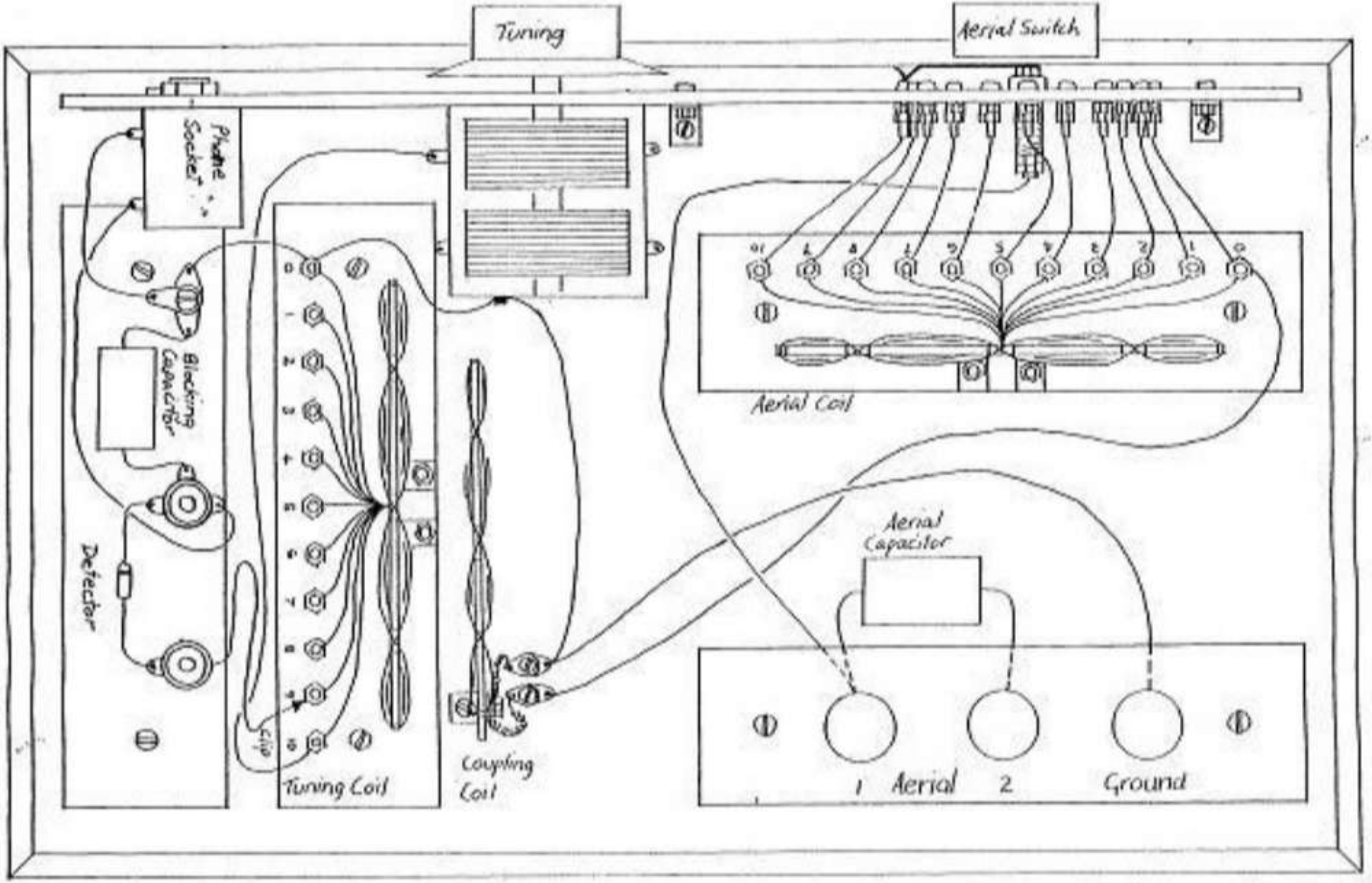



10A

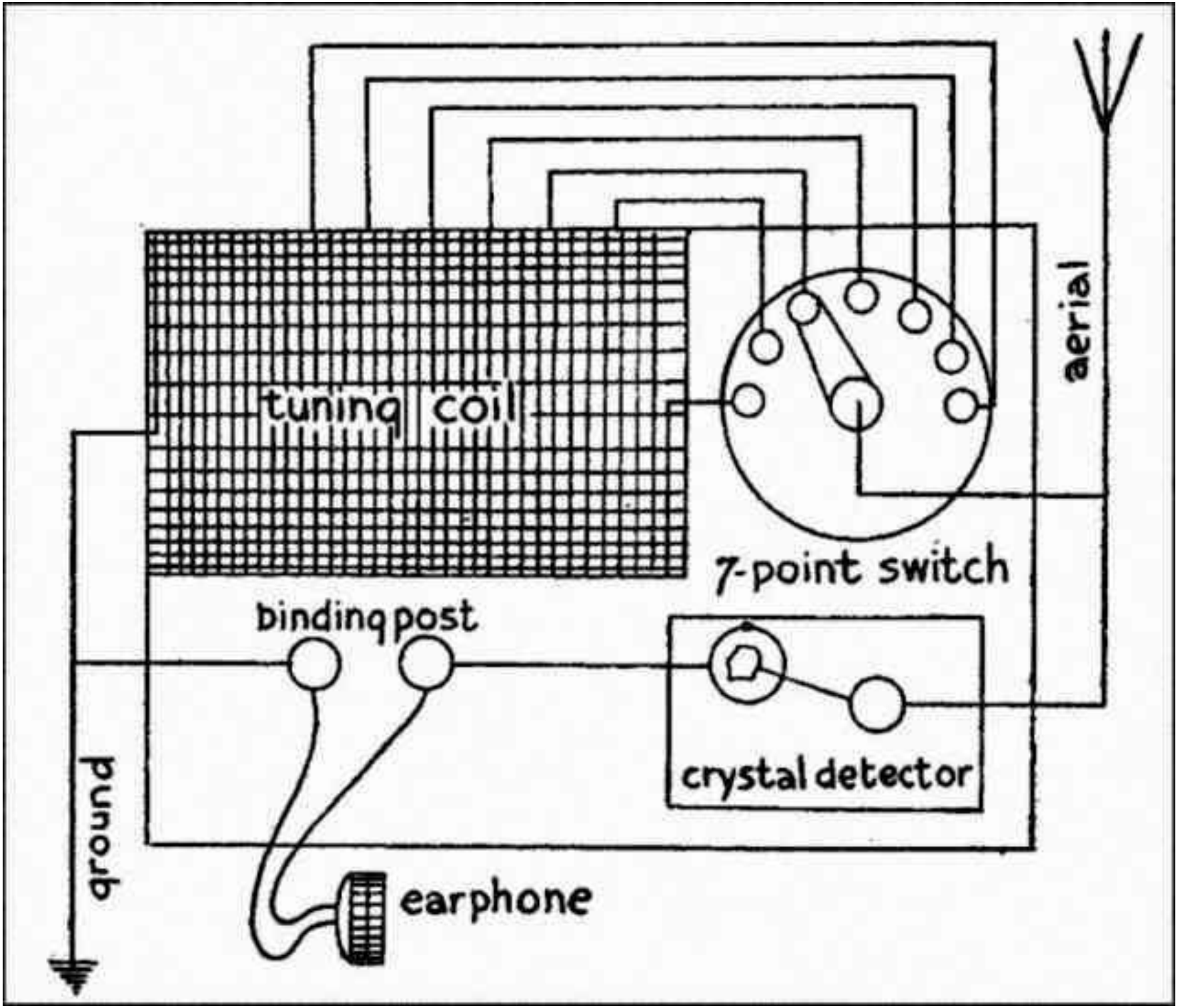

795


469


THE
SUPER
CRYSTAL
SET
AERIAL TAP
0
1
2
3
4
5
6
7
8
9
10
TUNING
0
10
20
30
40
50
60
70
80
90
100
PHONES


Tuning
Aerial Switch
Phone Socket
Blocking Capacitor
Detector
Aerial Coil
Aerial Capacitor
Tuning Coil
Coupling Coil
1 Aerial 2 Ground


KB8TAD


tuning coil
7-point switch
aerial
binding post
crystal detector
ground
earphone


KB8TAD

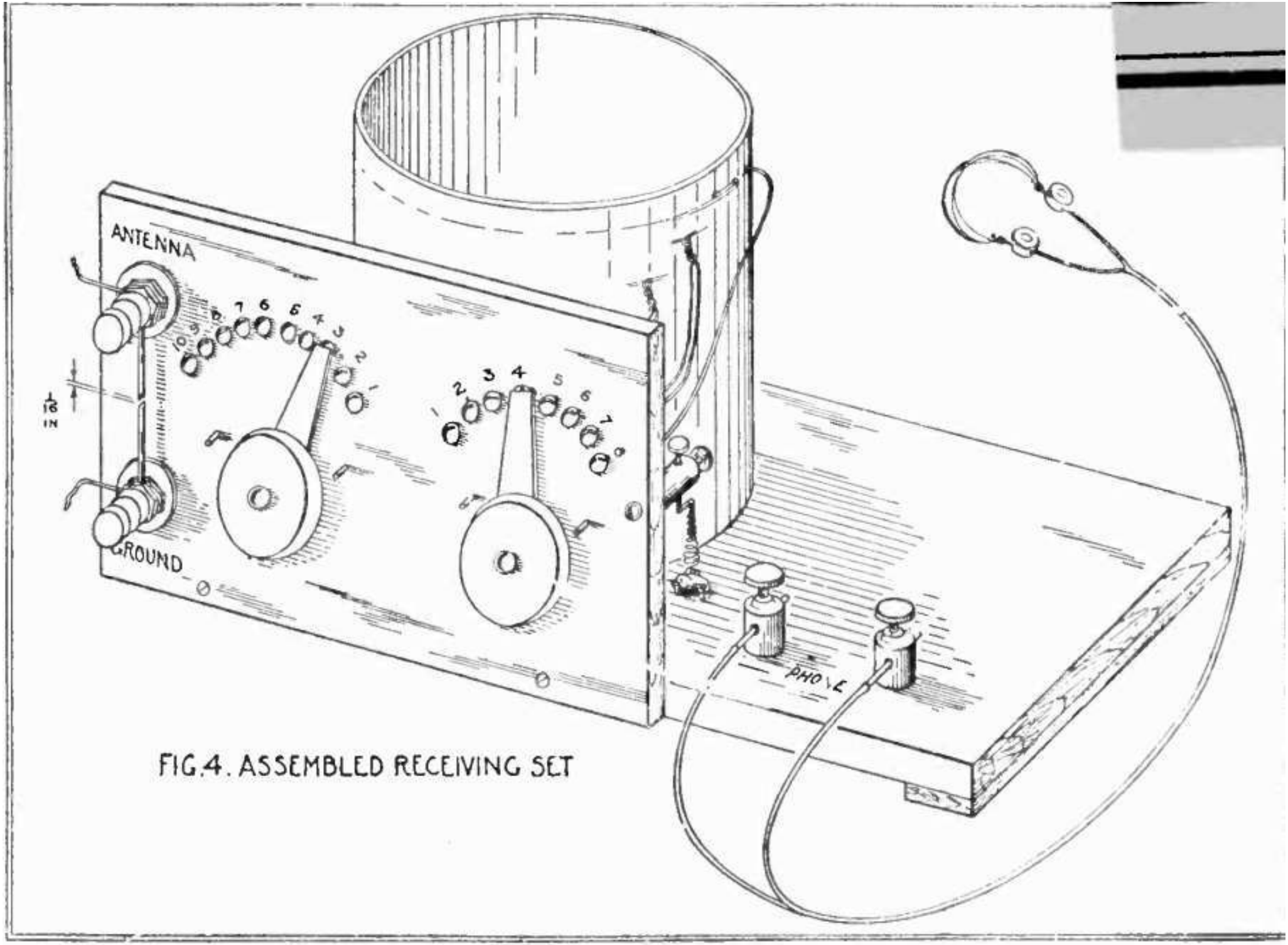


FIG.4. ASSEMBLED RECEIVING SET

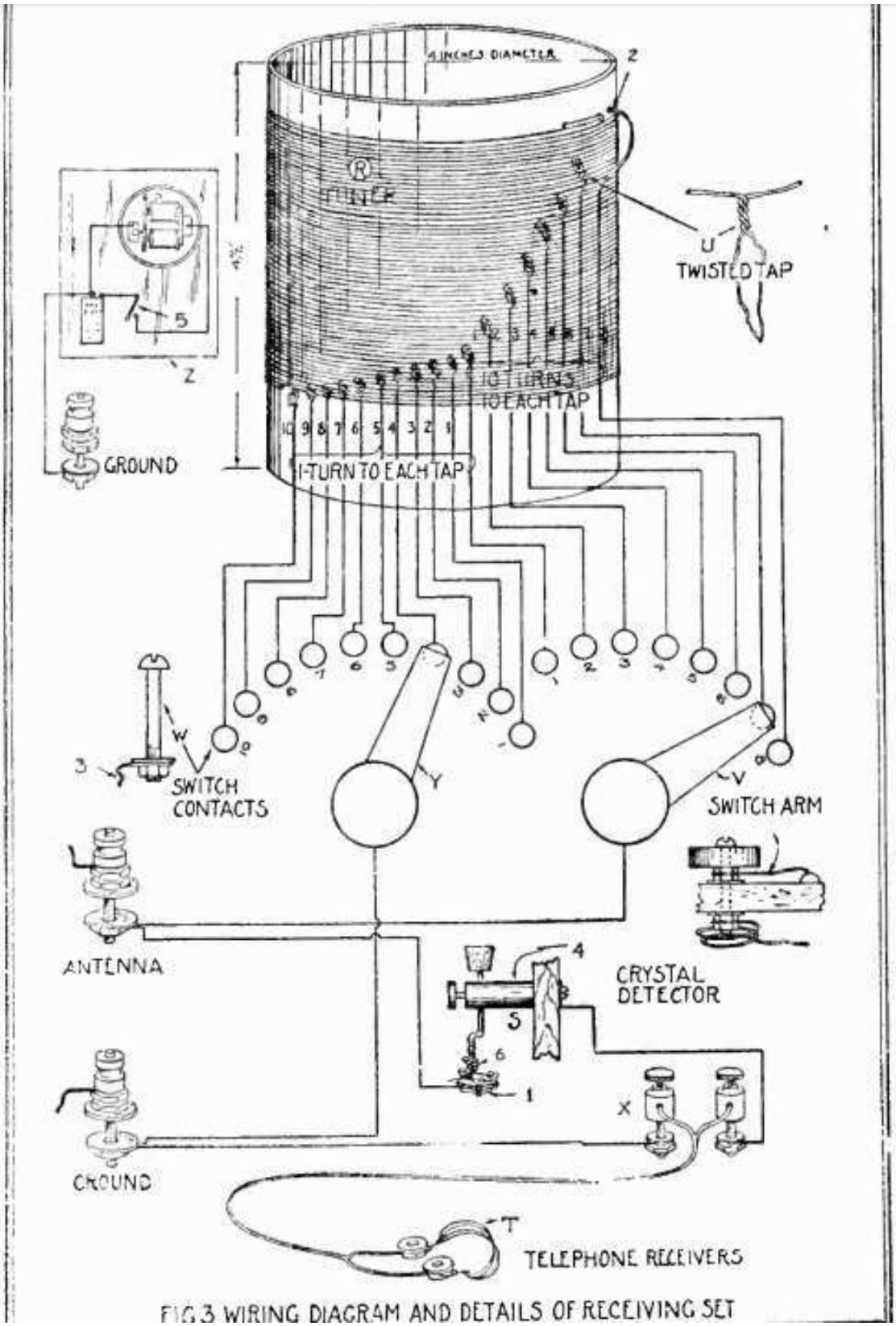


FIG.3 WIRING DIAGRAM AND DETAILS OF RECEIVING SET

FIG 2. RECEIVING SET, WITH ANTENNA AND GROUND CONNECTIONS

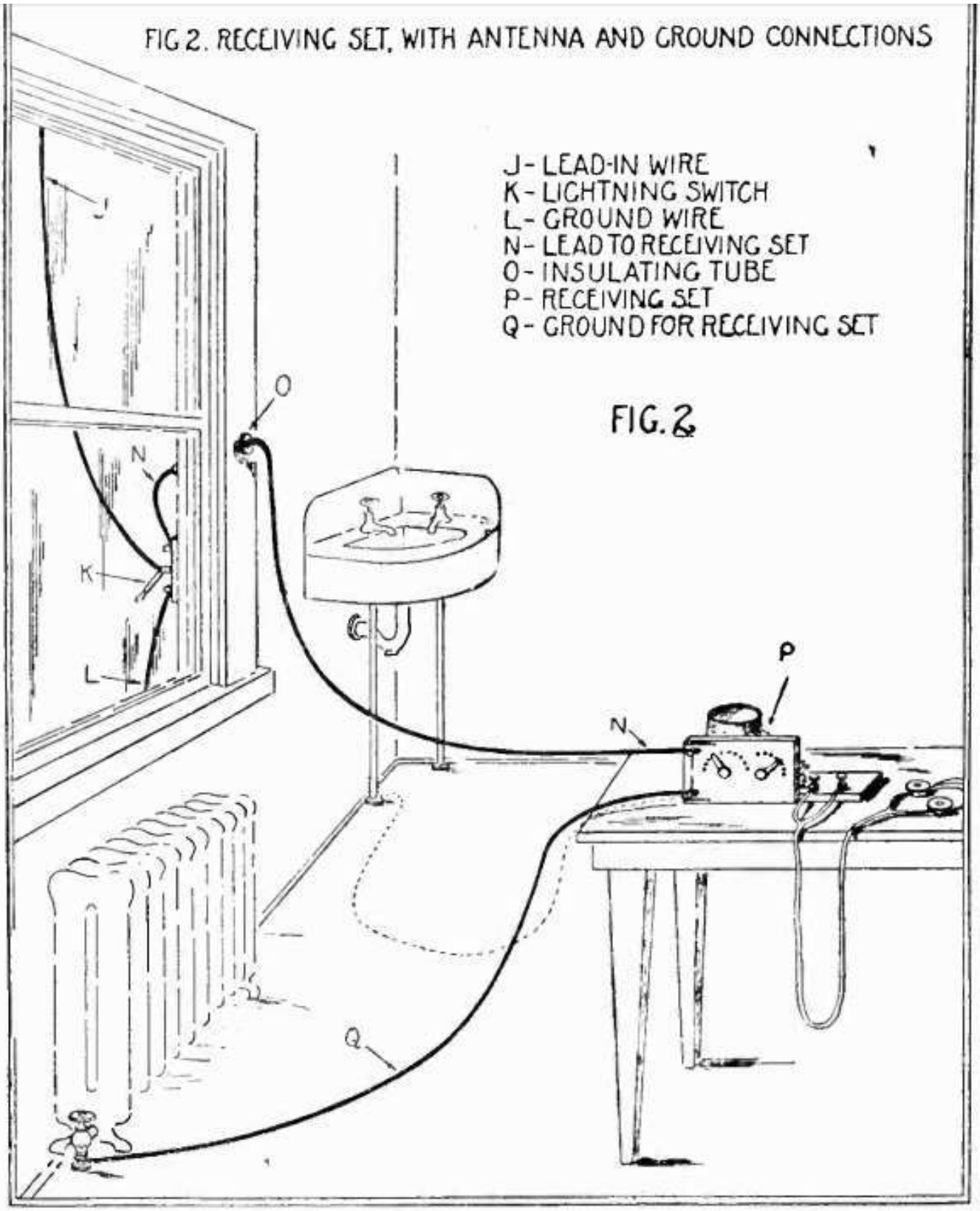
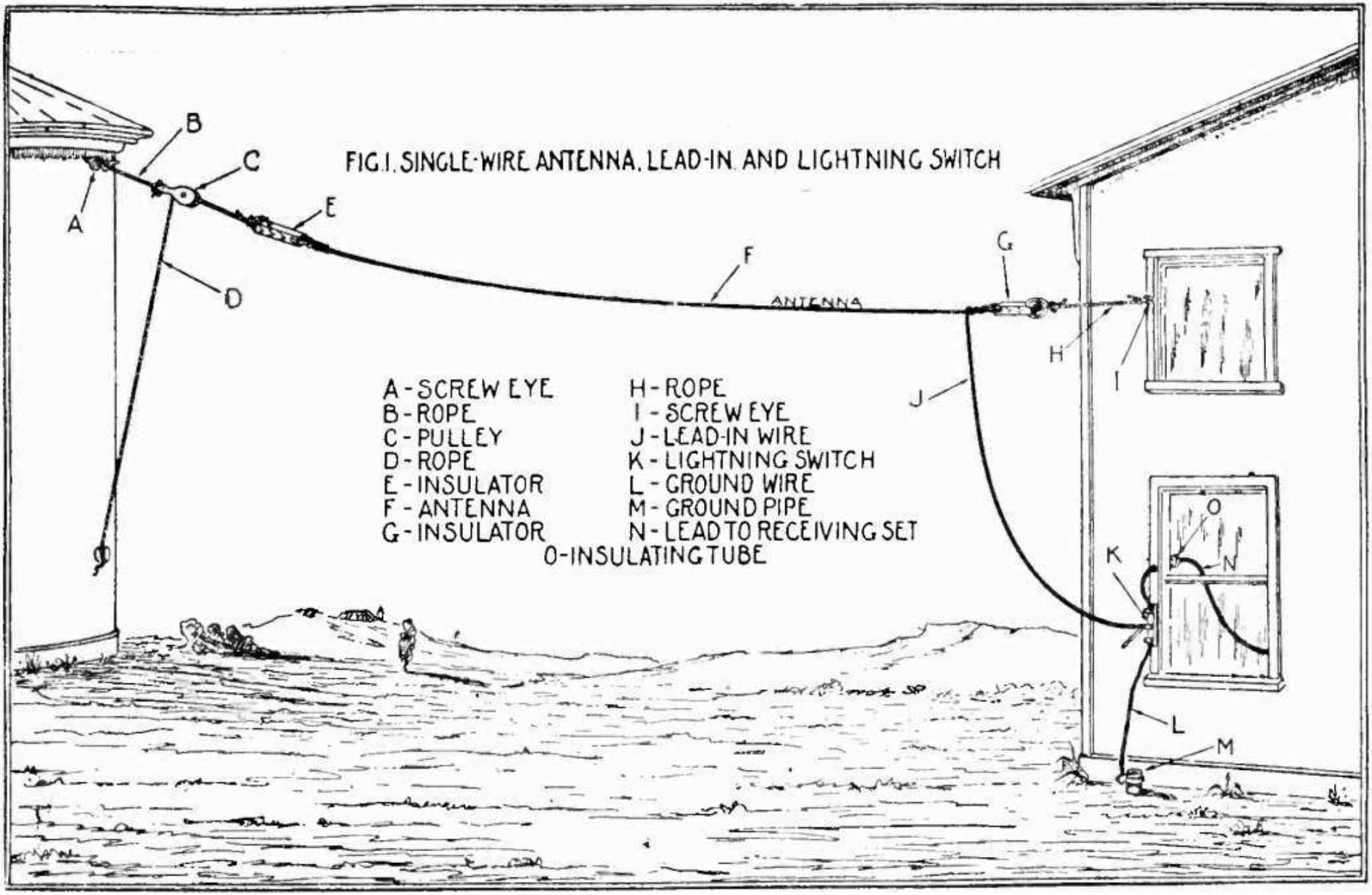


FIG. 2.


FIG. 1. SINGLE-WIRE ANTENNA, LEAD-IN AND LIGHTNING SWITCH
A - SCREW EYE
B - ROPE
C - PULLEY
D - ROPE
E - INSULATOR
F - ANTENNA
G - INSULATOR
H - ROPE
I - SCREW EYE
J - LEAD-IN WIRE
K - LIGHTNING SWITCH
L - GROUND WIRE
M - GROUND PIPE
N - LEAD TO RECEIVING SET
O - INSULATING TUBE
ANTENNA

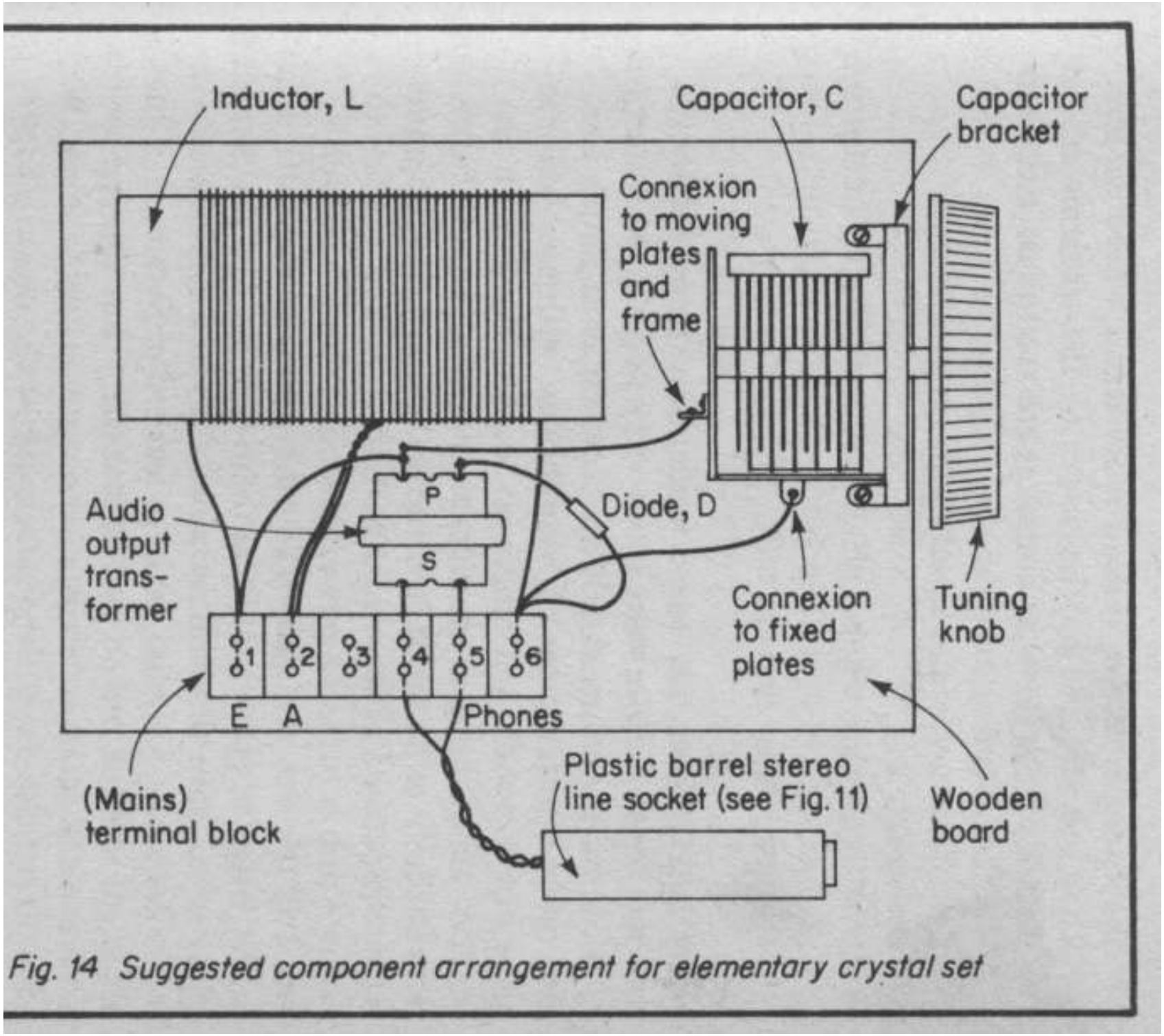
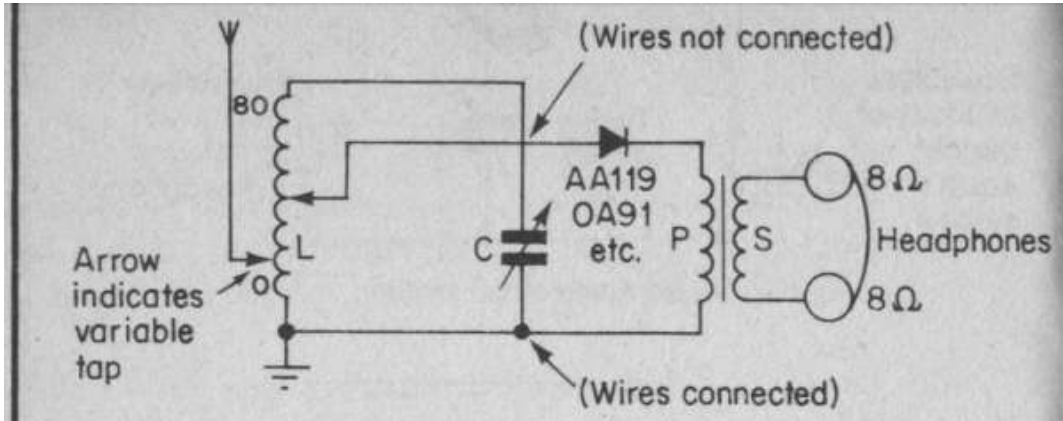
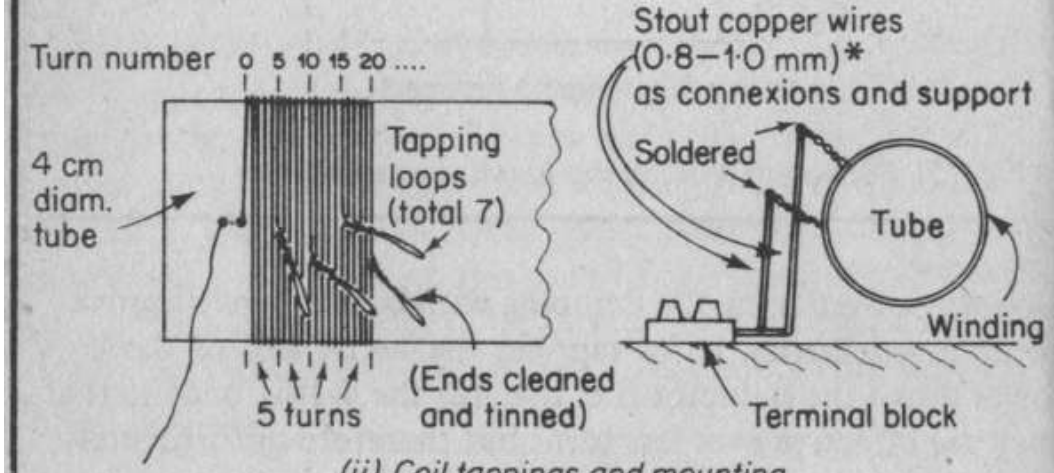


Fig. 14 Suggested component arrangement for elementary crystal set

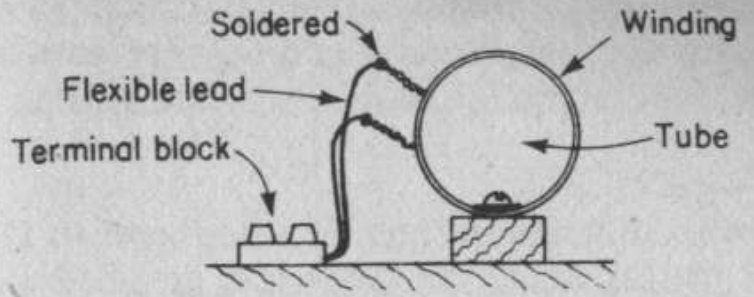


(i) Circuit

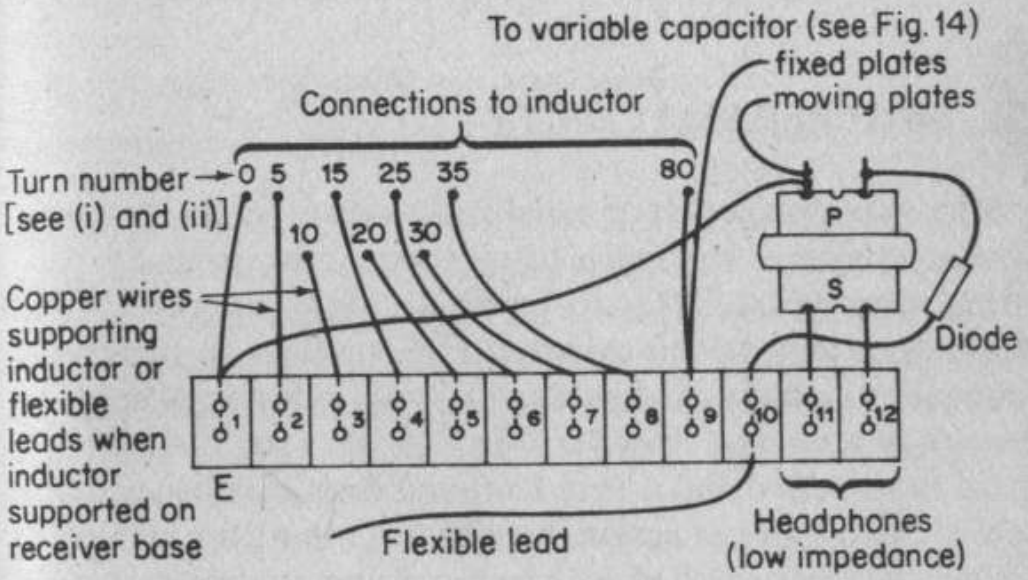


(ii) Coil tappings and mounting

Fig. 16 *Circuit with tapped inductor*



(iii) Alternative mounting



(iv) Suggested component arrangement

* 21–19 SWG, 20–18 AWG

required) and a *flying lead* for the diode, these components are shown in Fig.16(iv). This is doing the job properly, there is no reason however (except for unreliability of contact) why both aerial and diode flying leads should not terminate on *crocodile clips* and be clipped onto the chosen taps as required.

Earth is connected to terminal 1 and the headphones to 11 and 12. Both the aerial and the diode lead are tried at terminals 2 – 9, a game of "poke and hope" but one which can be rewarding. Remember that generally but not always, the tappings with the lower numbers reduce loudness but increase selectivity. Aerial to terminal 8, diode to 9 brings us back to Fig.13(i) of course.

5.2 SWITCHED SELECTIVITY

A technique of selection of aerial and diode tappings by means of rotary switches has much to recommend it especially if setting changes are likely to be needed for reception of different stations. In this case two single-pole 8-way switches are required, usually obtainable as 12-way so leaving 4 spare. The drawing symbol shown in Fig.17 speaks for itself with regard to its action and it may be found from catalogues that there are two types of *action*, by which is meant the manner in which the switch changes over from one contact to the adjoining one. *Break before make* switches disconnect one circuit before the next is connected and *make before break* have a change-over period during which both circuits are connected at once for a short time. Either type is suitable for us. A knob to rotate each switch is also required, a small one, say 2 cm diameter or less is ample, if with an indicator line or pointer, so much the better. The modifications to Fig.16 for switching are given in Fig.17.

With such rotary switches a search for the optimum arrange-

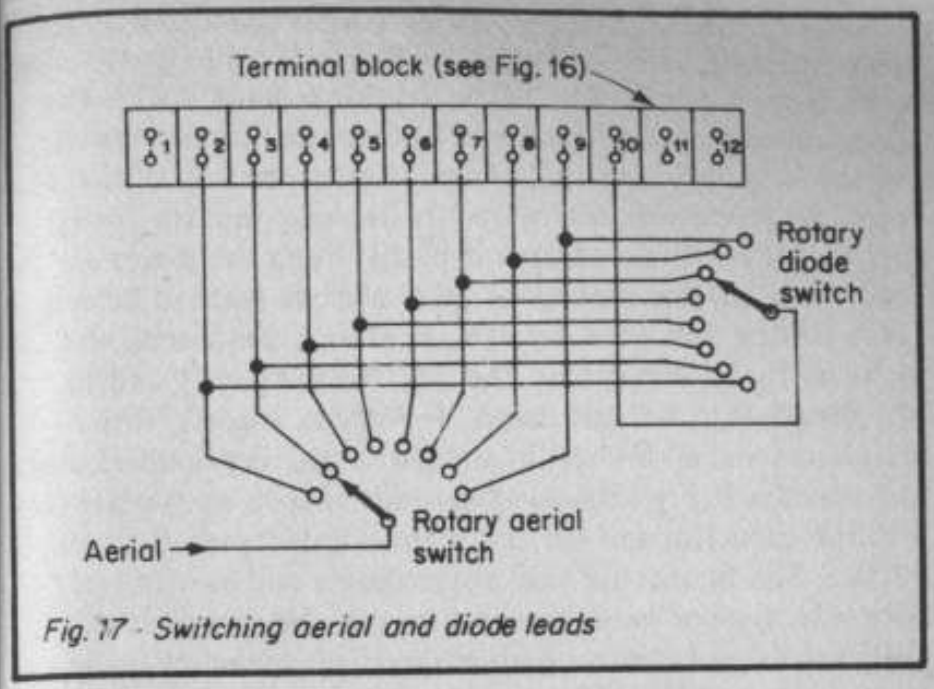


Fig. 17 - Switching aerial and diode leads

variable capacitor, the two switches and the headphone socket, the latter must then be of the chassis type. A pair of terminals for aerial and earth completes the receiver. On the panel the two rotary switches are easily labelled 1 – 8 but we are still uncertain about a tuning dial because we may not have the right variable capacitor for the inductor, this is the subject of the next section.

5.3 GETTING THE RANGE RIGHT

This is where we pause in receiver construction to remove some of the confusion which may still exist with regard to the tuning ingredients, wavelength, frequency, inductance and capacity, each of which has some bearing on the others, to fit together these four pieces of the puzzle, so to speak. For most crystal sets the inductance is fixed according to the variable capacitor available and we tune the receiver over the range by rotating the variable capacitor knob over half a

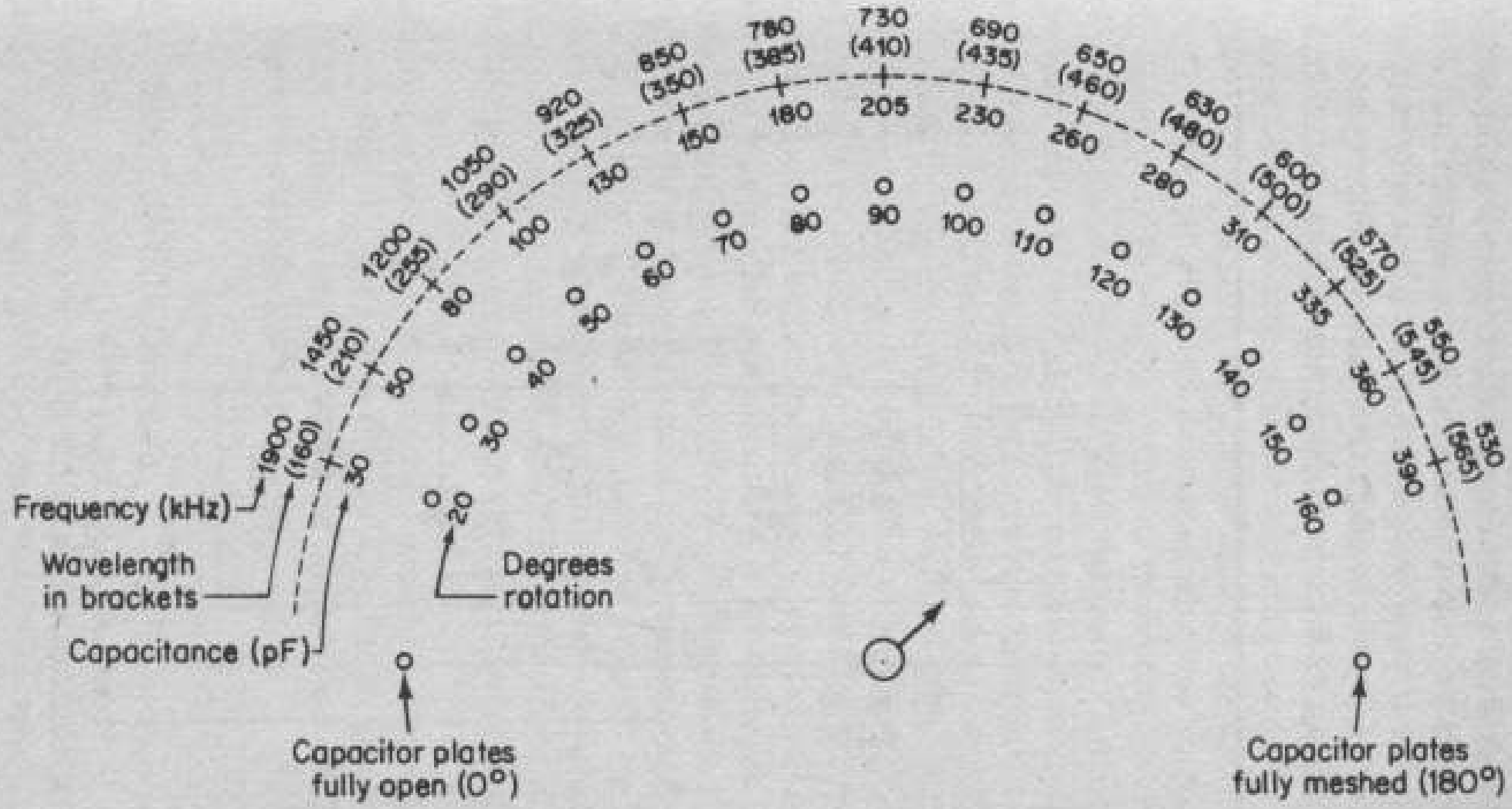
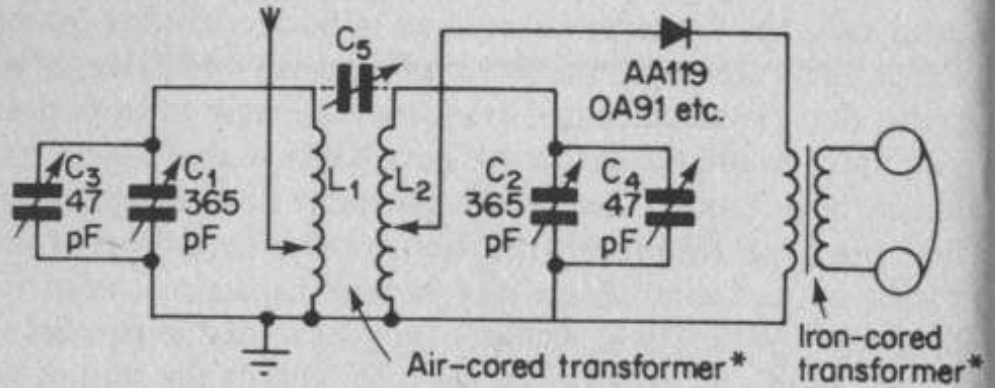
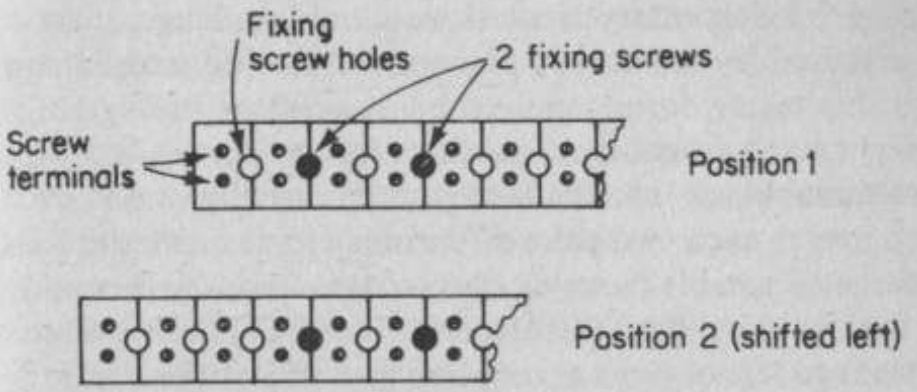


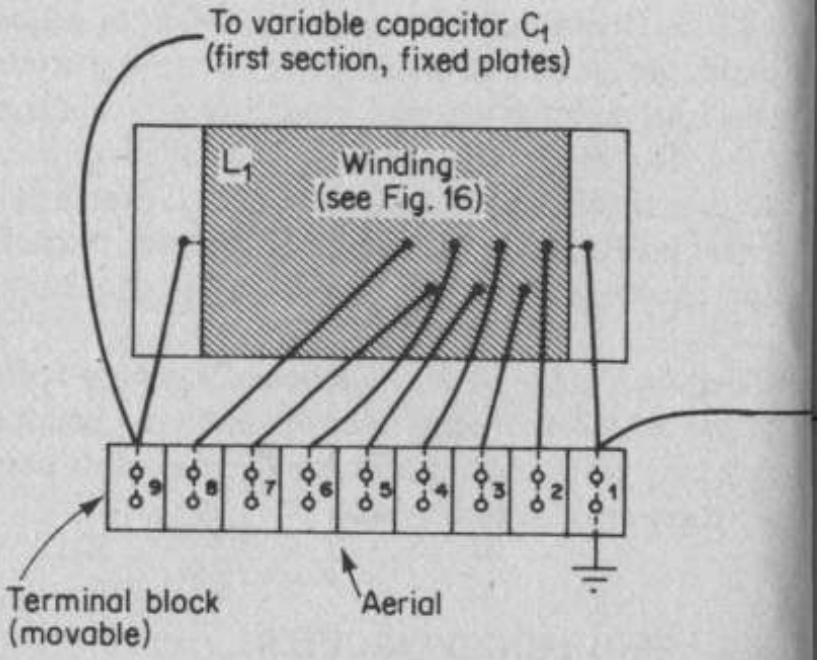
Fig. 18 Approximate capacitance and frequency values for 365 pF variable capacitor and 230 µH coil



(i) Circuit



(iii) Moving inductor L_1



(ii) Arrangement of inductors

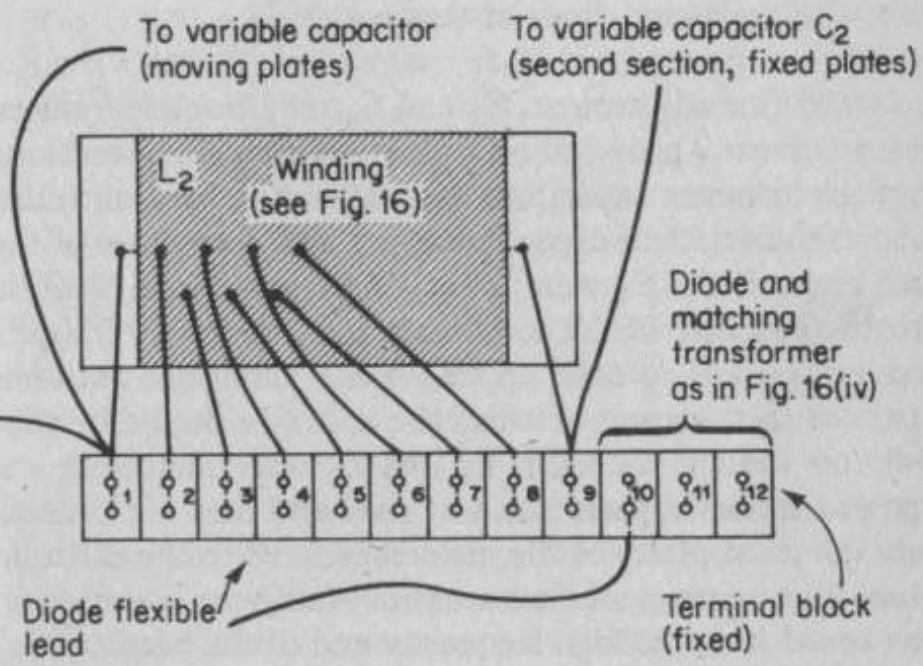
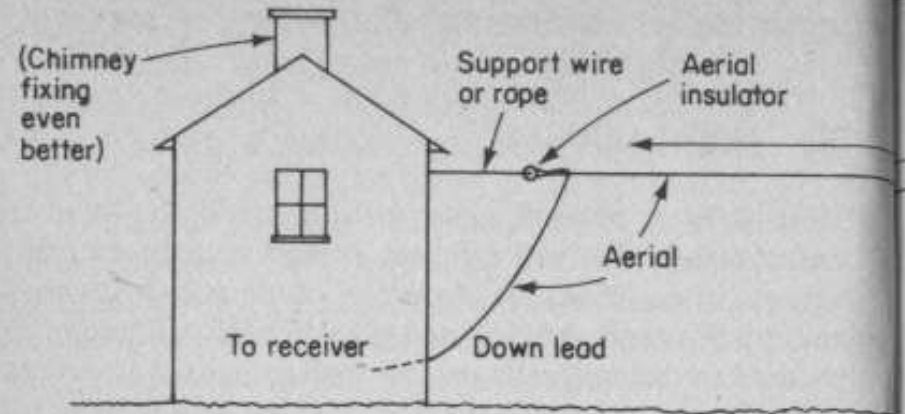
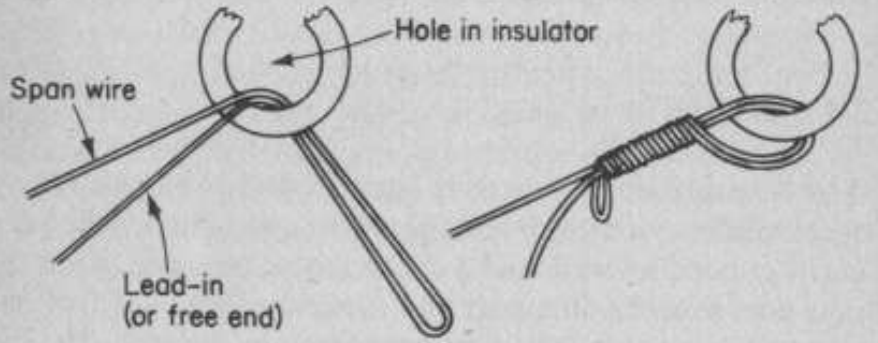


Fig. 21 A double-tuned crystal receiver

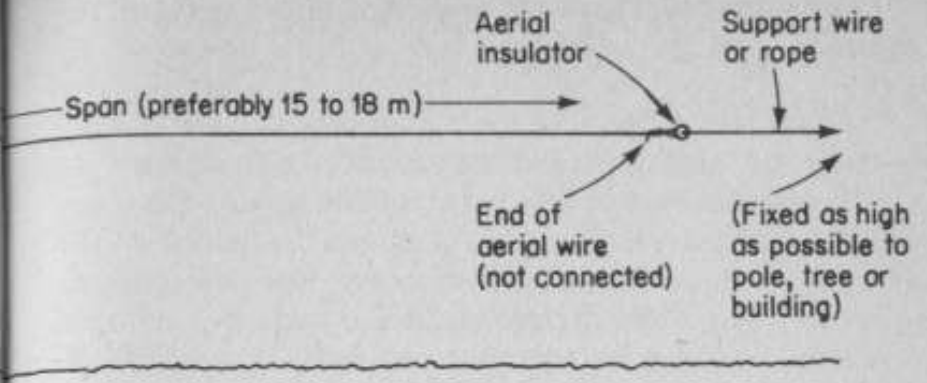
* See Section 2.4

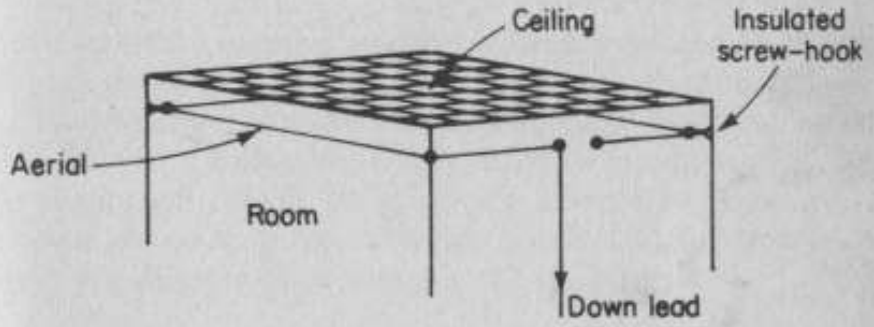


(i) Outdoor Aerial

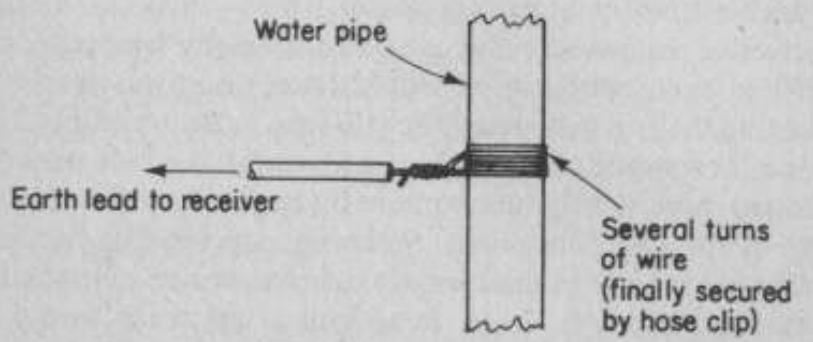


(ii) Attaching aerial to insulator

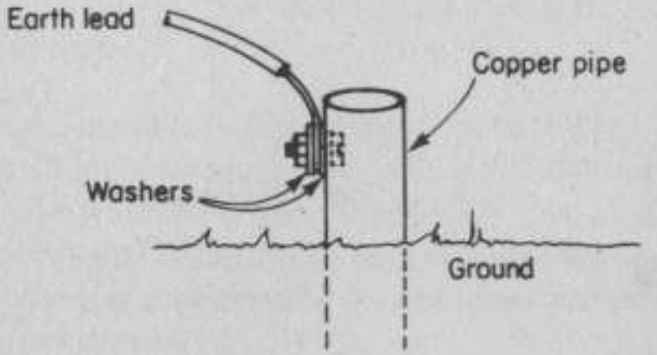




(iii) Room aerial



(iv) Earth connection to water pipe



(v) Lead bolted to earth spike

Fig. 12 Aerial/earth systems

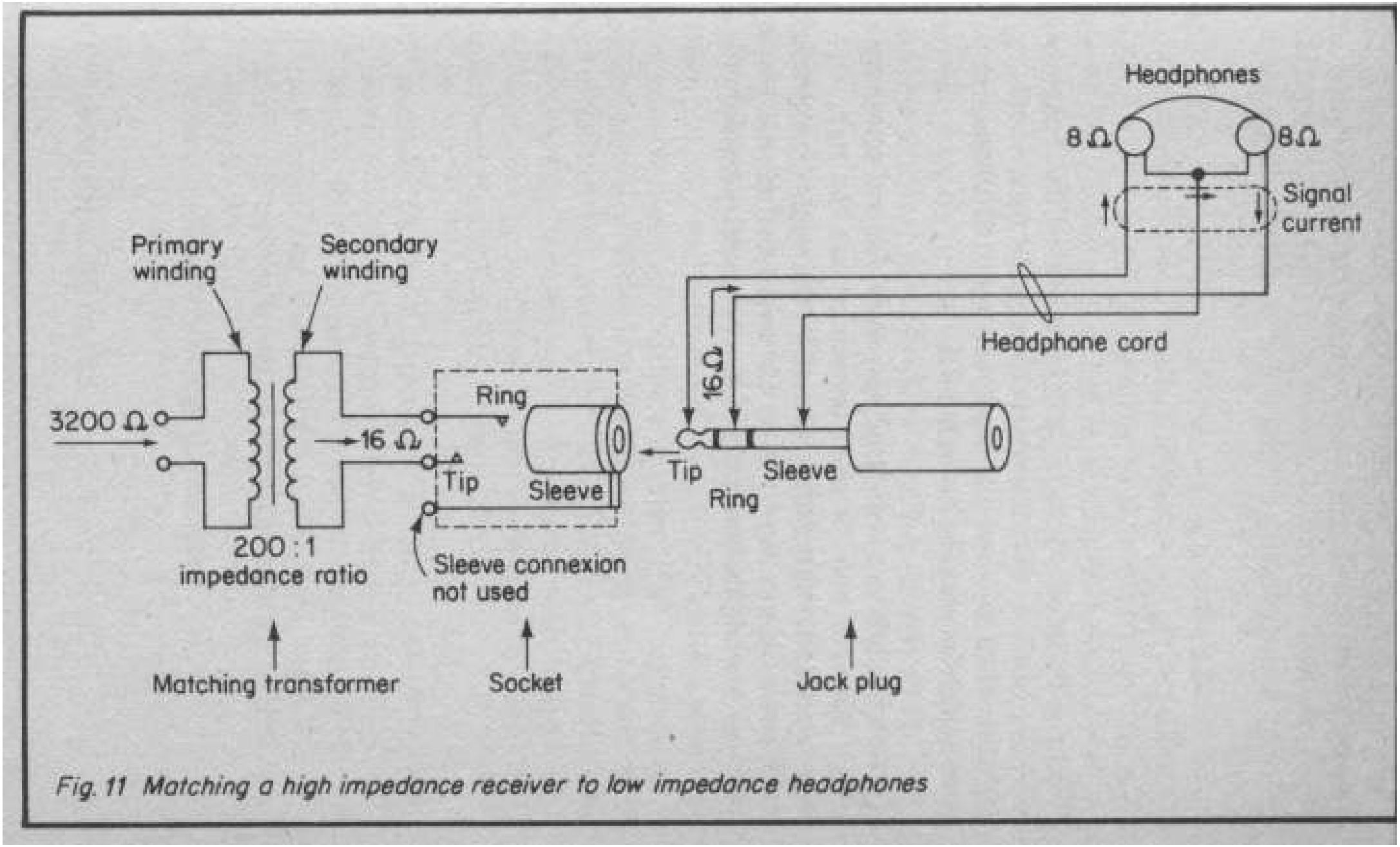
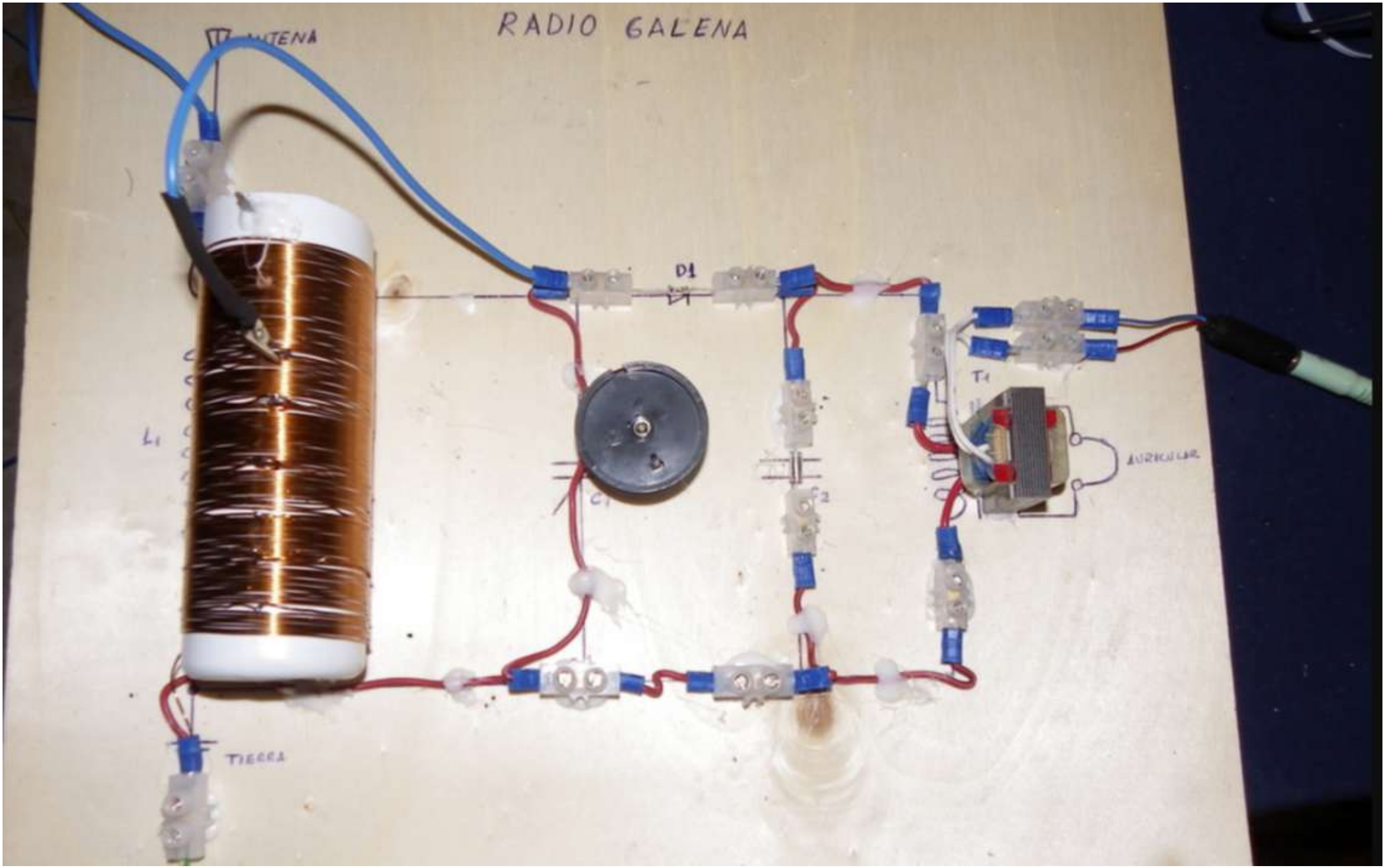
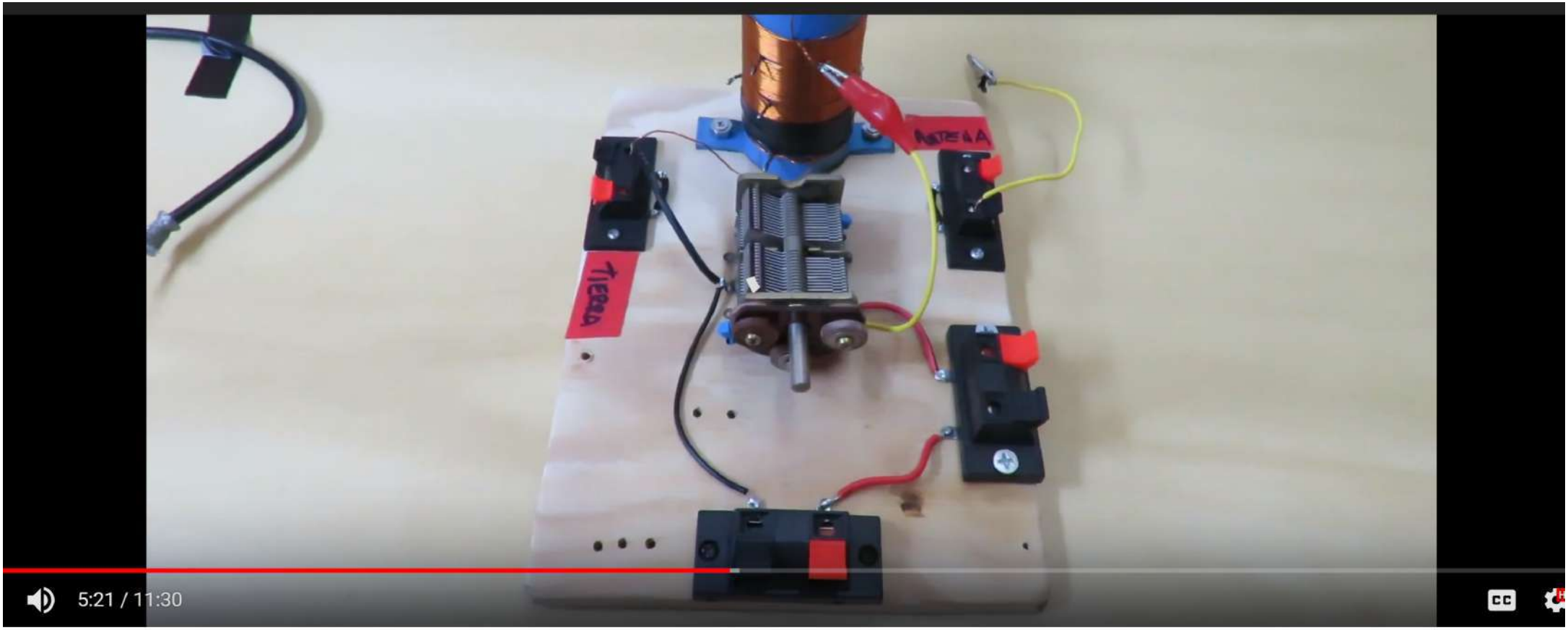


Fig. 11 Matching a high impedance receiver to low impedance headphones


RADIO GALENA
D1
T1
AURICULAR
TIERRA

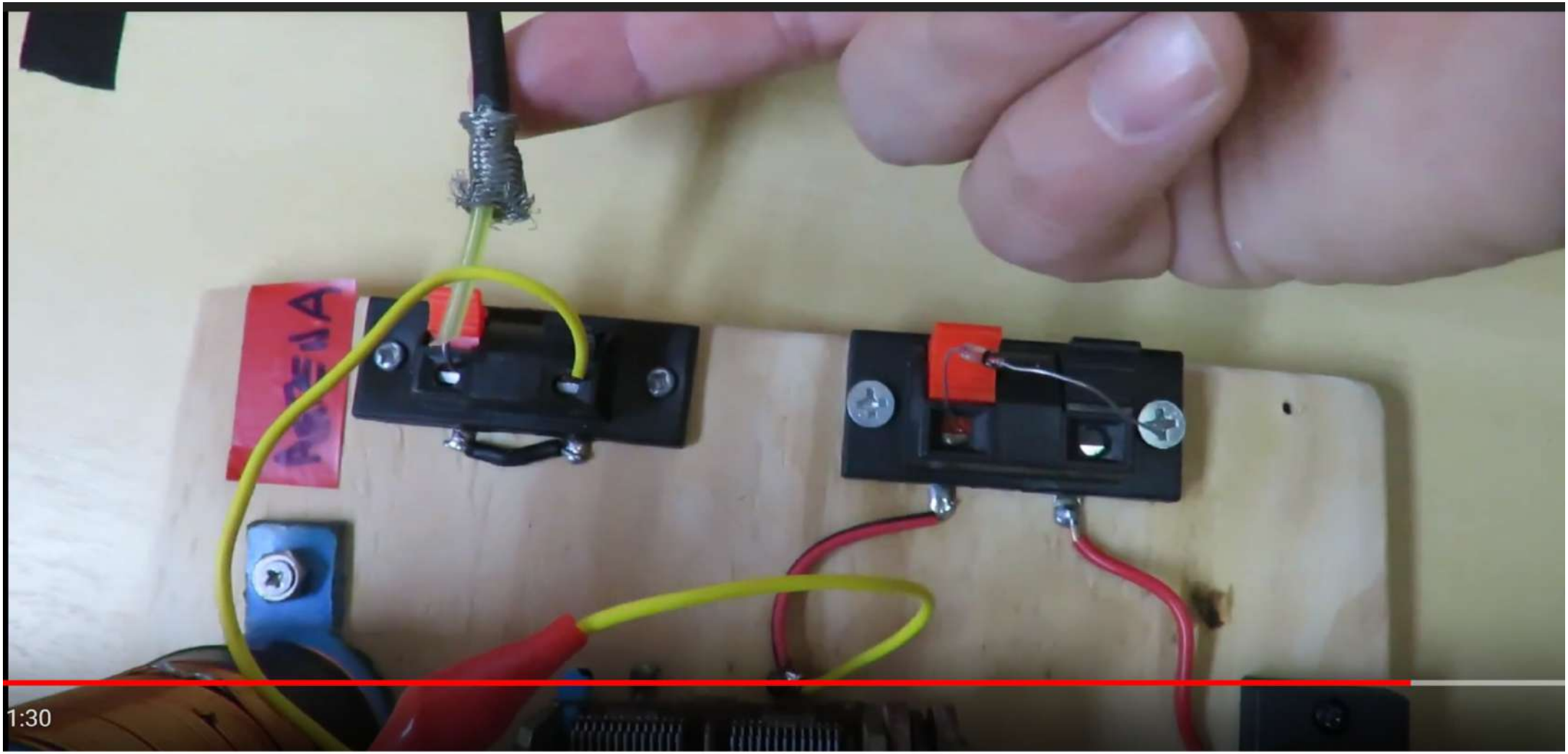


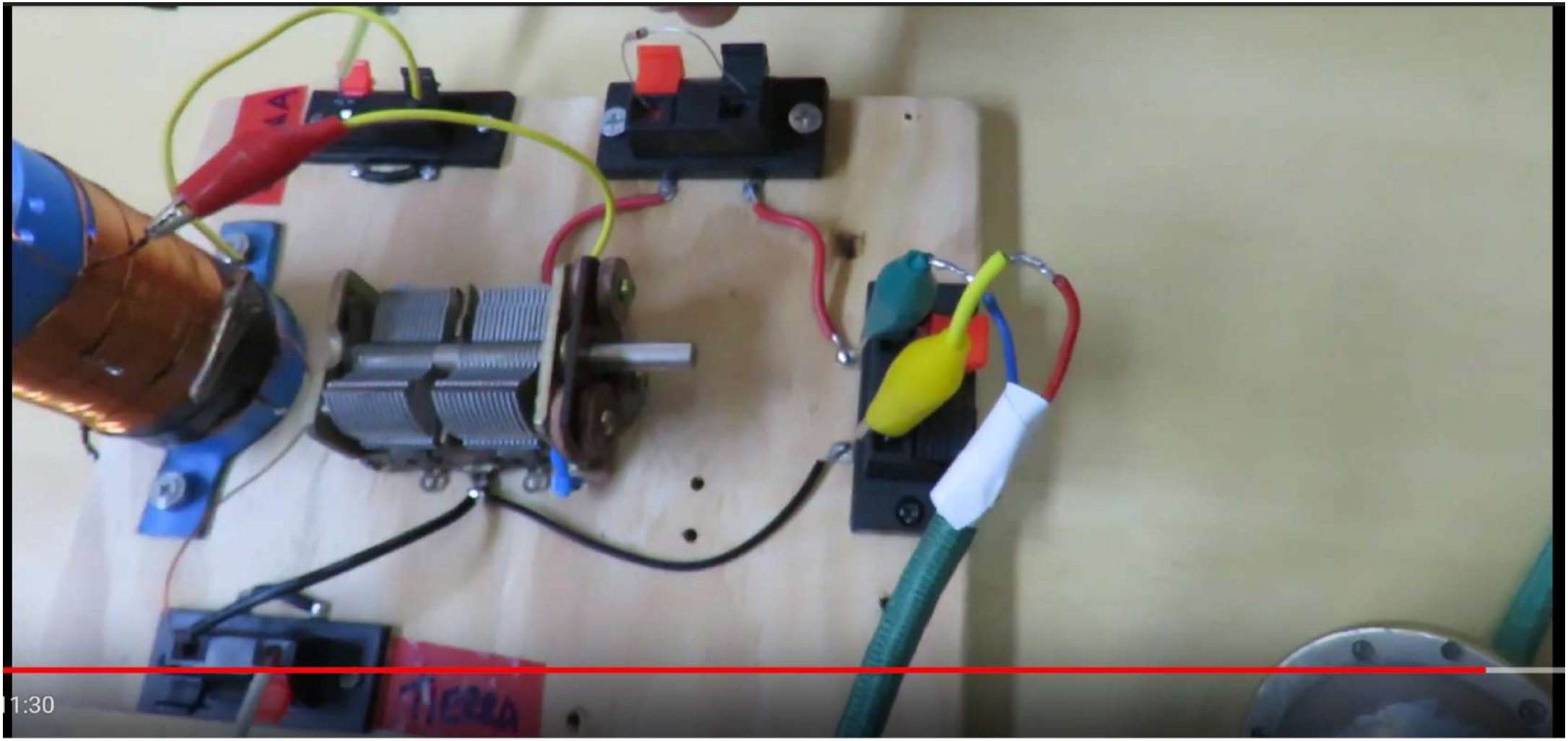
5:21 / 11:30

Radio Galena en la practica (con diodo detector)

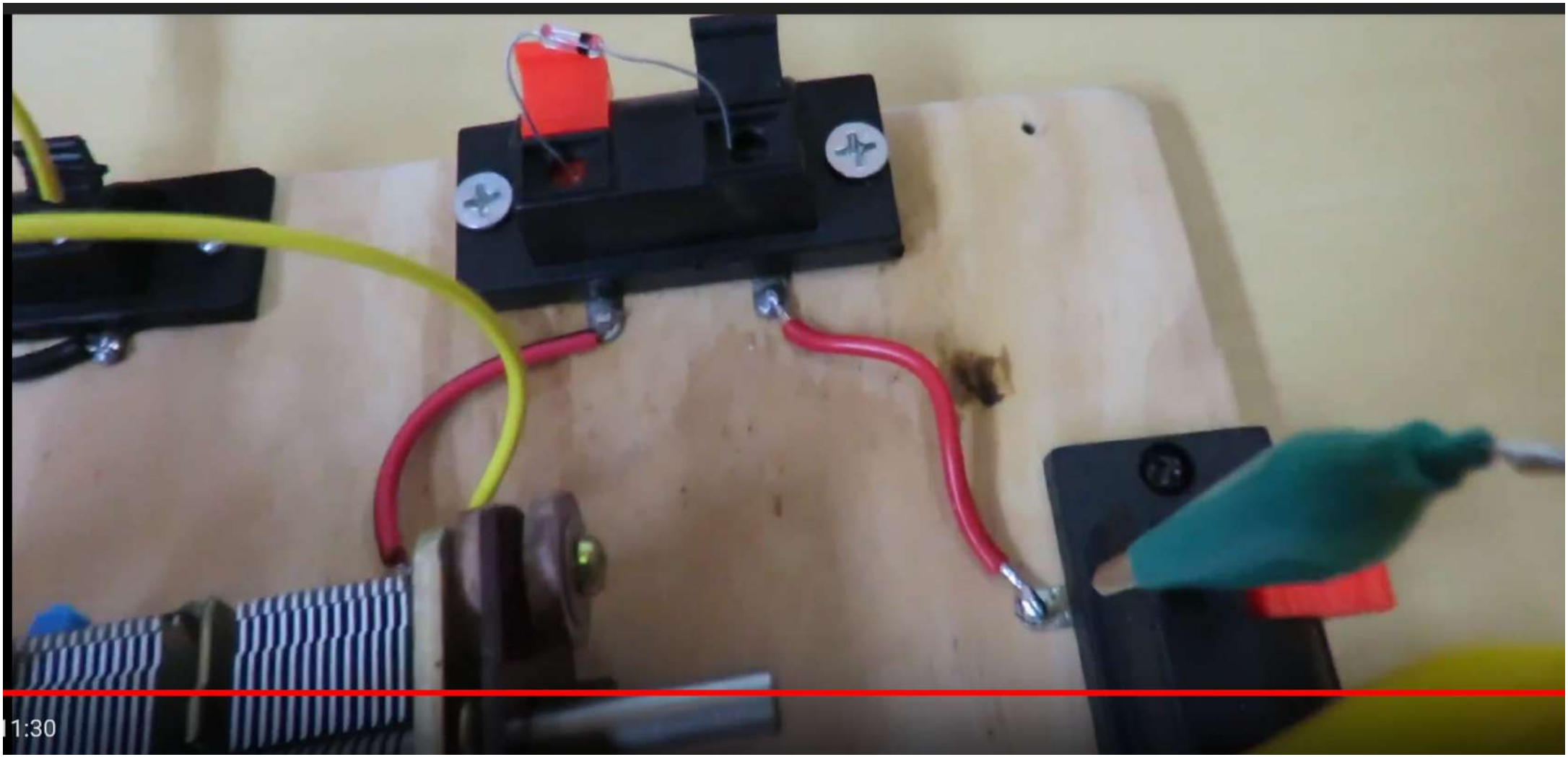
Up next

AUTOPLA

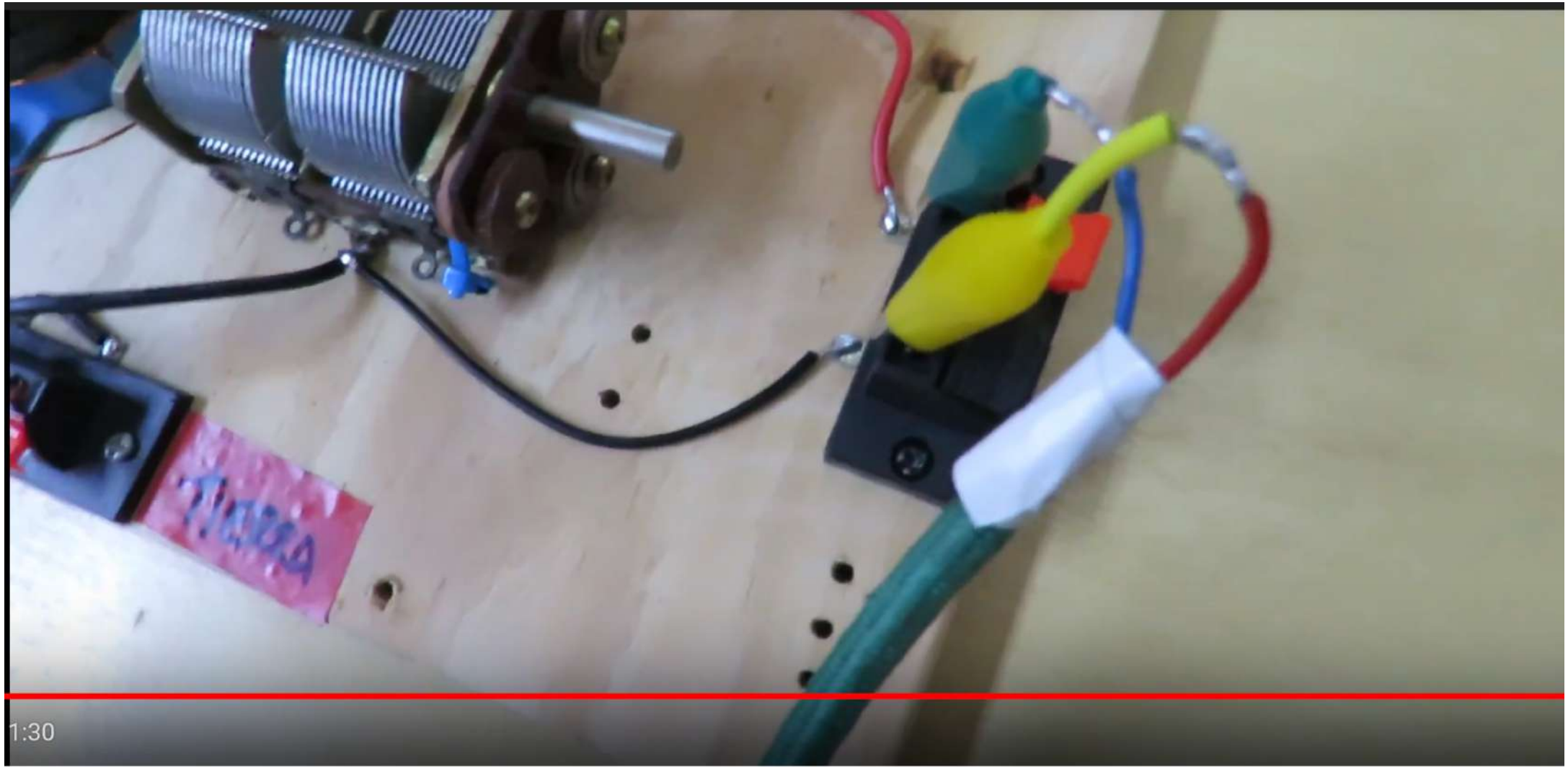

1:30

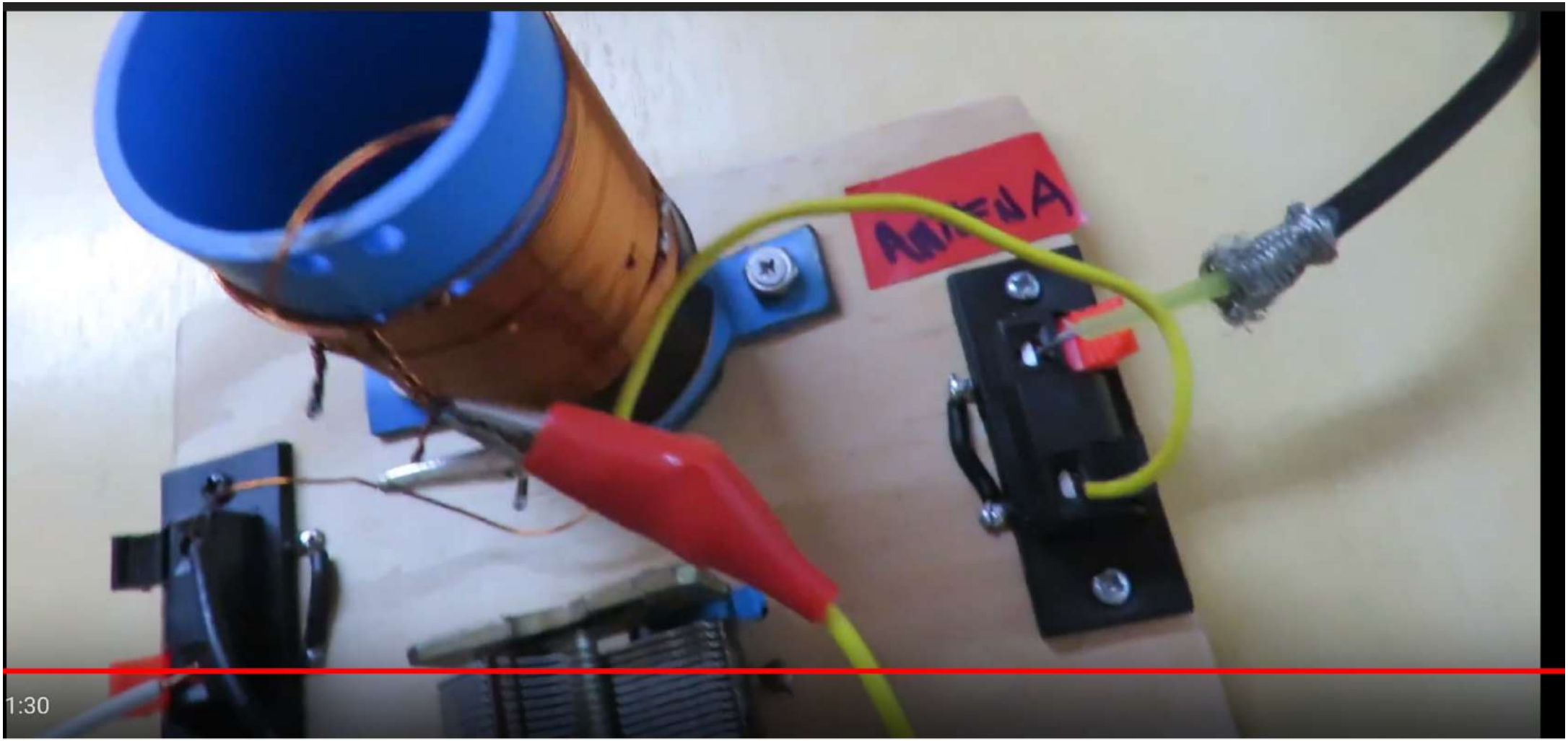

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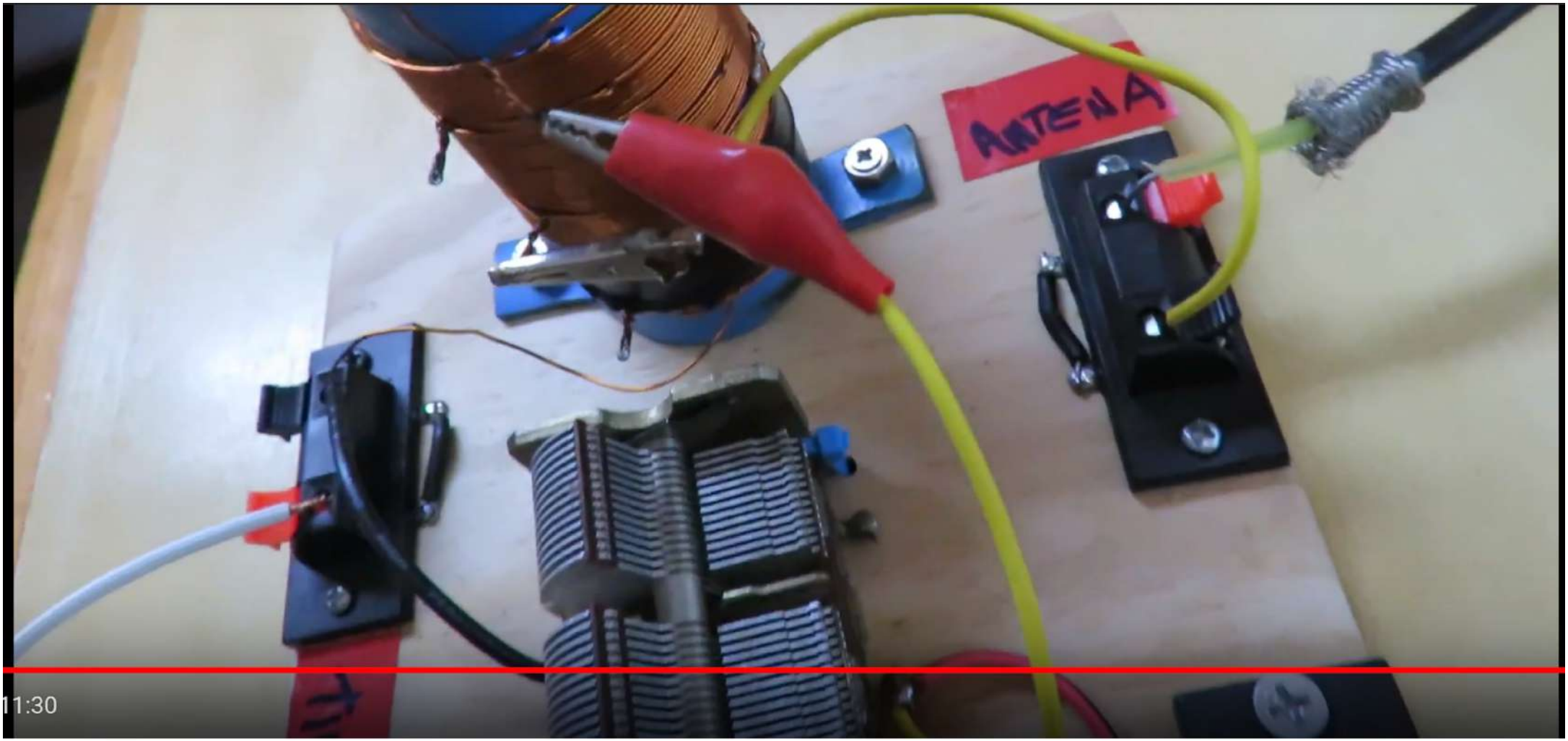

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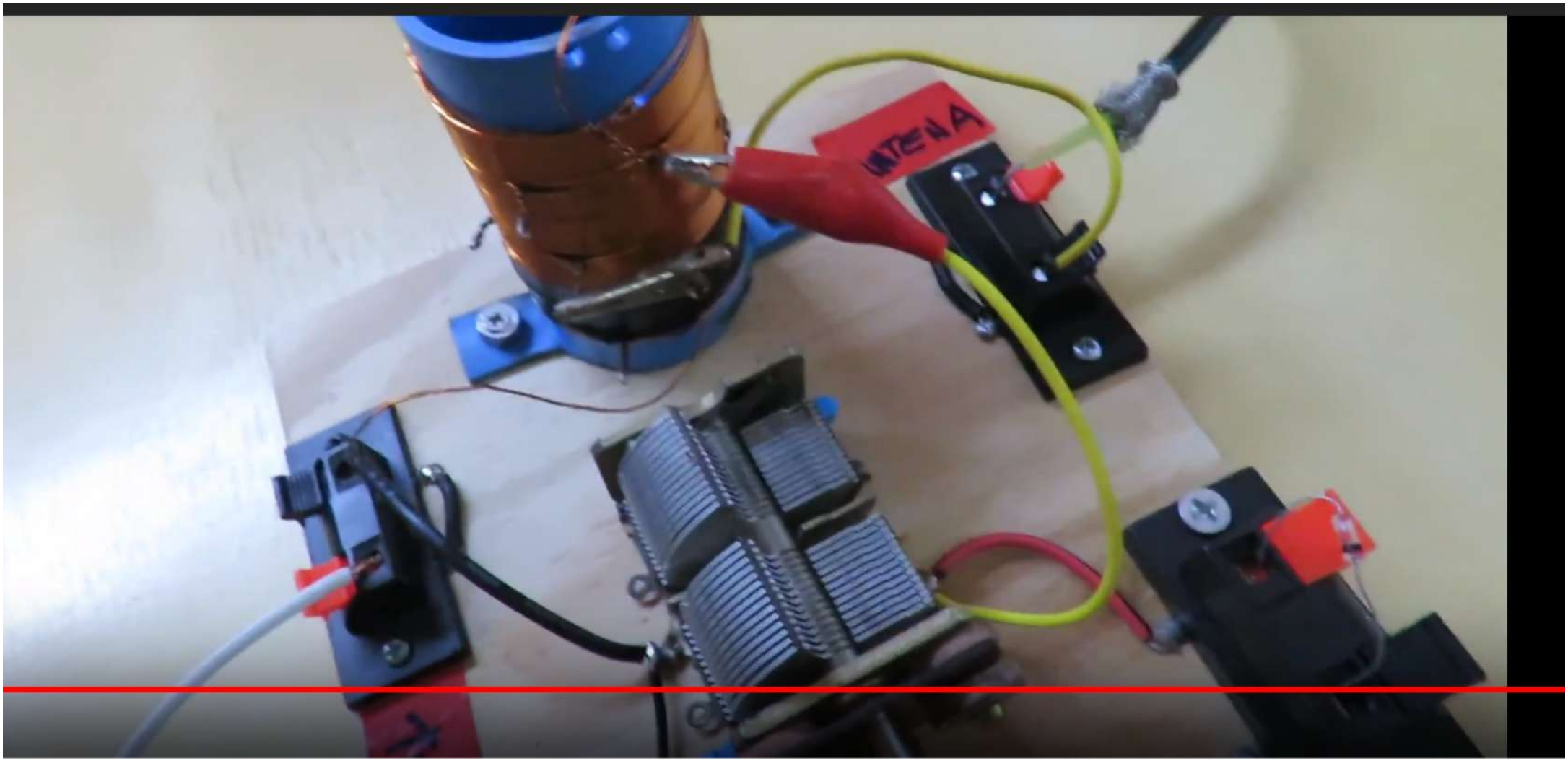

11:30

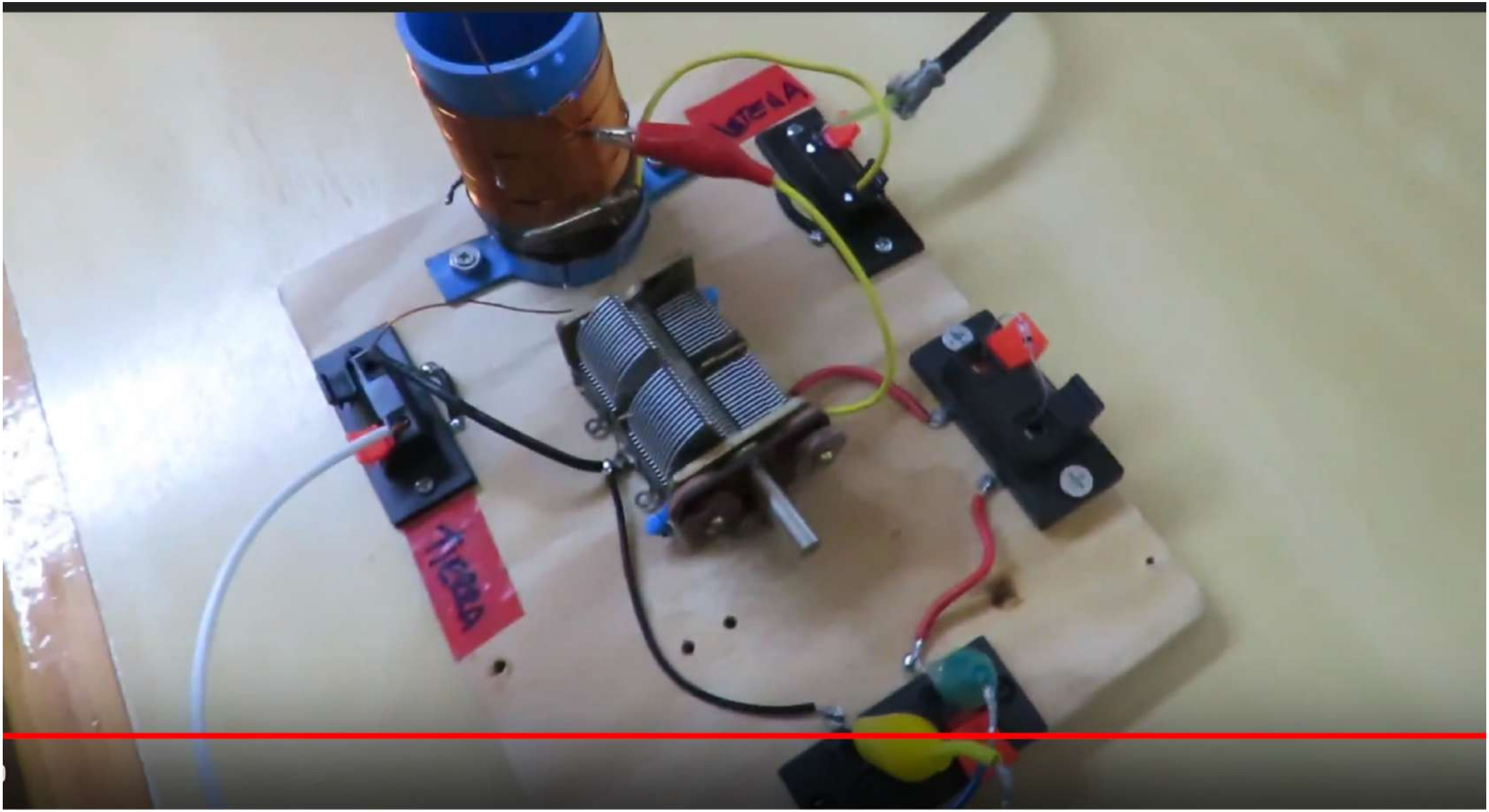

TIERRA
:30

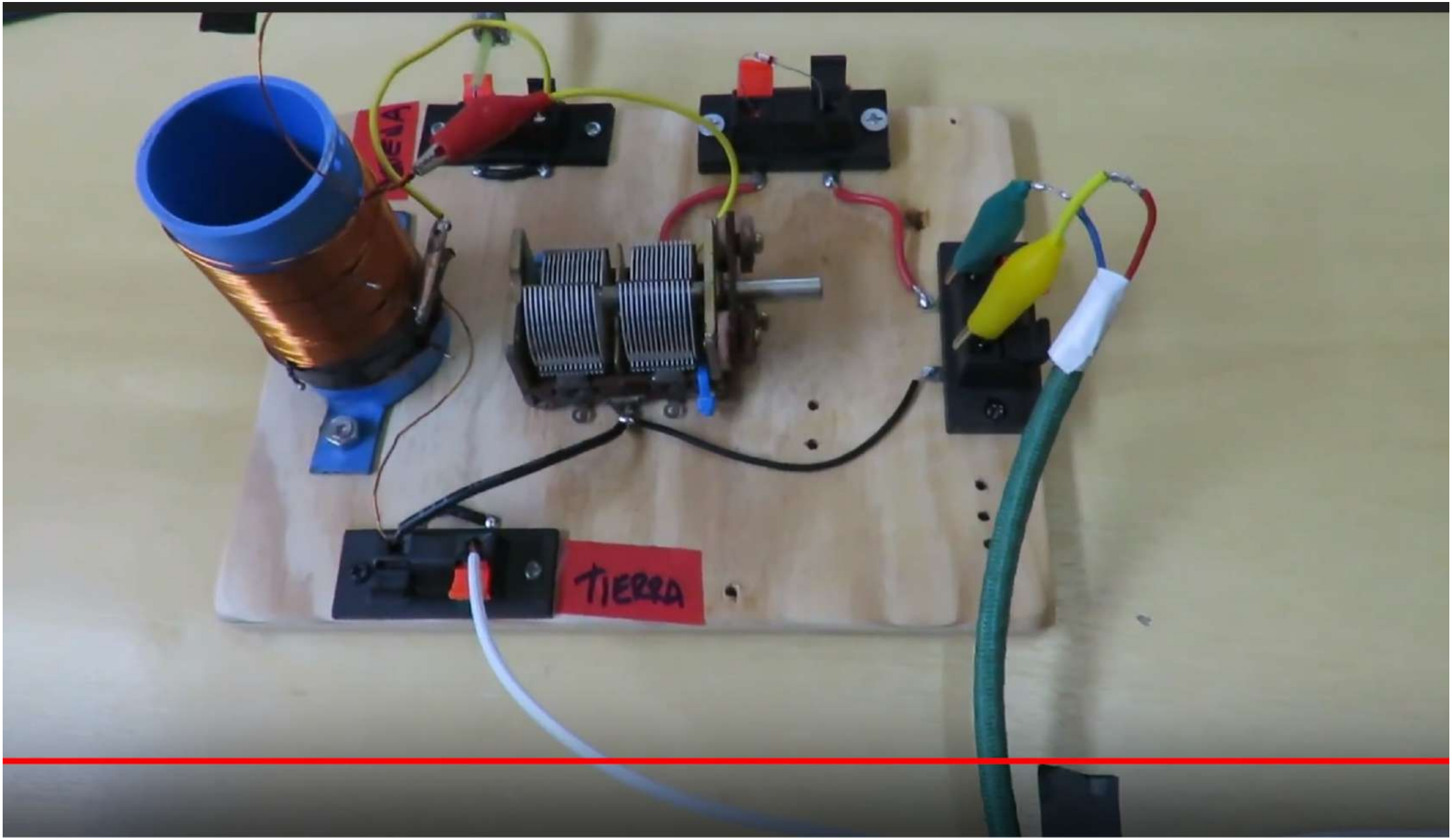

1:30


1:30


ANTENA
11:30





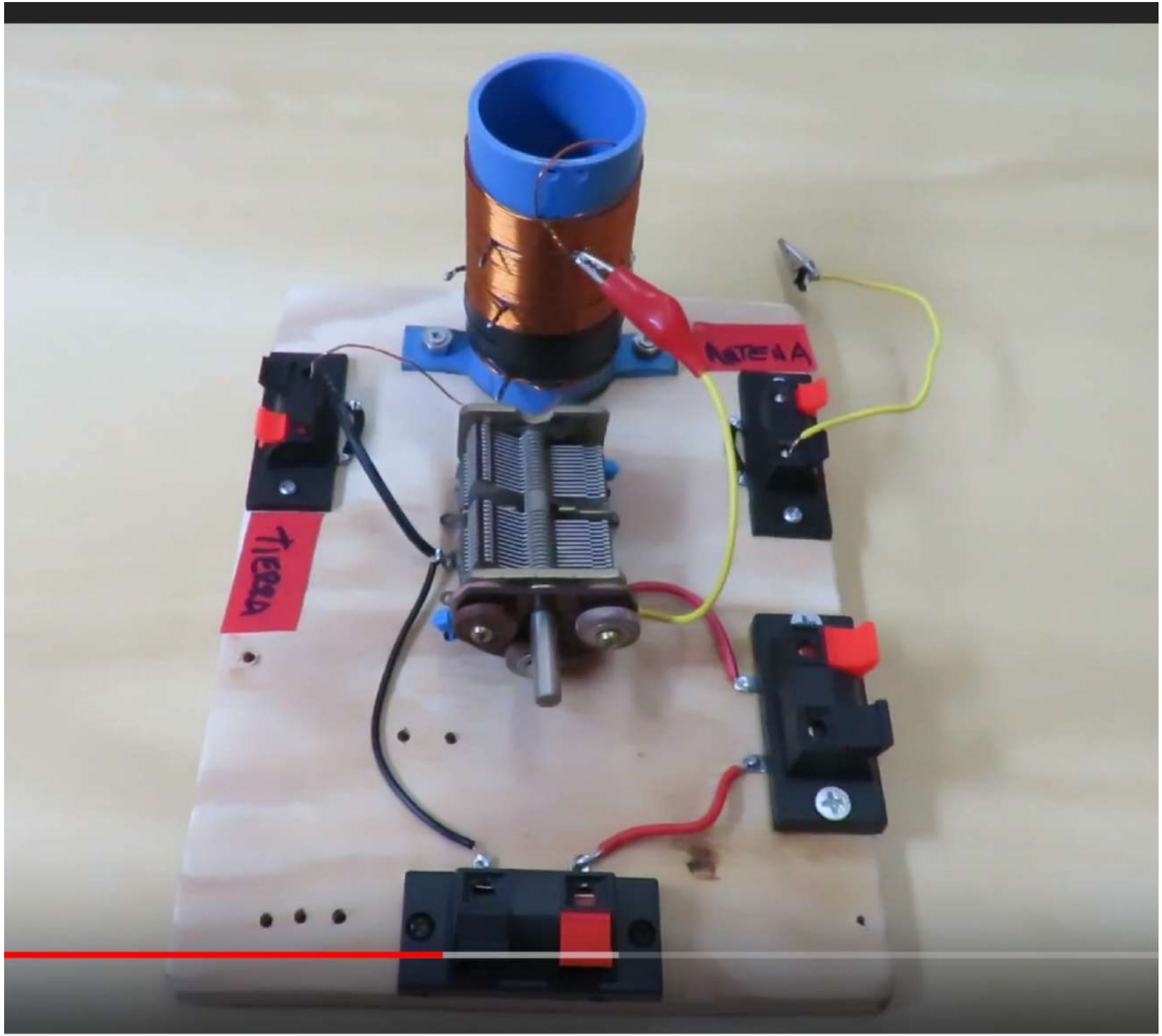

TIERRA

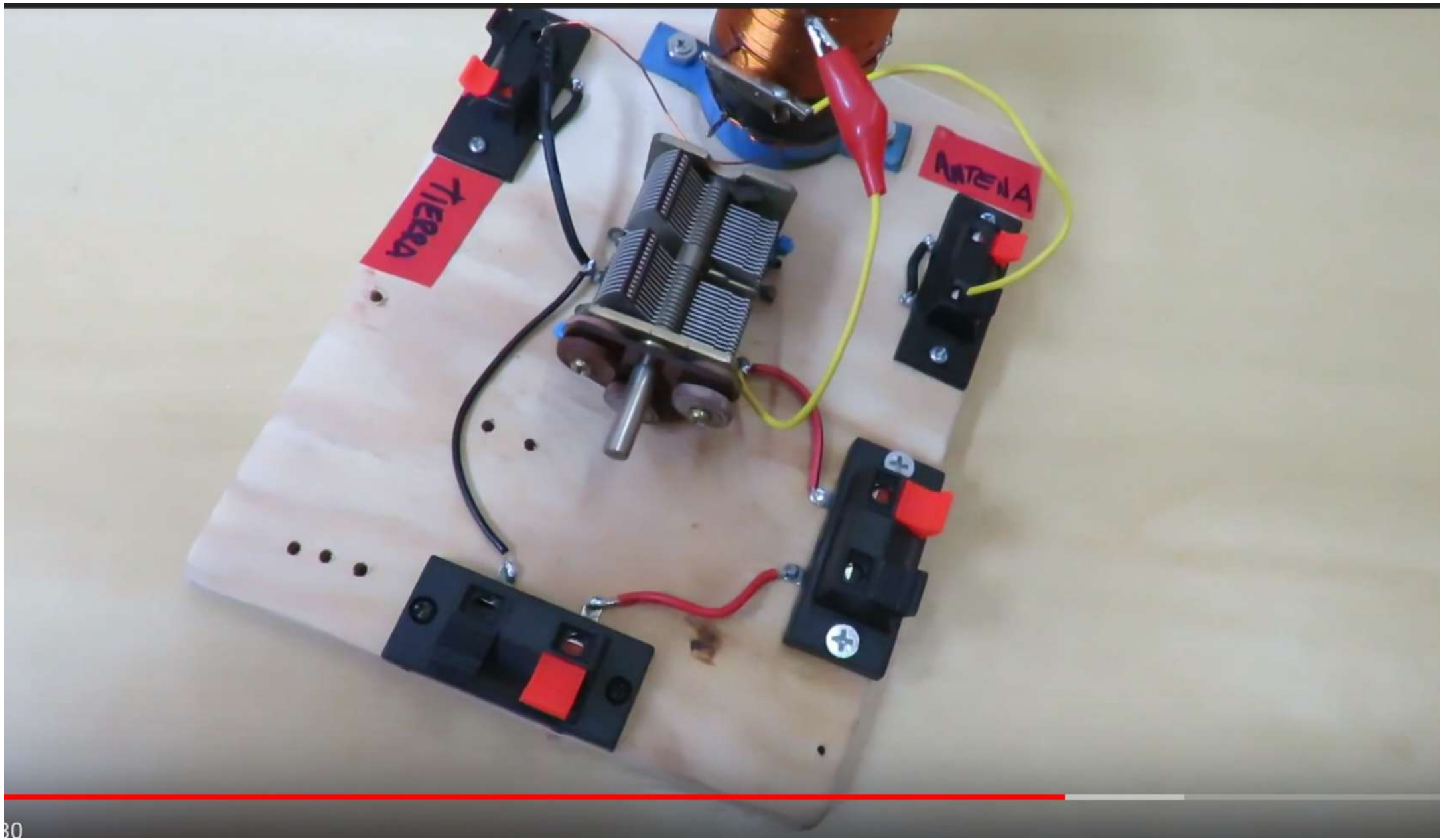

Tubo de PVC de 40 mm de diámetro,
y 12 cm de largo

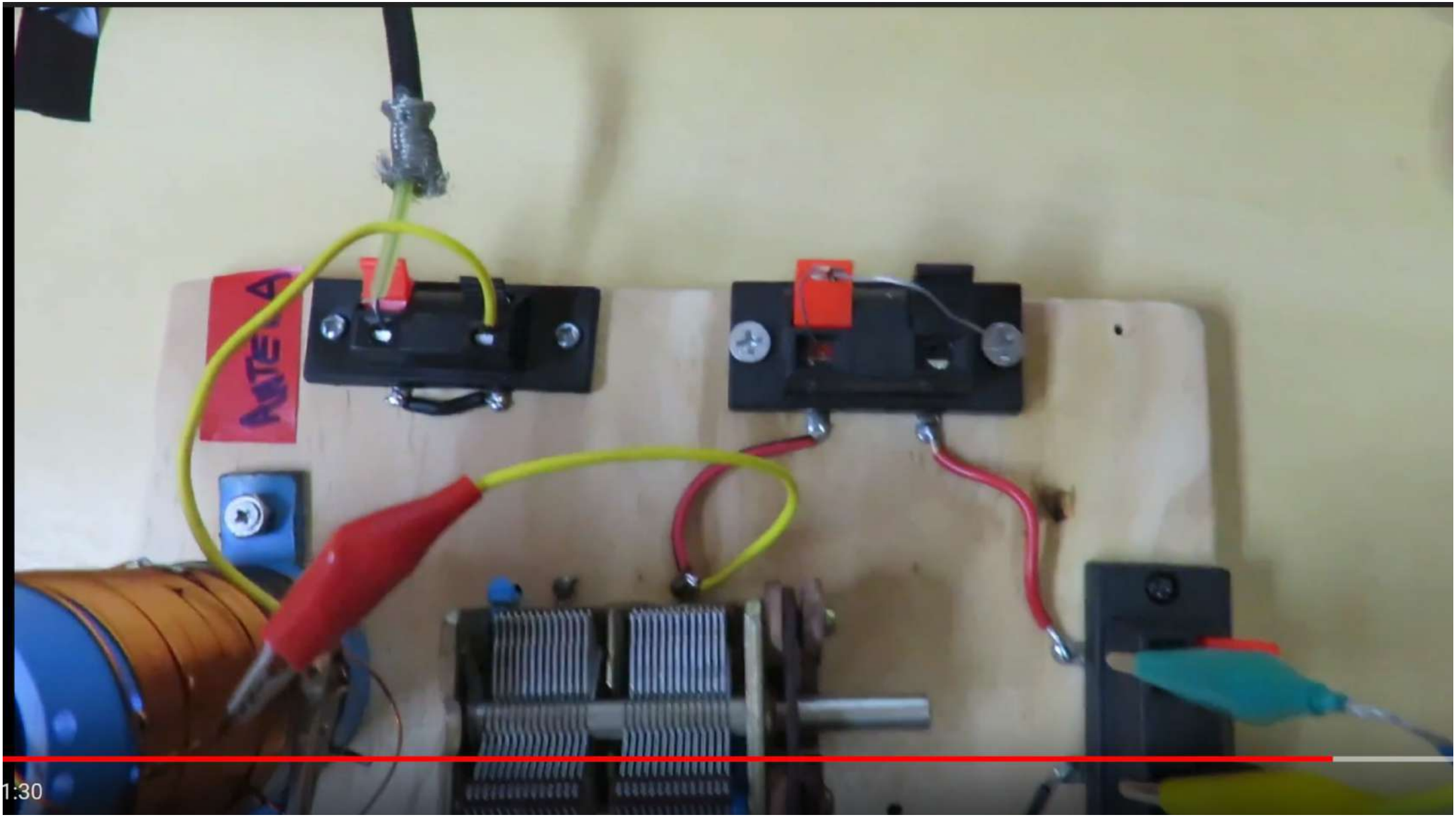


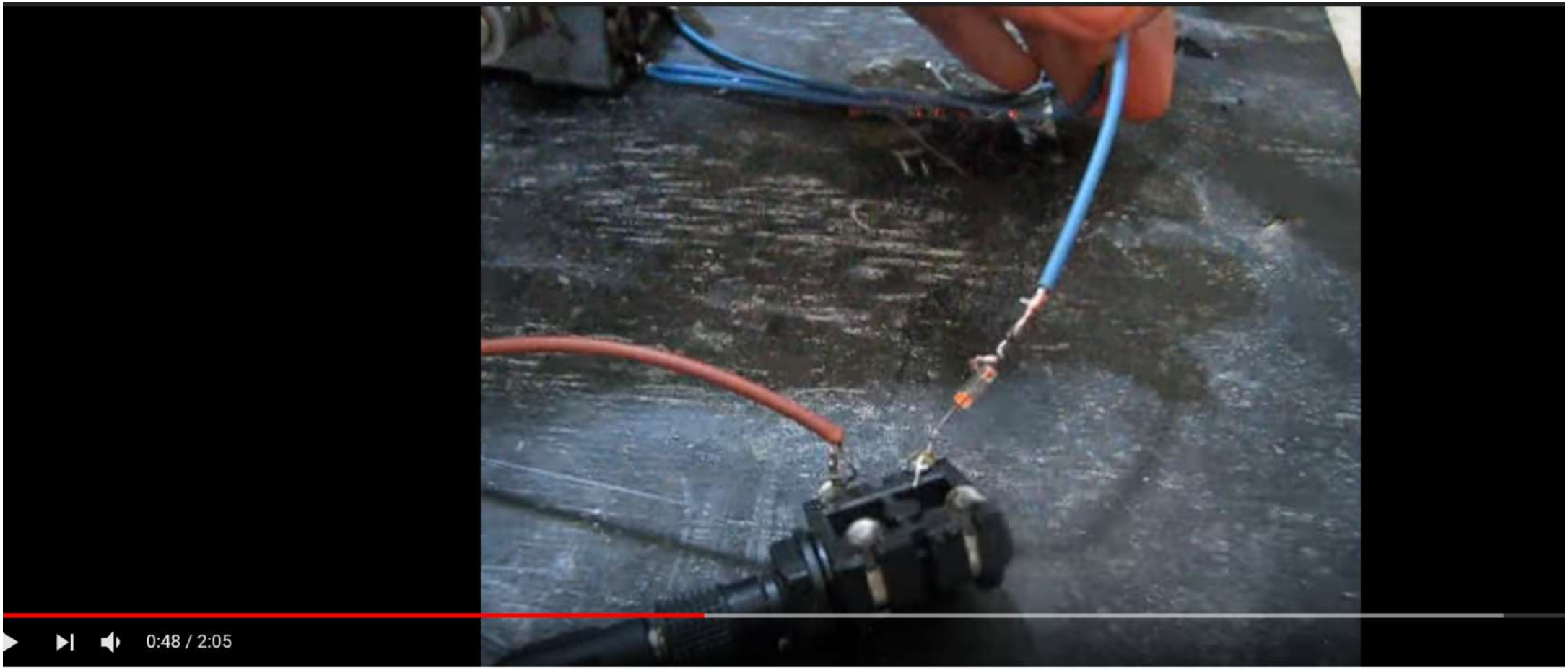





ANTENA
TIERRA


Tierra
Antena

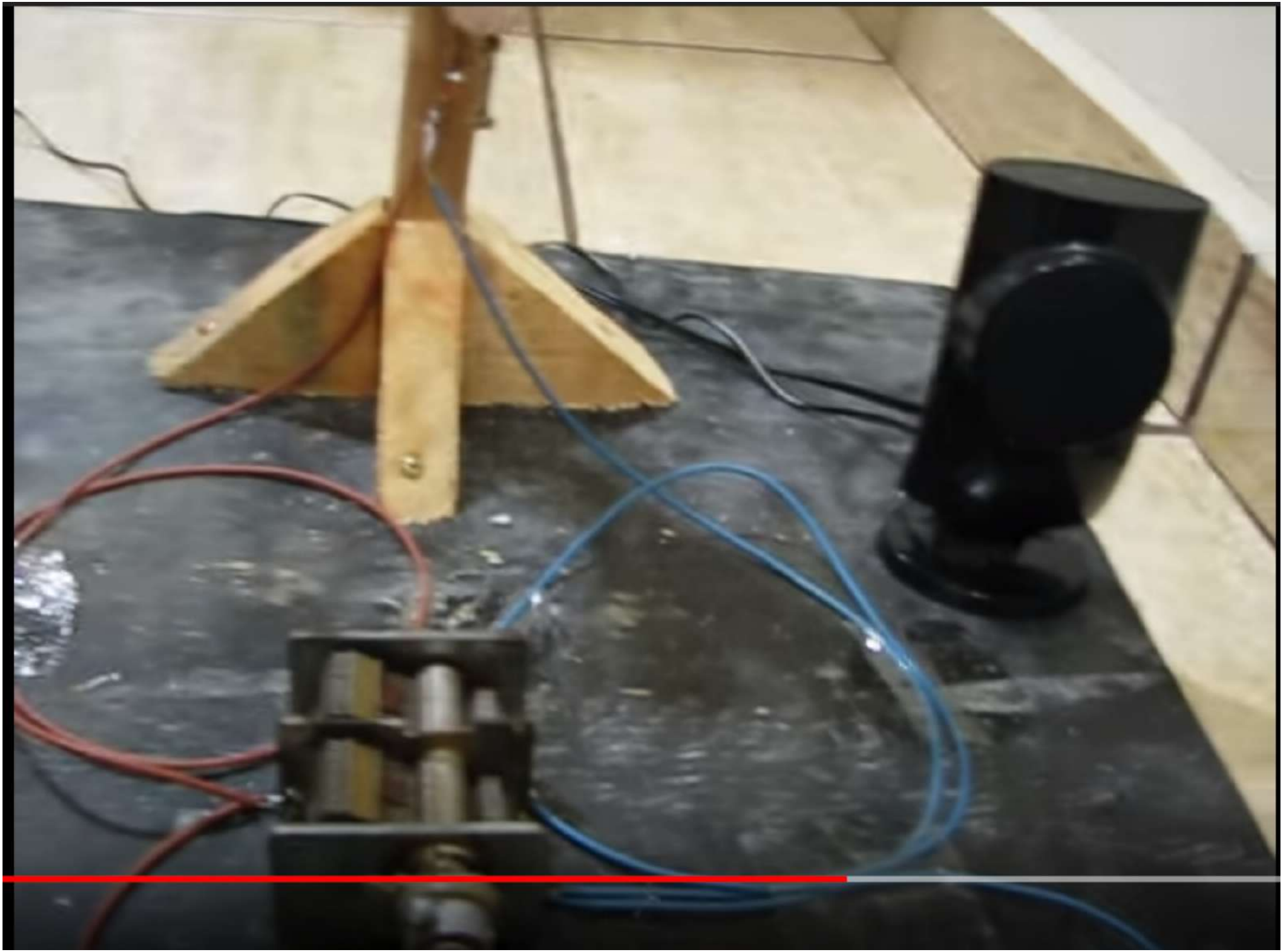

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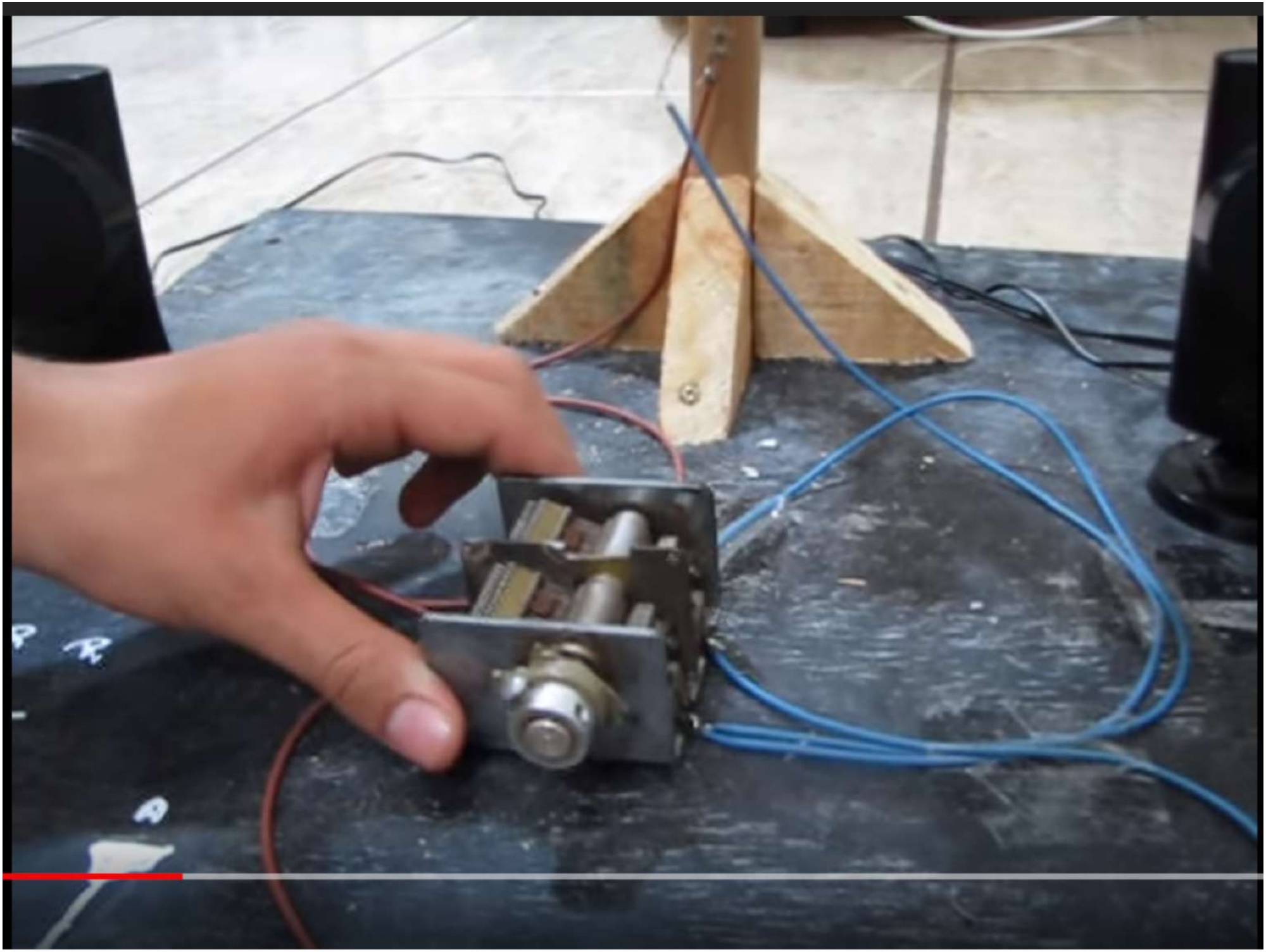
Rádio de Galena com Antena de Quadro - UTFPR - TD

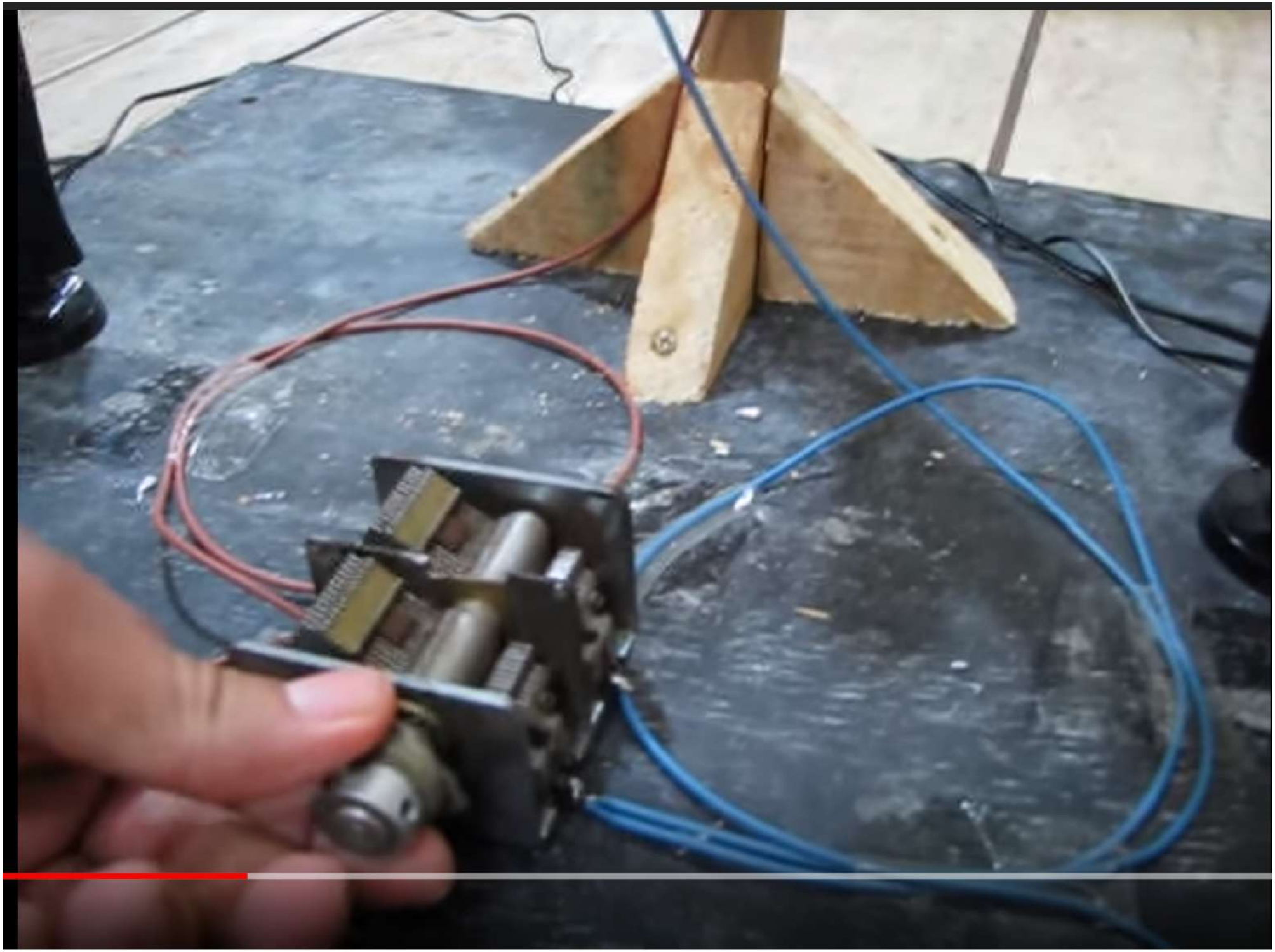
Up next

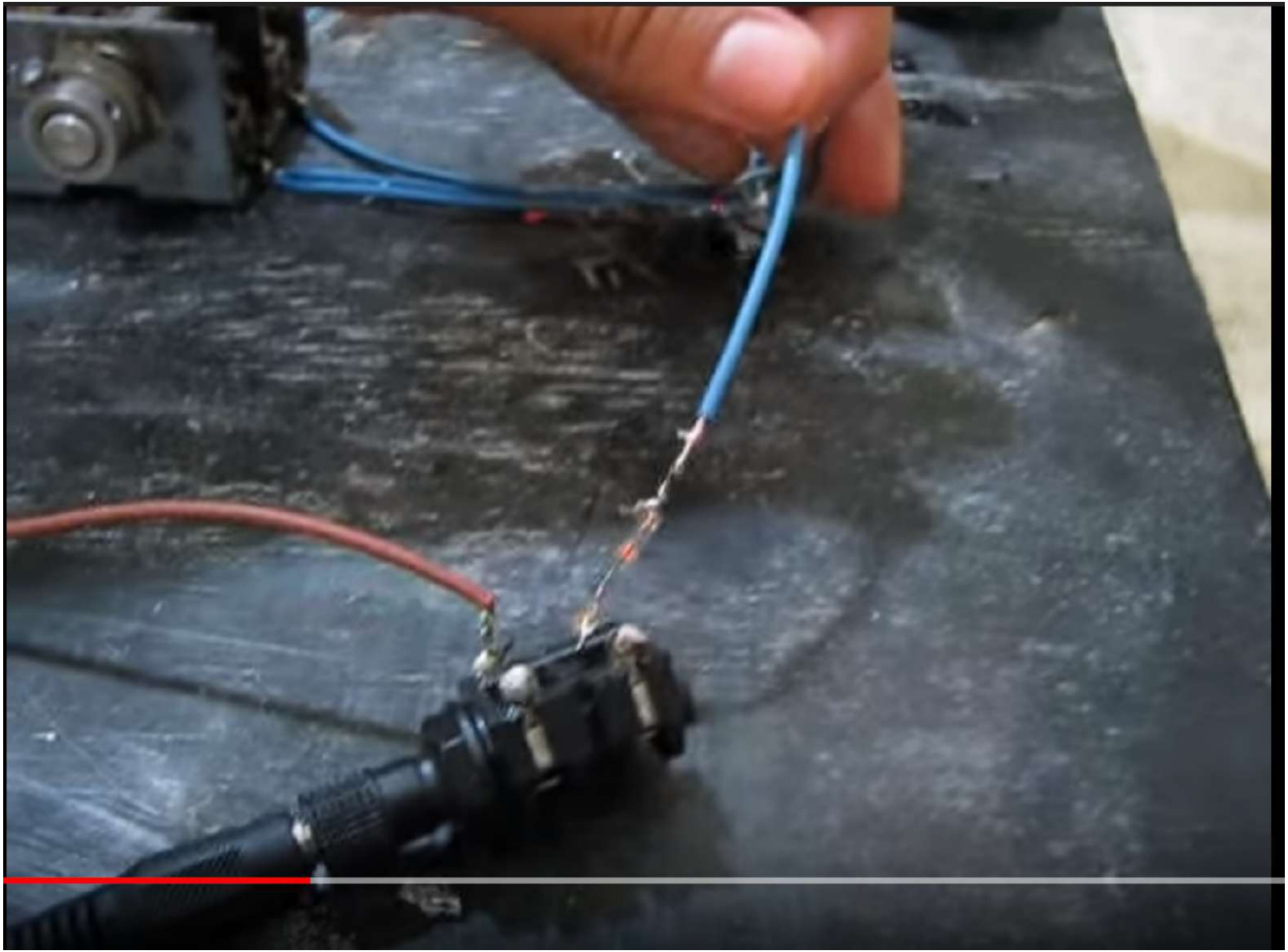


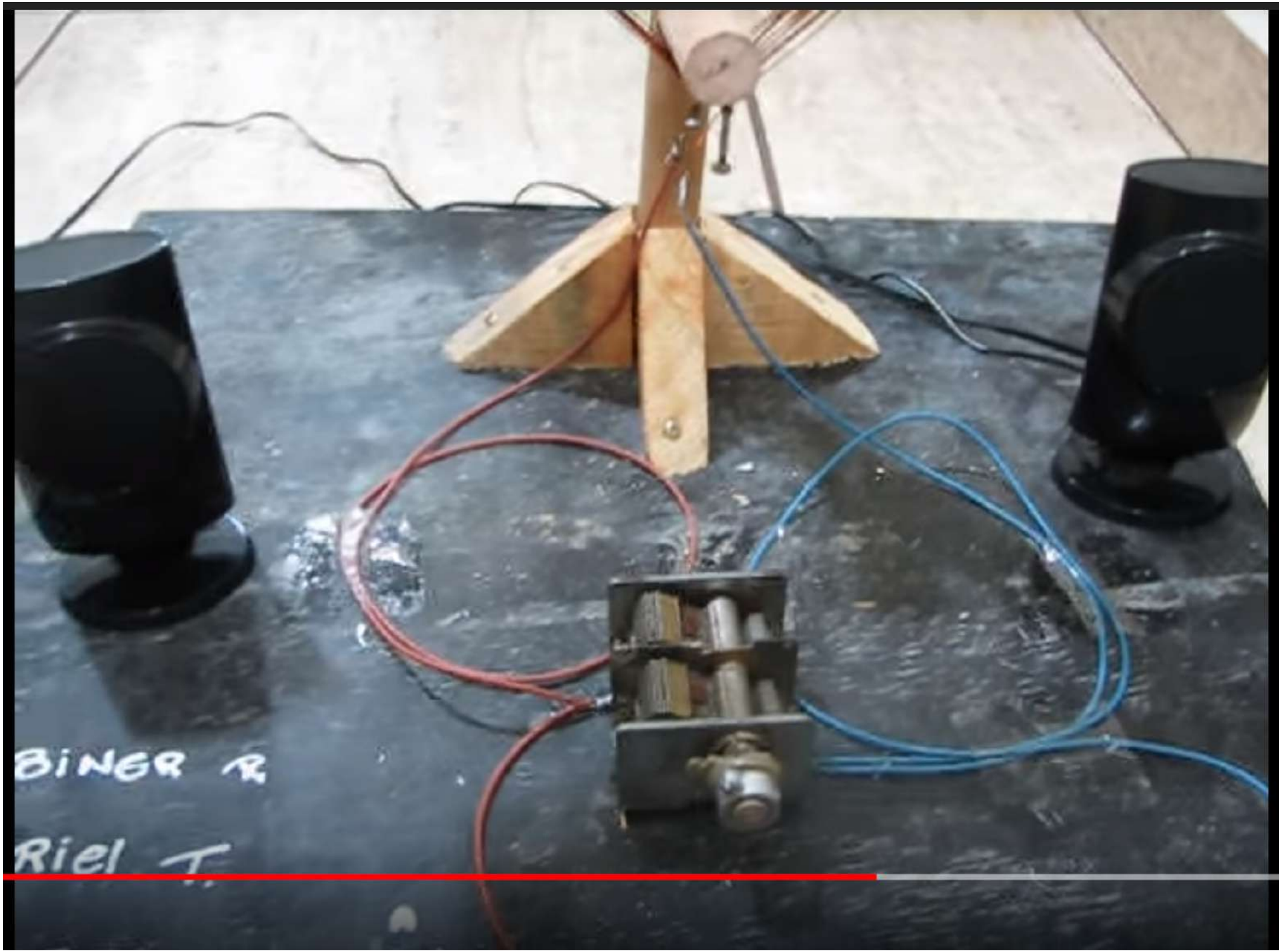


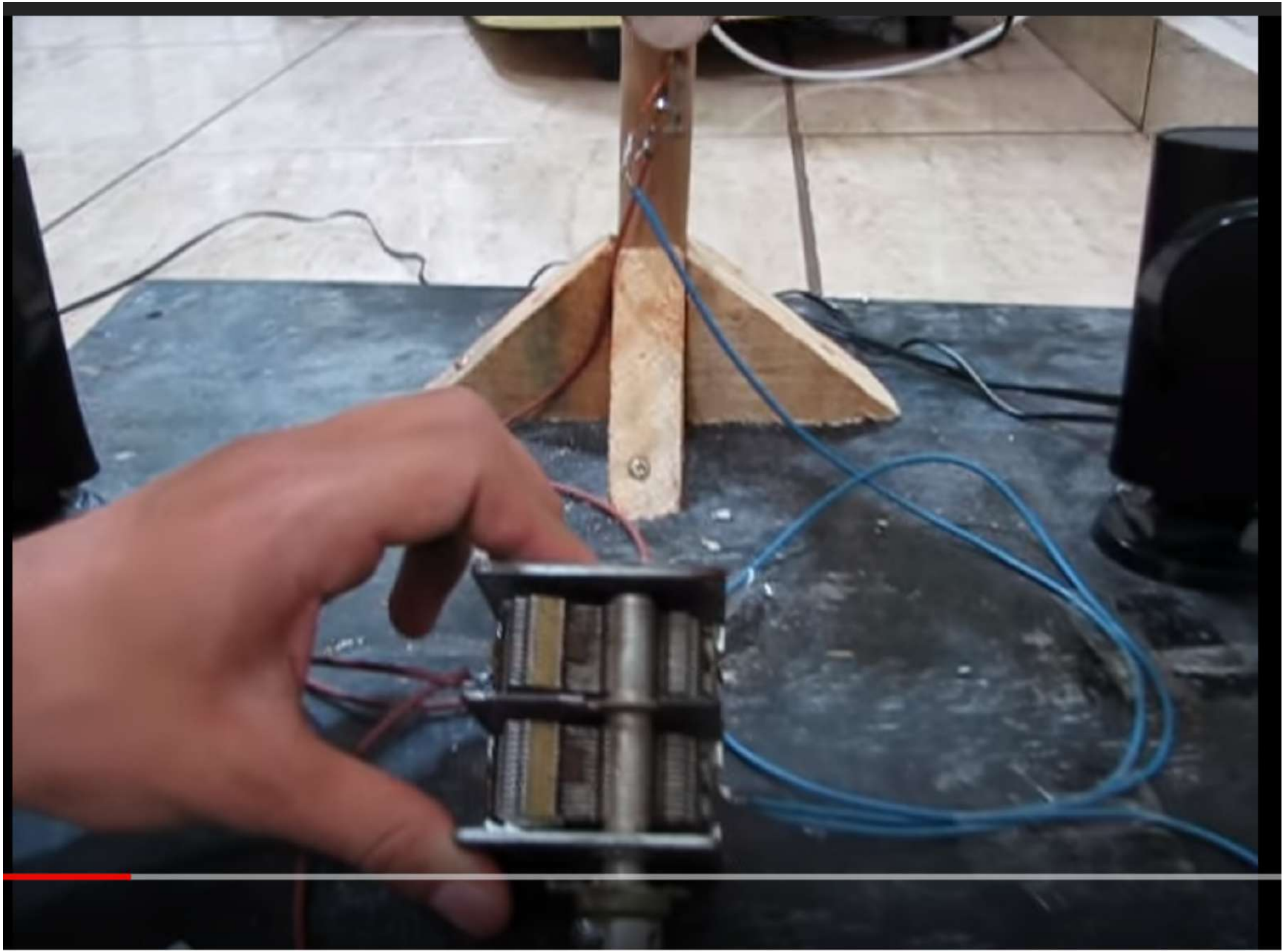

BINGR R
BRiel T

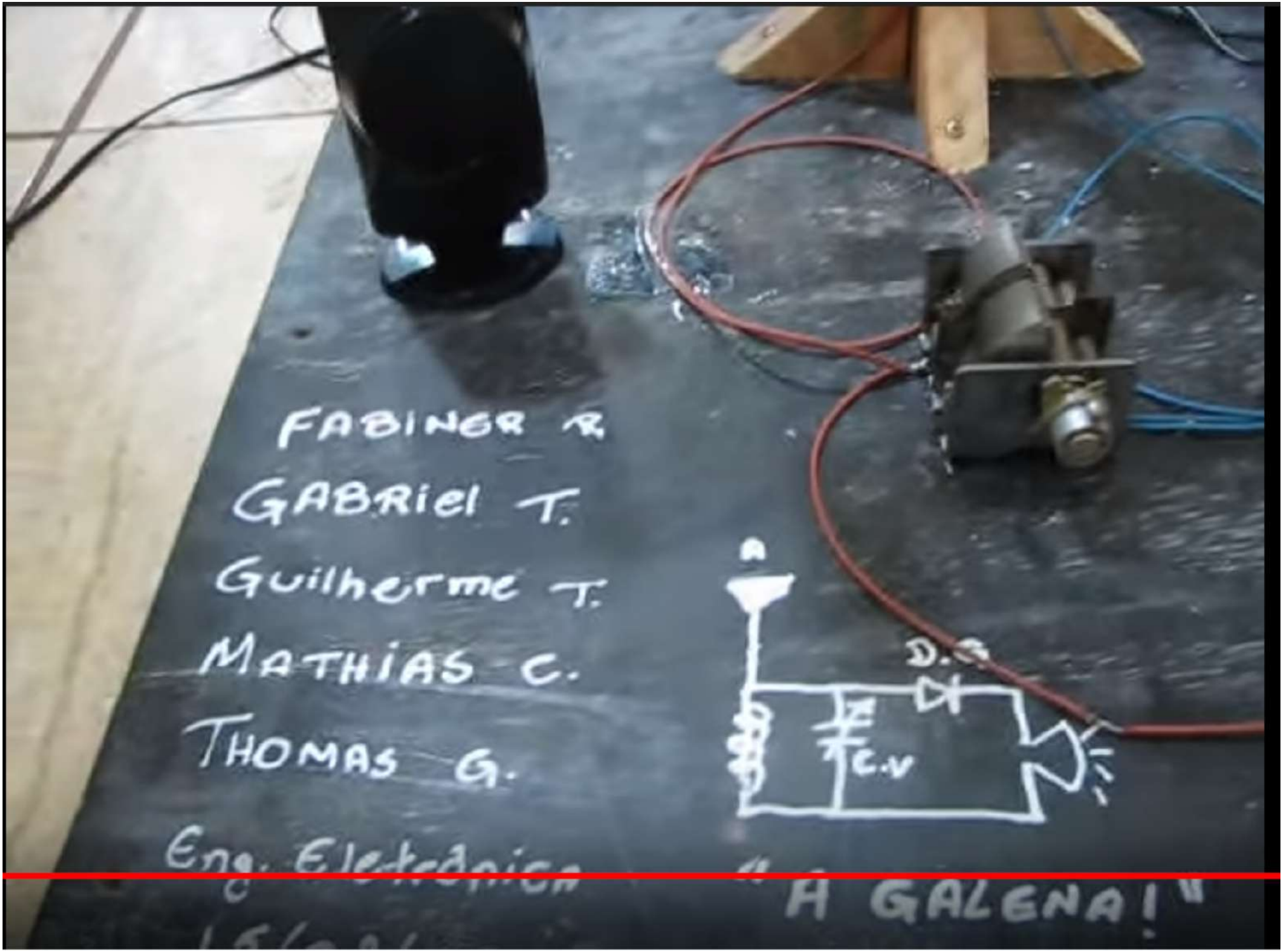


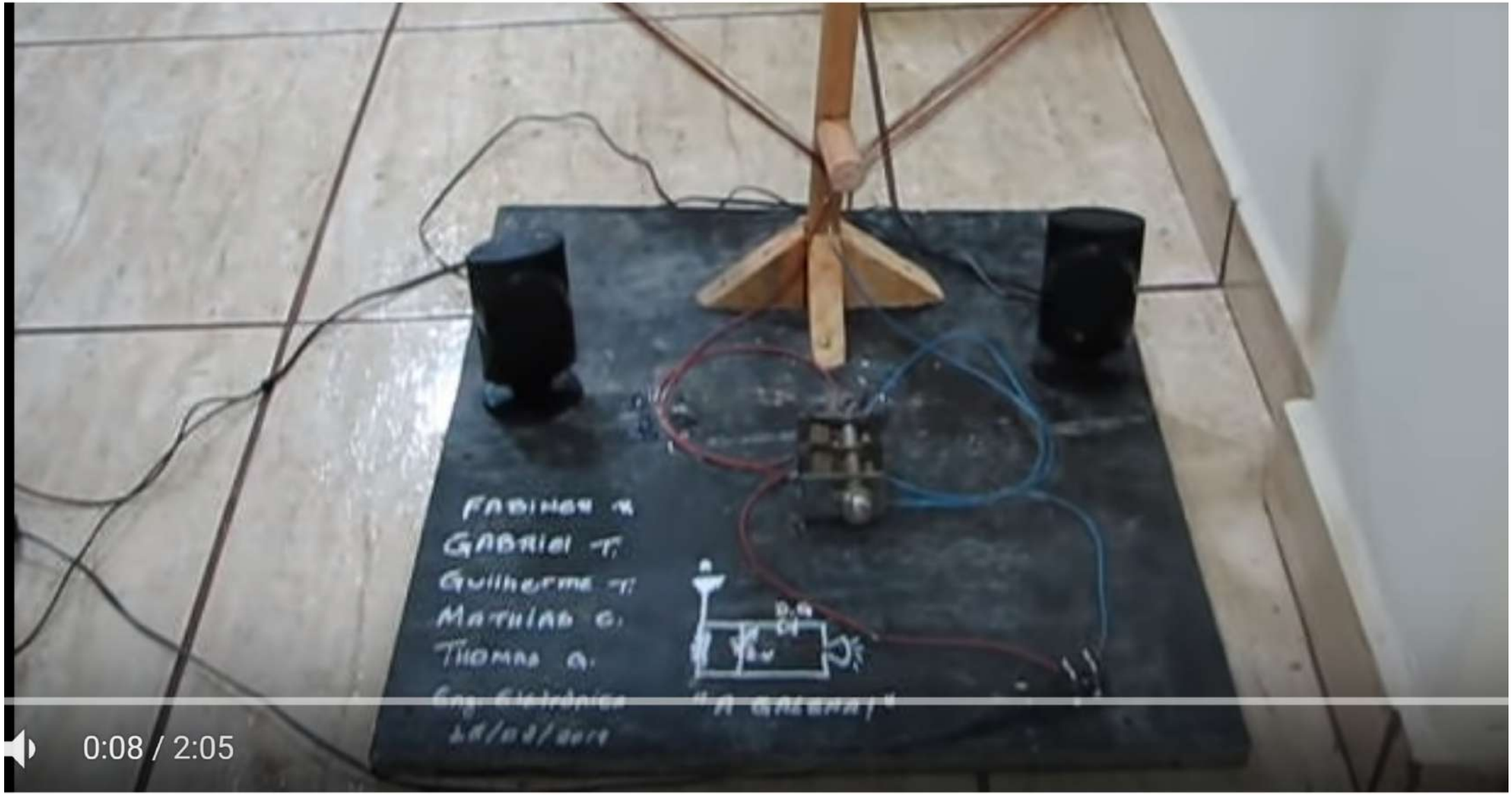


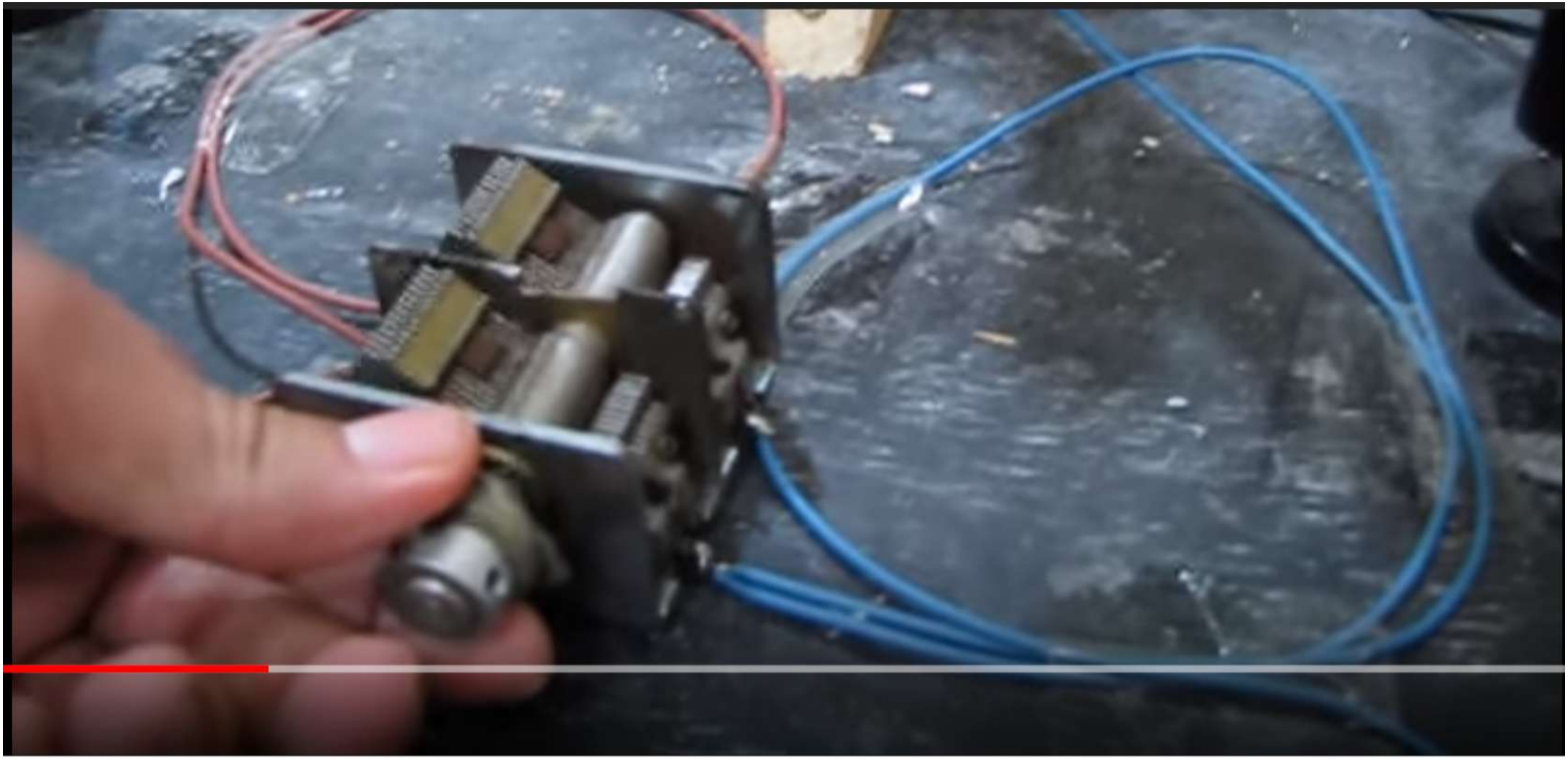


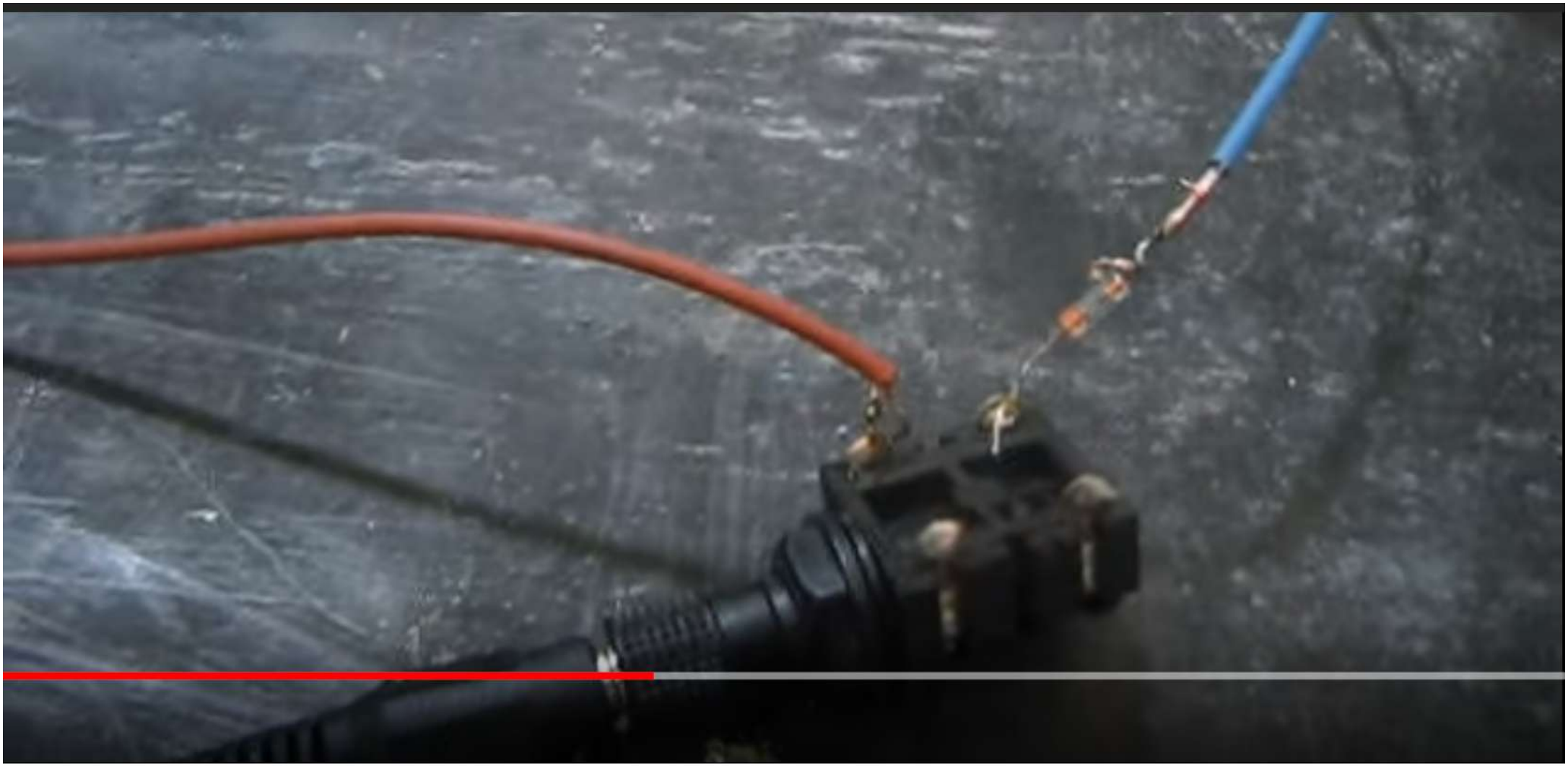

BiNGR R
Riel T




FABINER R
GABRIEL T.
Guilherme T.
MATHIAS C.
THOMAS G.
Eng. Eletrônica
A
D.
C.V
A GALENA!"


0:08 / 2:05







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DQG Fairy Brass XP-

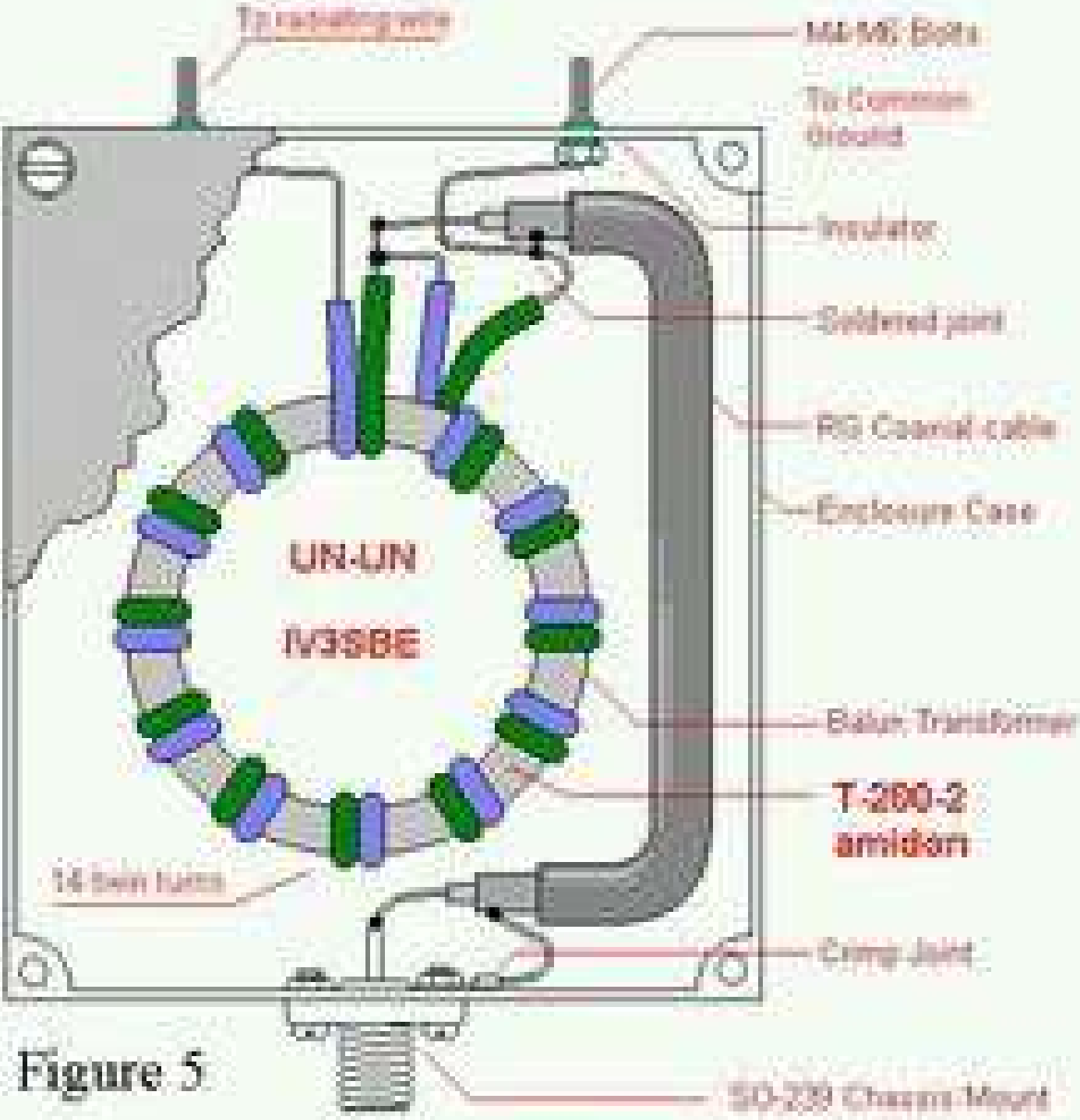
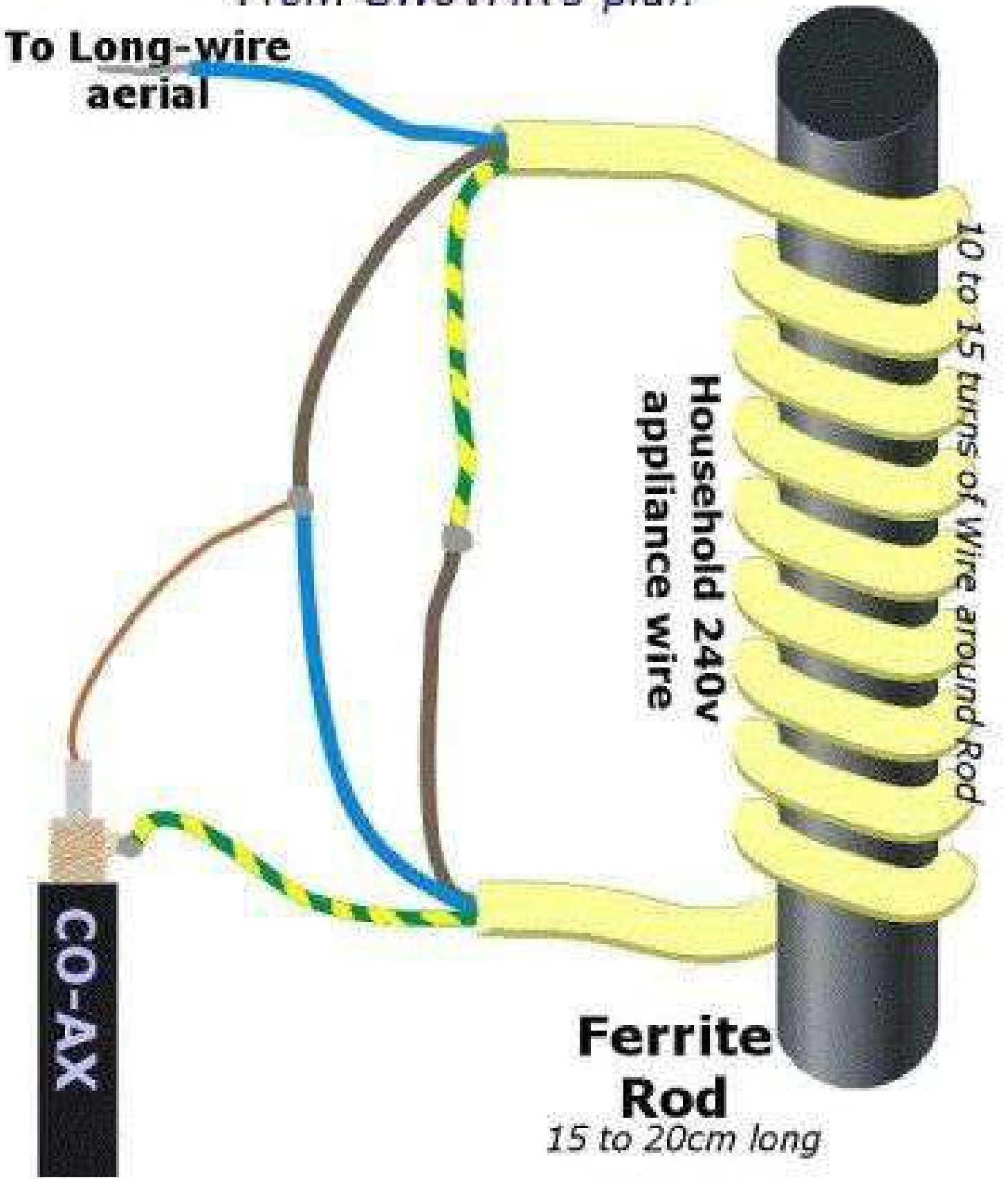
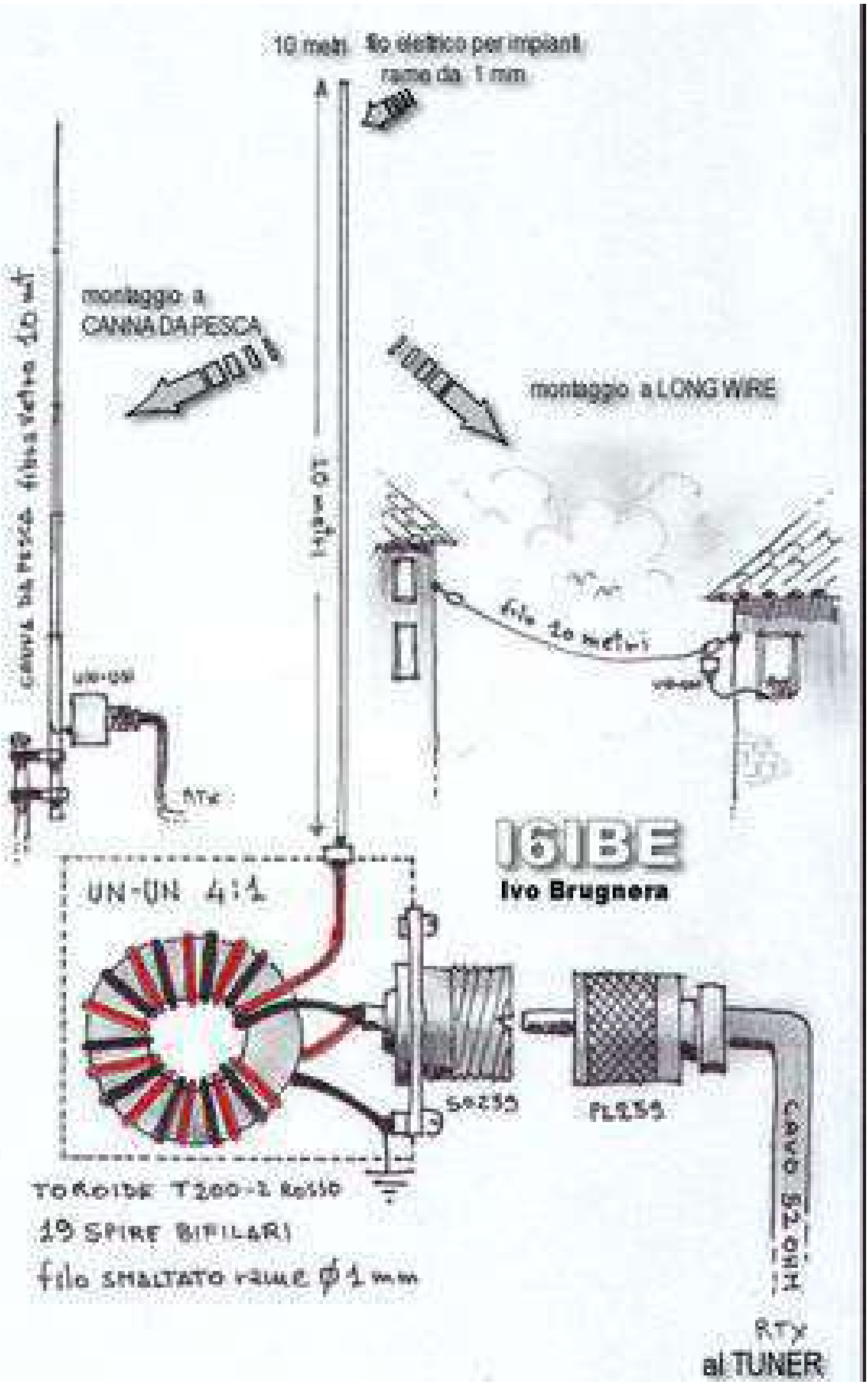

M4-M6 Bolts
To Common Ground
Insulator
Soldered joint
RG Coaxial cable
Enclosure Case
UN-UN
IV3SBE
Balun Transformer
T-200-2
amidon
Clamp Joint
SO-239 Chassis Mount

Figure 5

Voltage Balun / "Magnetic Balun"

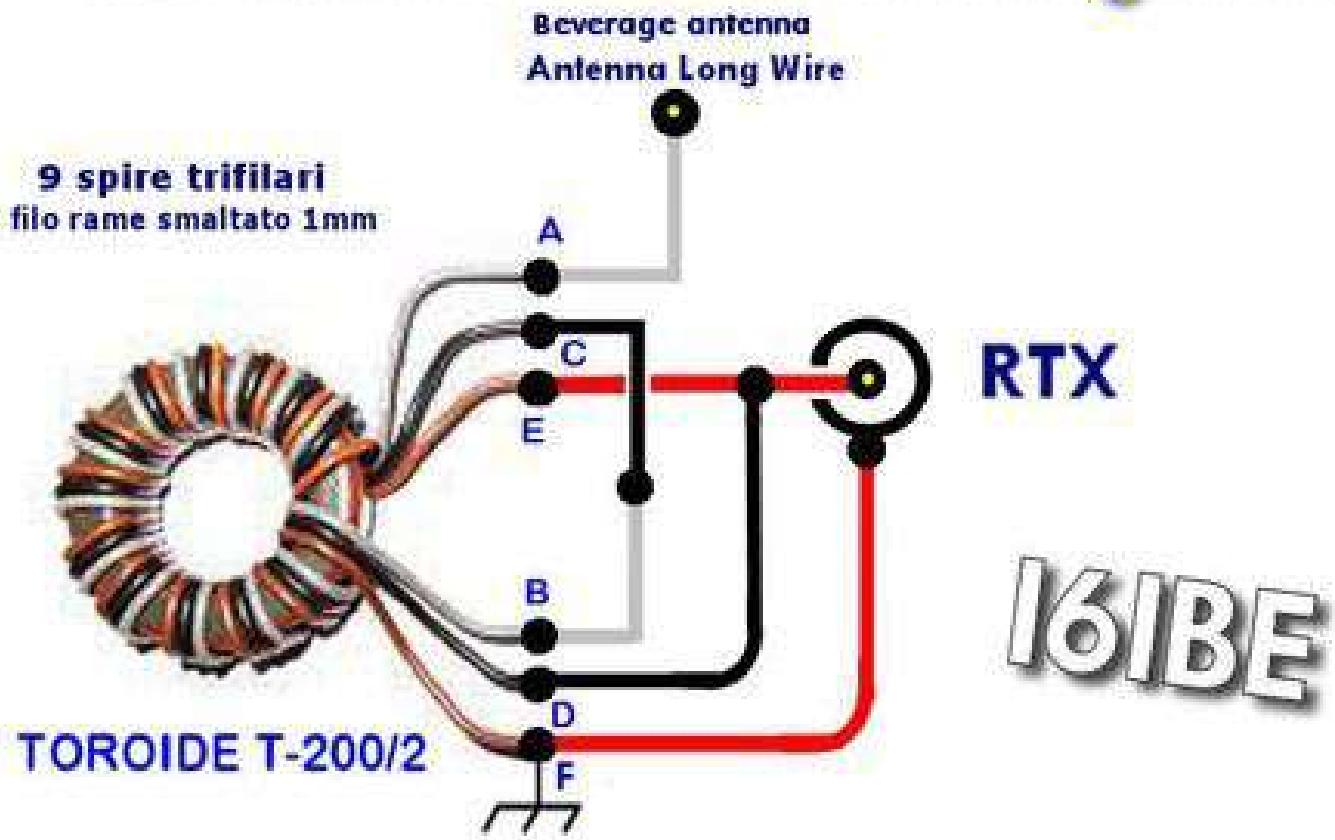
From GW0VMR's plan

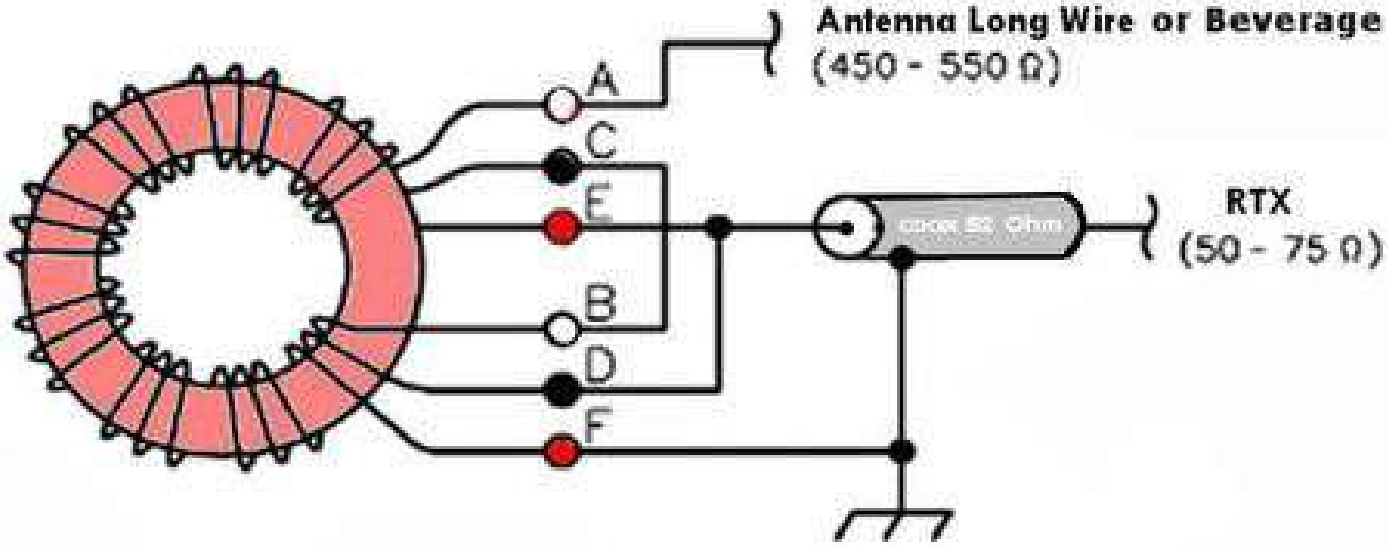


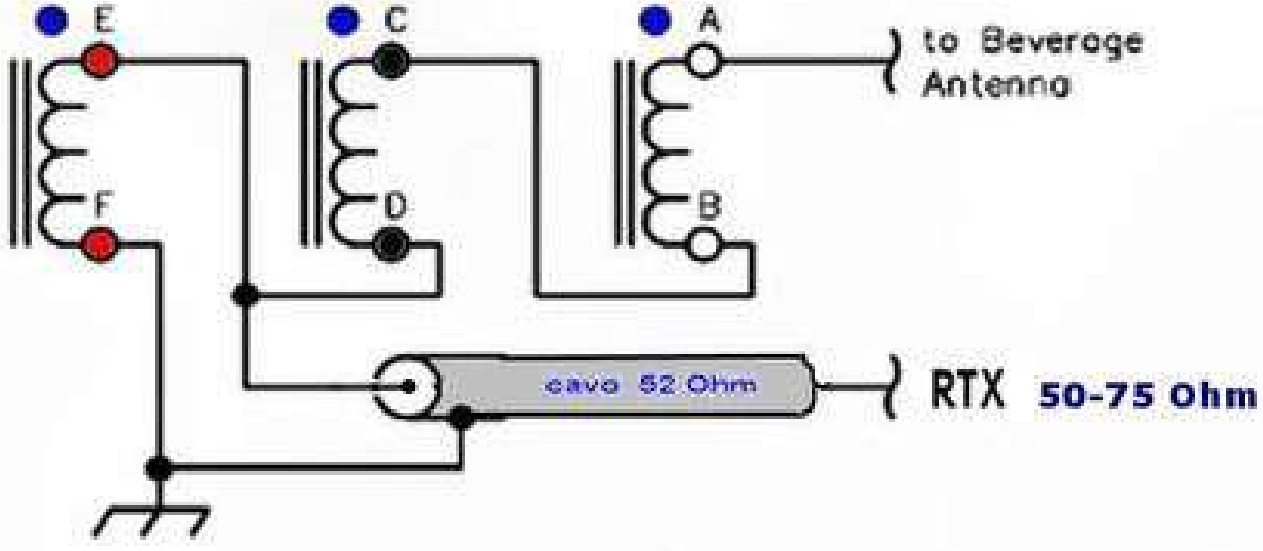


IOIBE
Ivo Brugnera

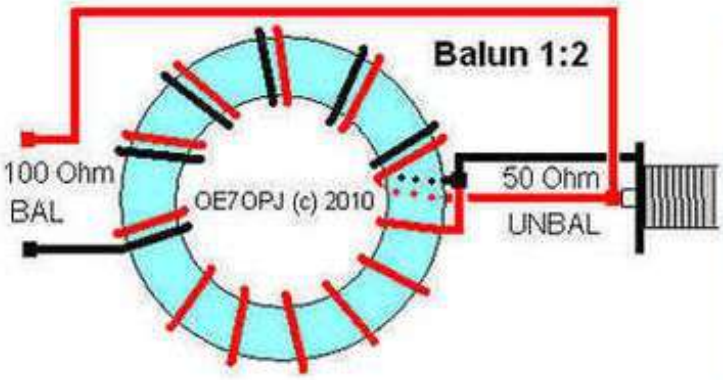
BALUN 9:1 Antenna Long Wire







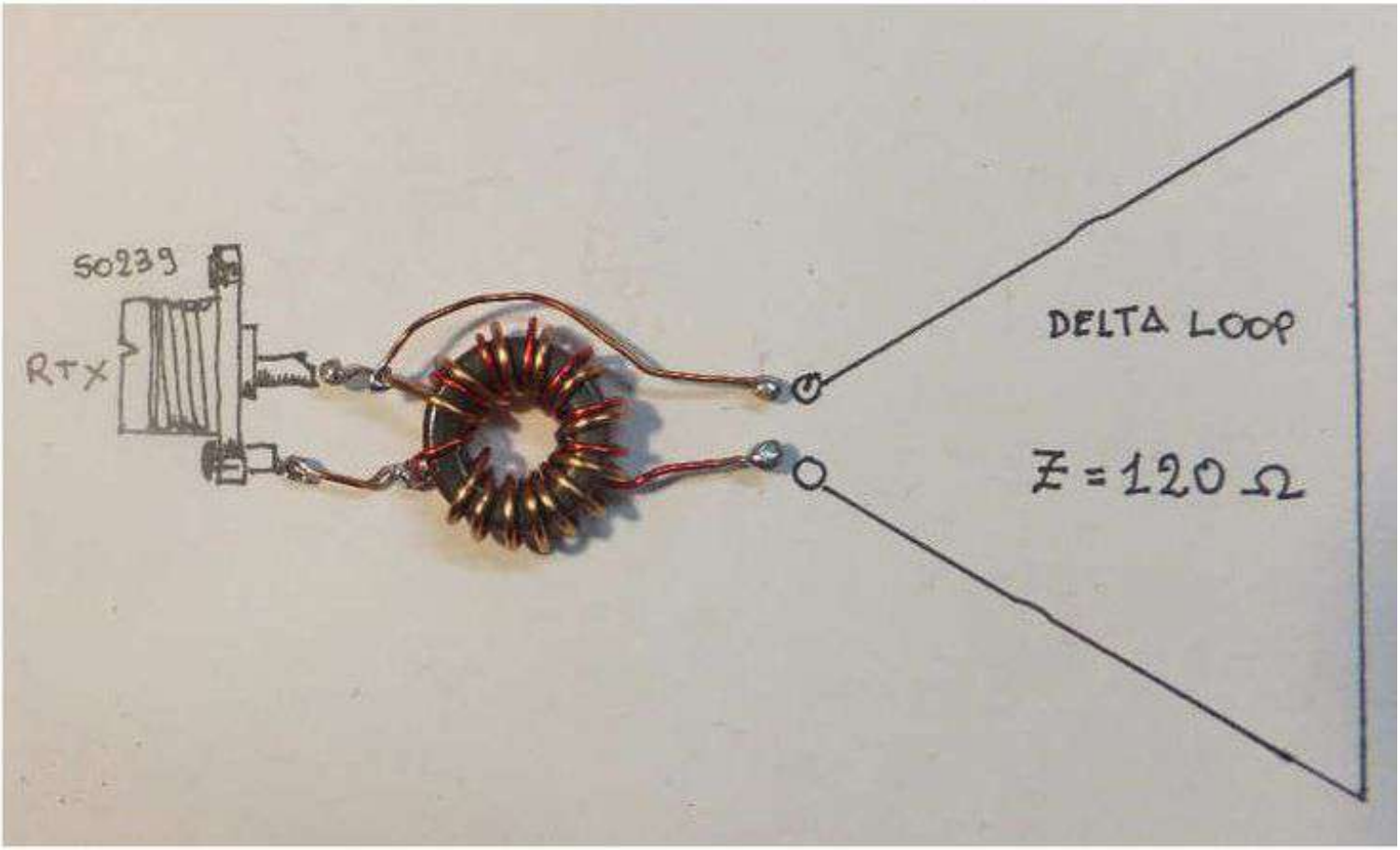
Bal-Un 2:1 per antenna DELTA-LOOP



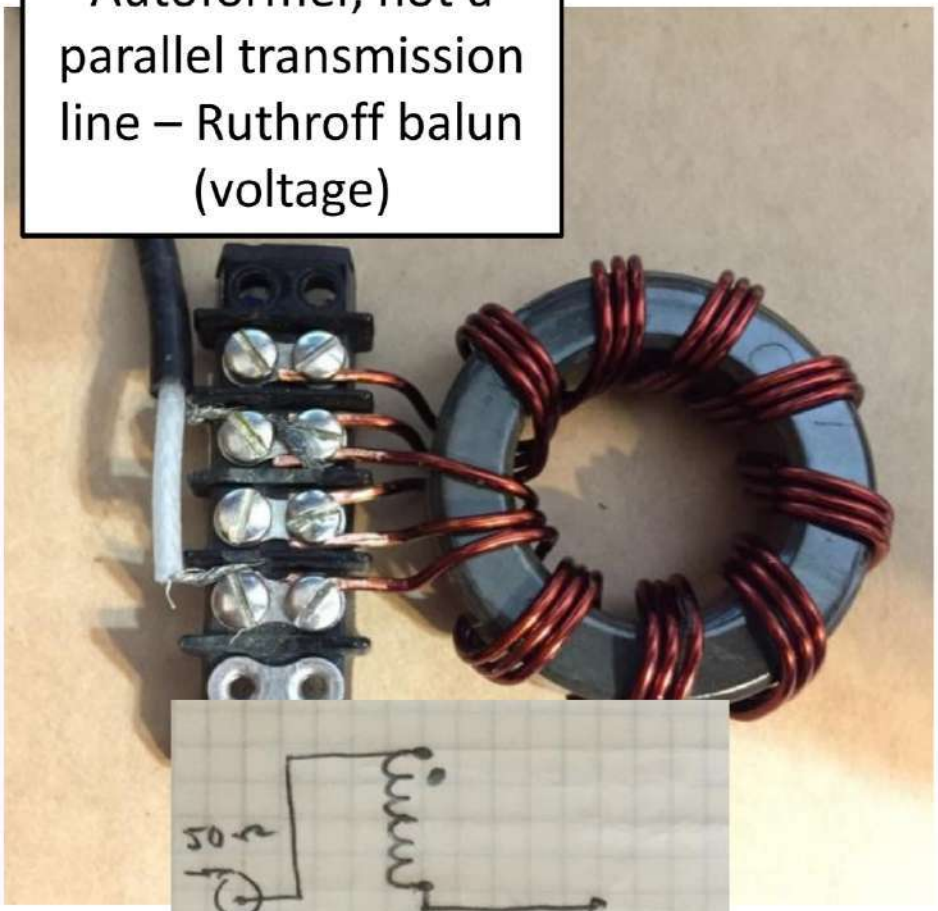


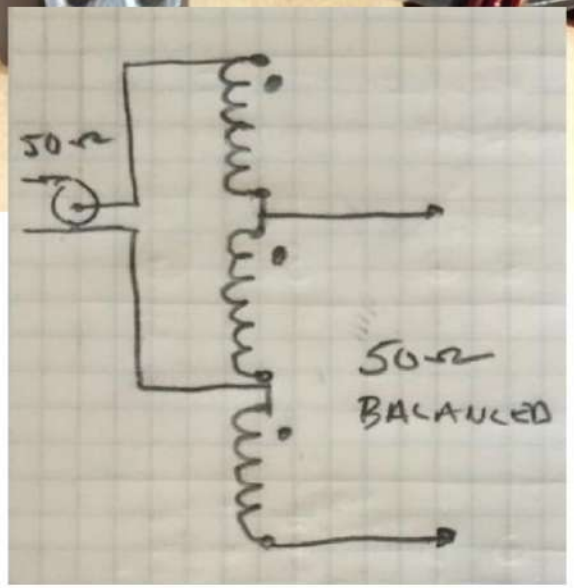
by OE7OPJ

Toroide	Numero di Spire	Potenza Supportata
T80-2	25	60 Watts
T106-2	16	100 Watts
T130-2	18	150 Watts
T157-2	16	250 Watts
T200-2	17	400 Watts
T200A-2	13	400 Watts
T400-2	14	1000 Watts



Autoformer, not a parallel transmission line – Ruthroff balun (voltage)



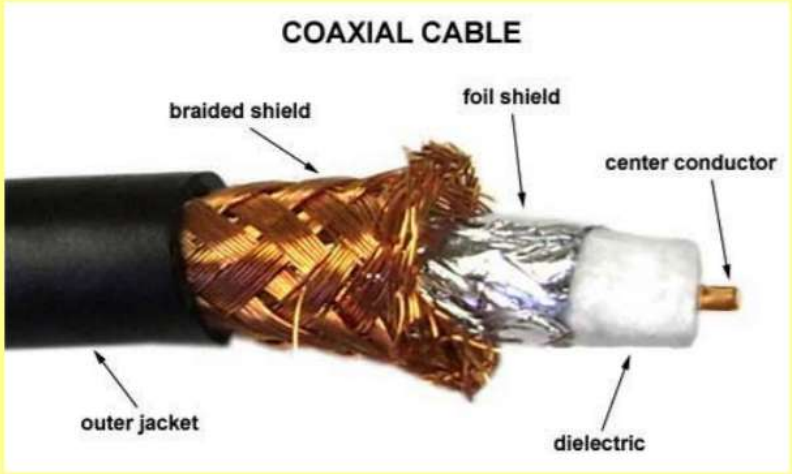




One or more parallel transmission lines, connected various ways – Guanella balun (current) – core is used solely for choking action

F/B: 0.00 dB; Rear: Azim. 120 deg, Elev. 60 deg

Coax is unbalanced …..





… Ladder line is balanced

Steve Nichols G0KYA

Coax is unbalanced, while ladder line and open wire feeder is balanced, as long as it is used properly and is kept away from metal and "earthy" materials

Convert parallel feedline to coax

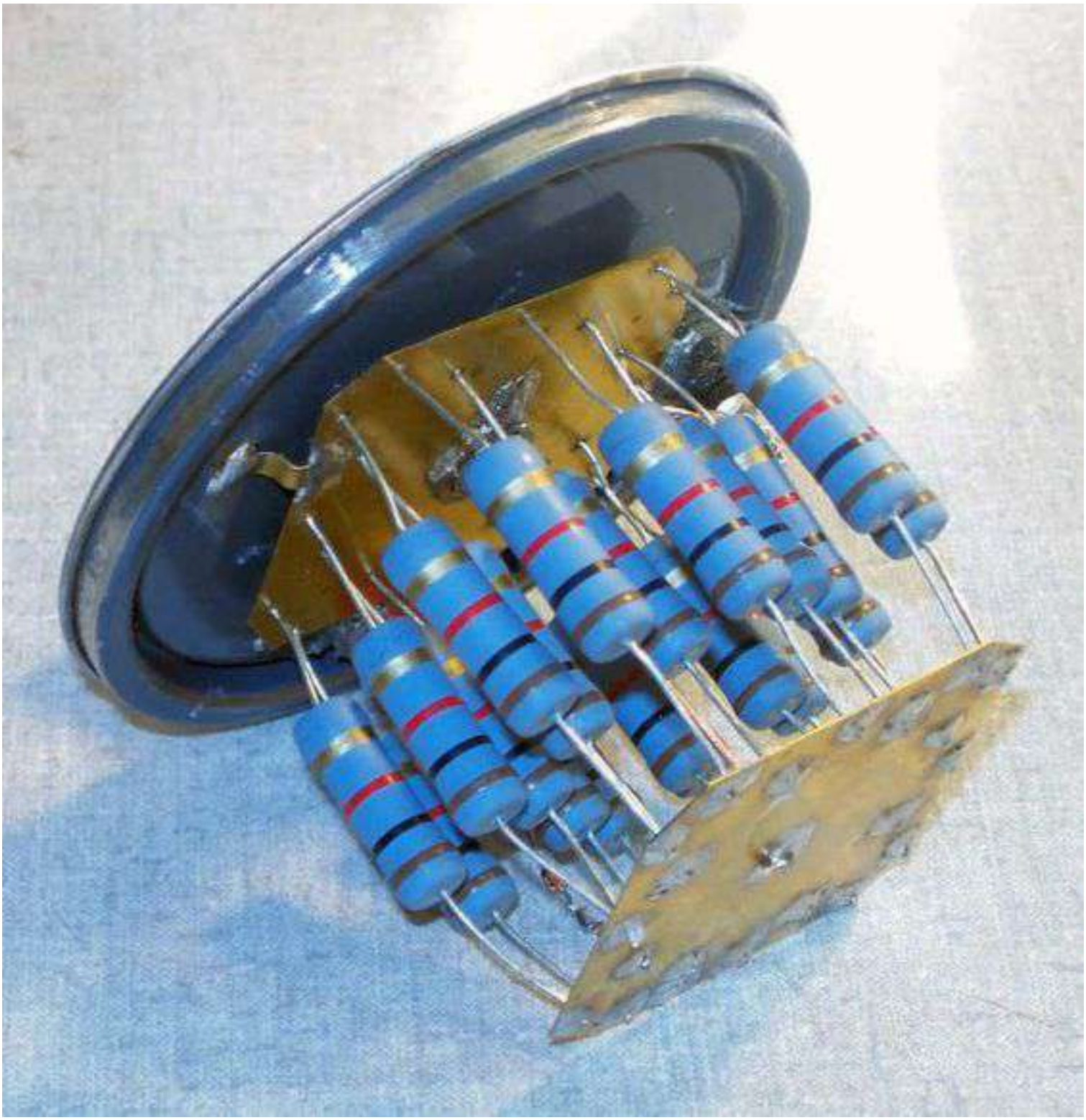


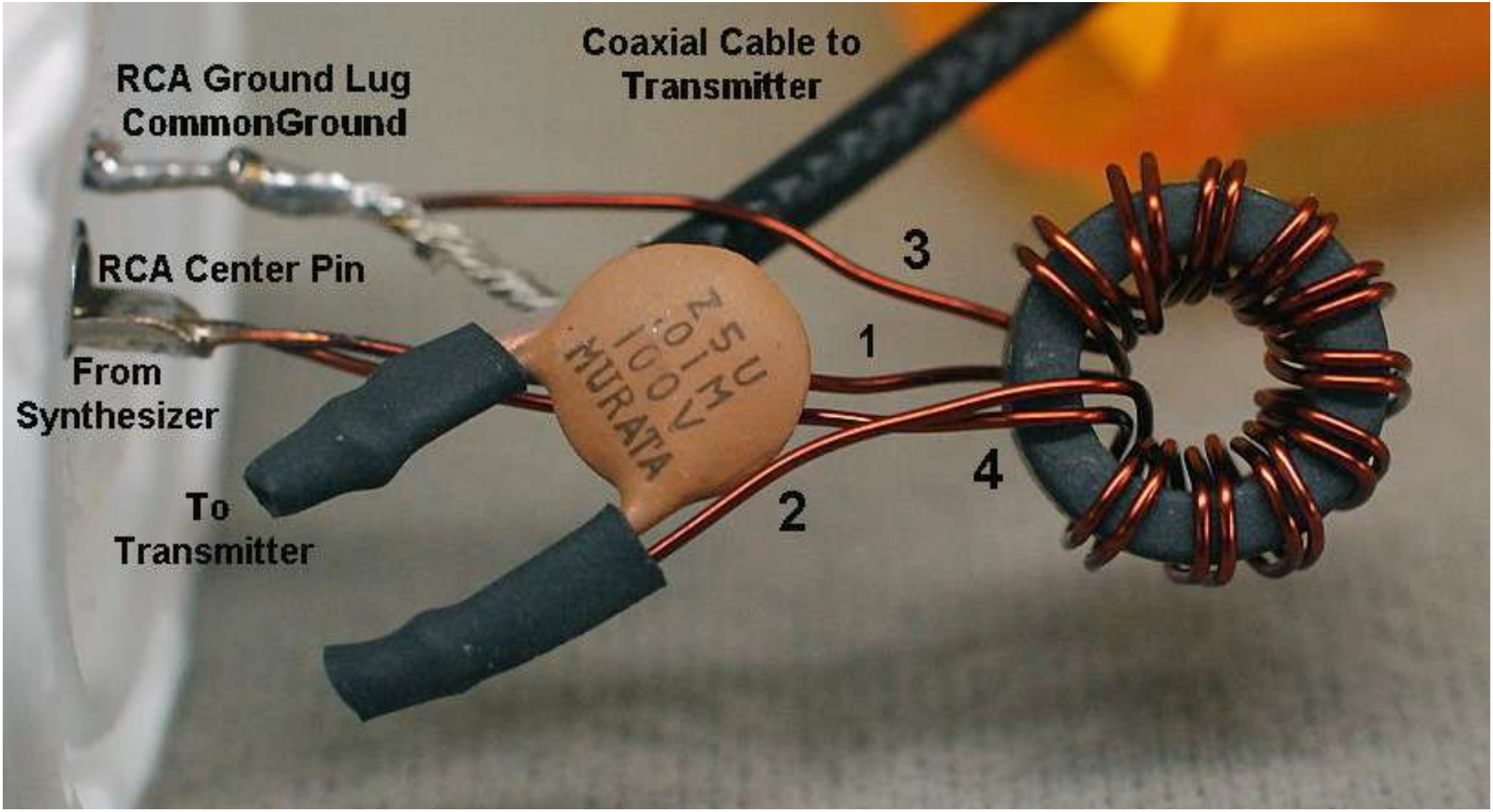
Types of Parallel Line

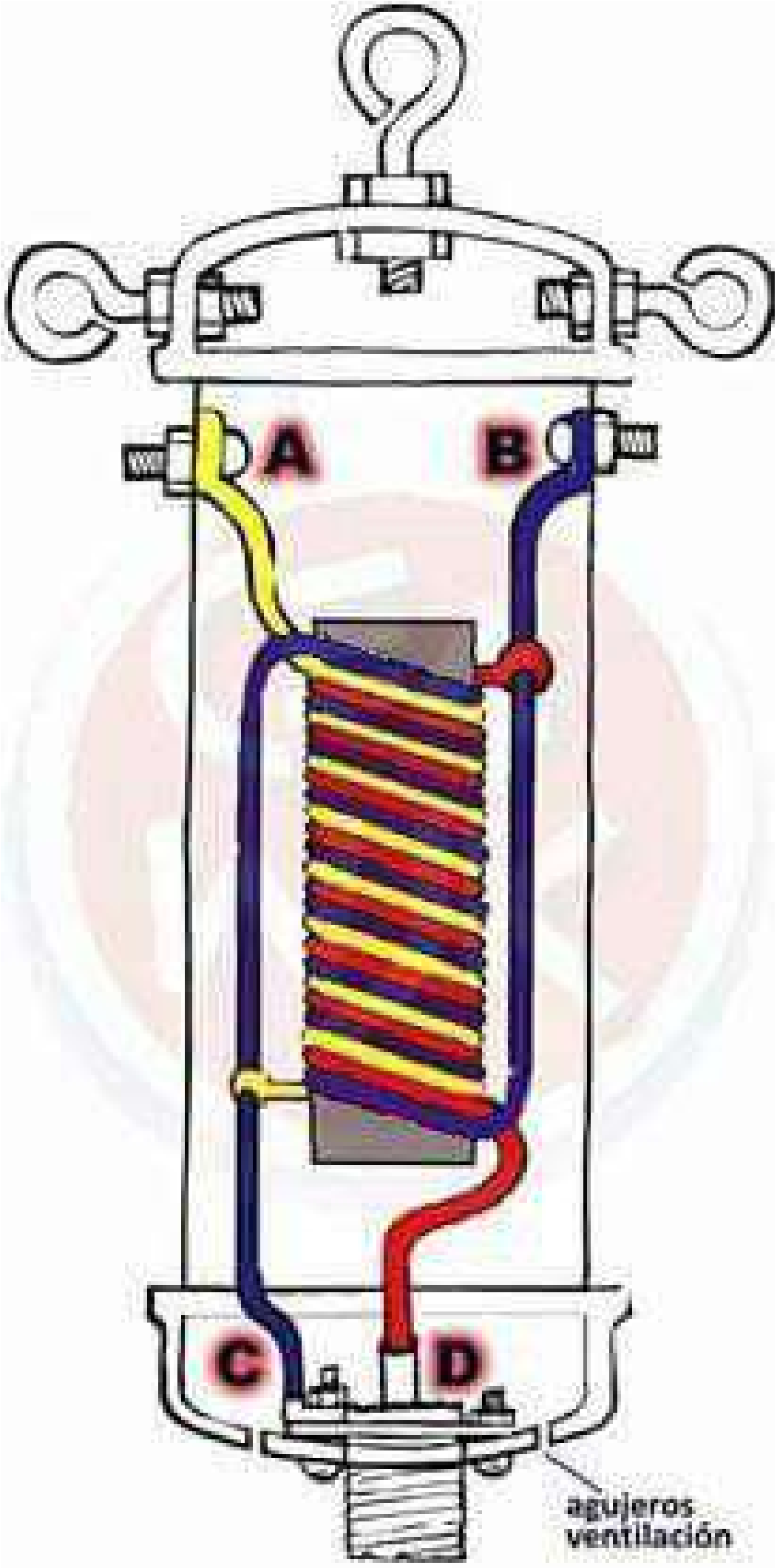
- **Open Feeder** or **Ladder line**
  - Typ 450 and 600 ohm
- **Twin Lead**
  - Common for (old) outdoor TV antennas
- **Window line**
  - Commonly available today



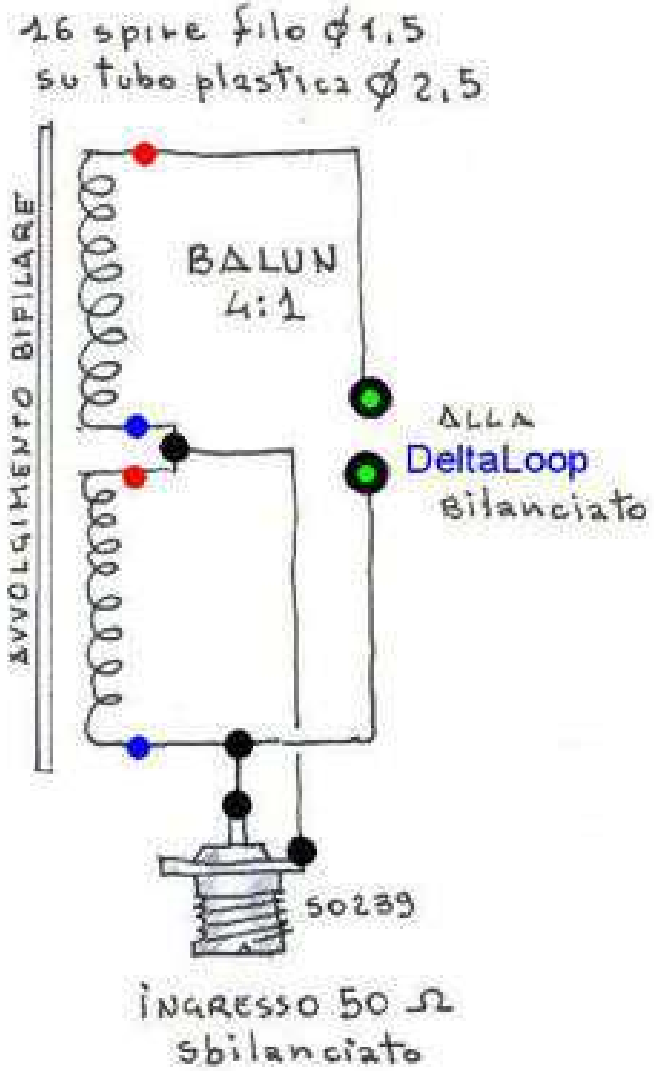


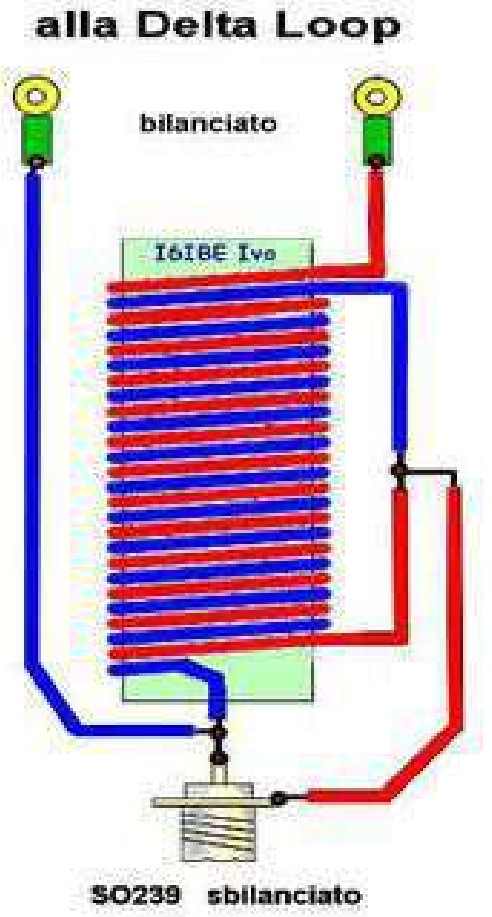



RCA Ground Lug
CommonGround
Coaxial Cable to
Transmitter
RCA Center Pin
From
Synthesizer
To
Transmitter
3
1
4
2
MURATA


A
B
C
D
agujeros
ventilación

Formula LUNGHEZZA DELTALOOP	Esempio 14.00 MHz (20 metri)	Lunghezza TOTALE del LOOP
Velocita' Luce : Freq MHz x 0.97= L	**299.8** VL : **14.100** MHz x **0,97**	**20.624** metri totale loop
$L = \frac{300.000}{MHz} \times 0.97$	I6IBE	
Formula LUNGHEZZA Stub coax 75 Ohm	Esempio 14.00 MHz (20 metri)	Lunghezza TOTALE cavo 75 Ohm
Lunghezza LOOP x 0.66 : 4	**20.624 x 0.66 : 4**	**3.402** Metri coax RG-59





BALUN 4:1

I6IBE



Choke RFI

toroide

cavo RG-58

5+5 spire

controfase

BOCCHETTONE
INGRESSO ANTENNA
SO-239

2. Insert metal electrodes and attach multimeter leads [copper (+), aluminum (-)] For measuring direct current voltage: set multimeter function switch to "DCV: 20" take a reading in volts DC. for measuring direct current: set multimeter function switch to "DCA: 20m" take a reading in milliamps (mA) DC.

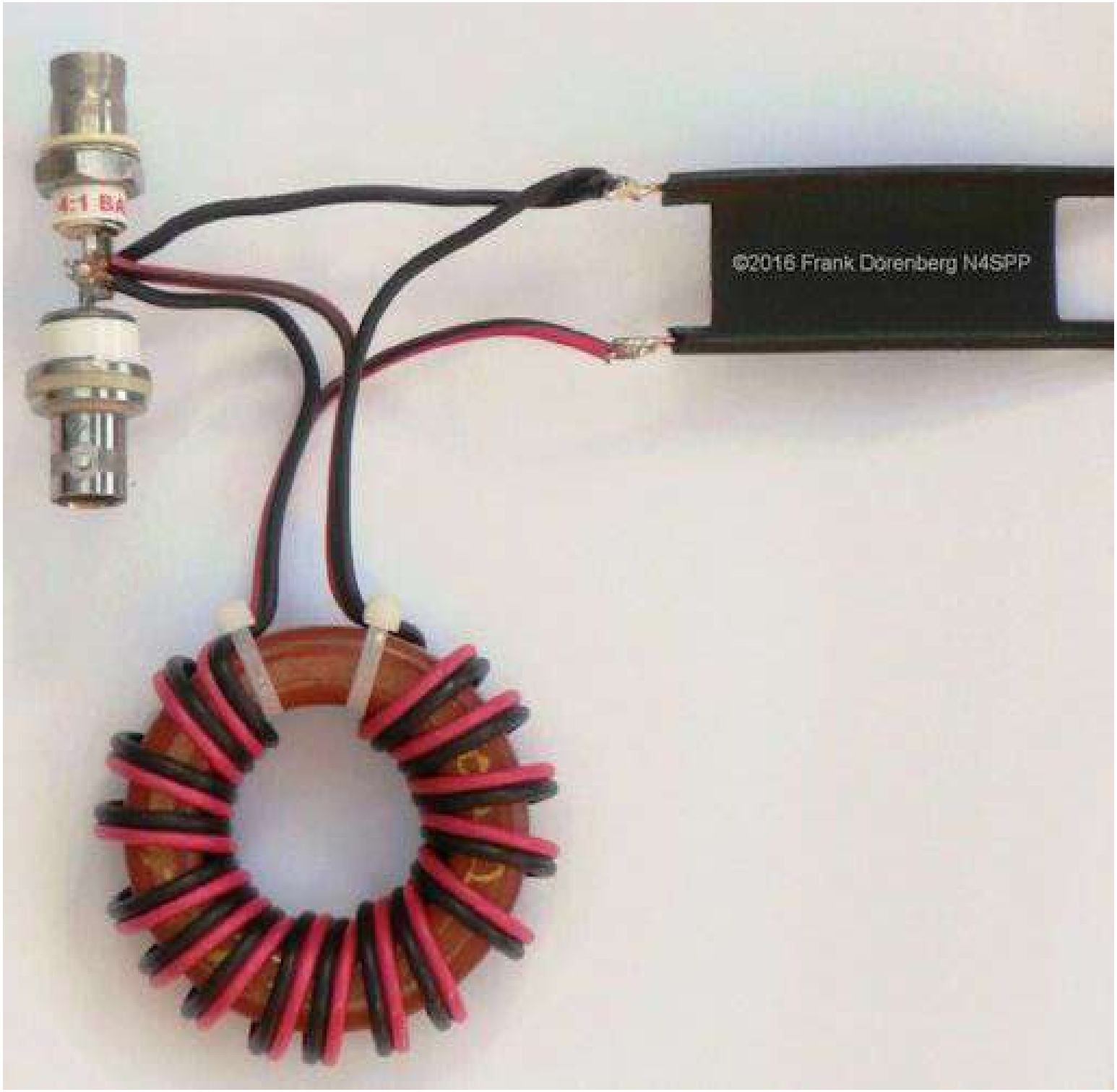
Lawn battery (summer). INSET: Marsh mud battery. (Circles show position of electrodes.)



Calculating Earth Battery Power (W = I * V)

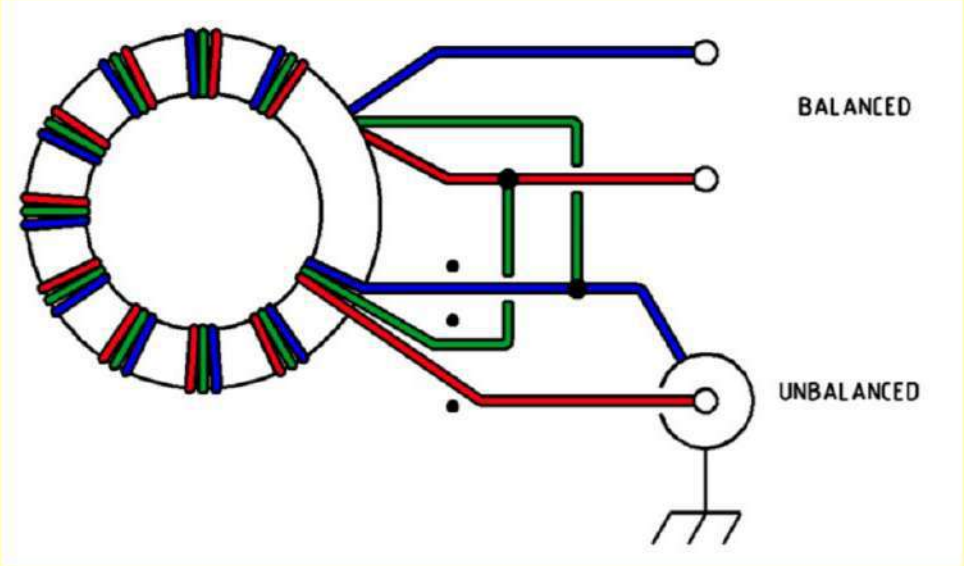
EXAMPLE: A lawn battery in late summer (little rain) produces a 0.65V, 0.2mA current. A battery power calculation of 0.00013W (0.13mW).

Powered by: PIXEL ink LLC


4:1 BA
©2016 Frank Dorenberg N4SPP

F/B: 0.00 dB; Rear: Azim. 120 deg, Elev. 60 deg

1:1 Ruthroff Voltage Balun



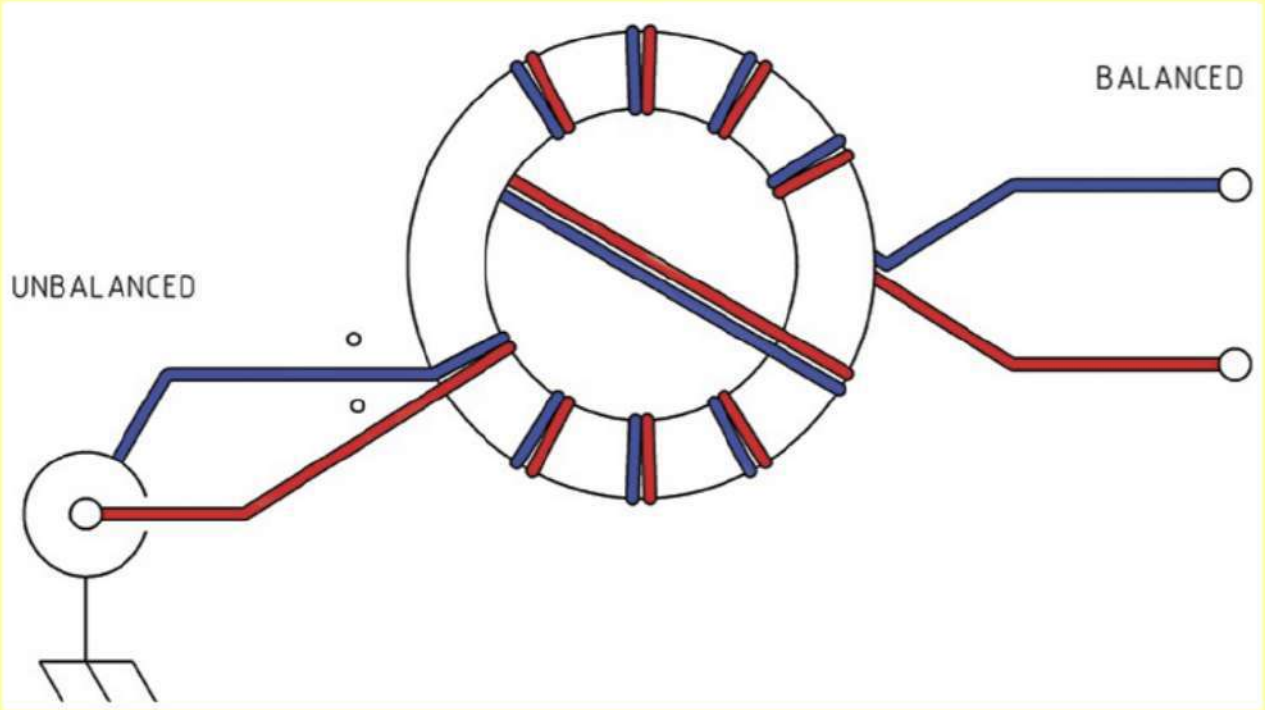
* 450 Ohm ladderline

Steve Nichols G0KYA

The Ruthroff or voltage balun is another type. Voltage baluns balance the voltages. Current balance is considered to be superior to voltage balance. Voltage baluns should not be used in lines with high SWR. They have the narrowest impedance and frequency range of any balun type. Properly designed voltage baluns have low common mode impedance. Properly designed current baluns have high common mode impedance, and provide better balance. If you want to stop common mode currents flowing on your coax a current balun is a better choice. But in the Carolina Windom, which uses the vertical coax as a radiator you WANT common mode currents, so a Ruthroff voltage balun is better.

F/B: 0.00 dB; Rear: Azim. 120 deg, Elev. 60 deg

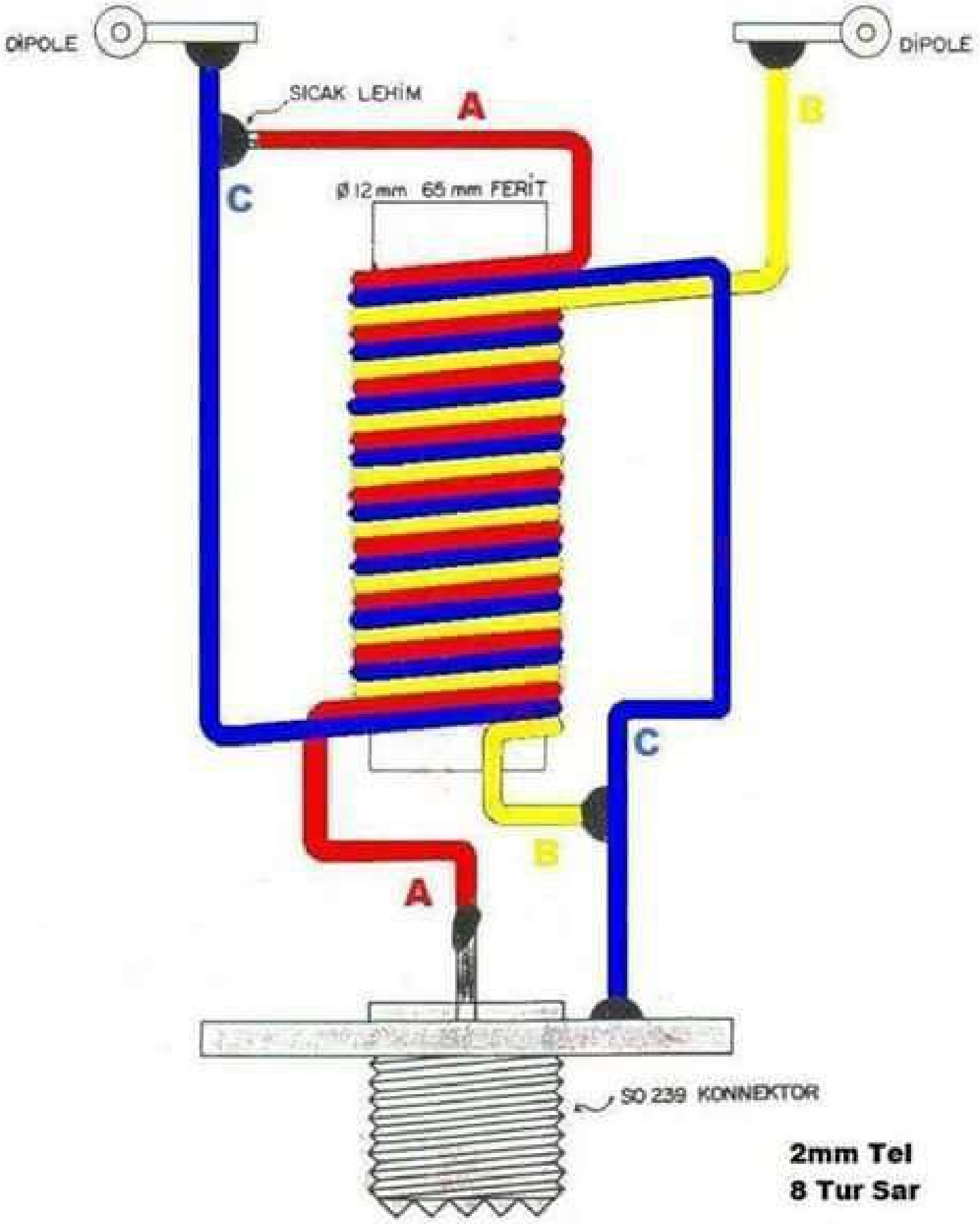
1:1 Guanella current balun



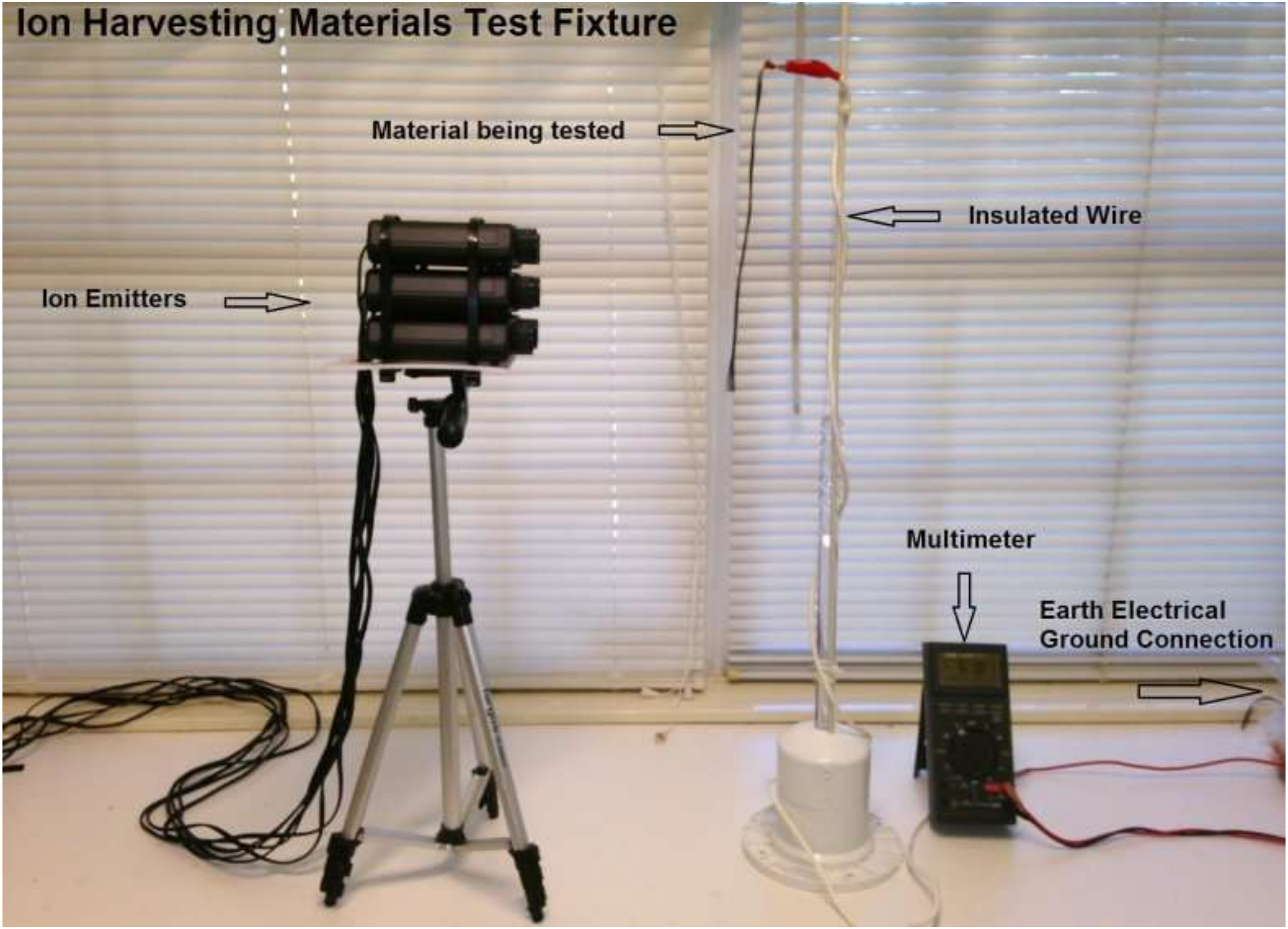
* 450 Ohm ladderline

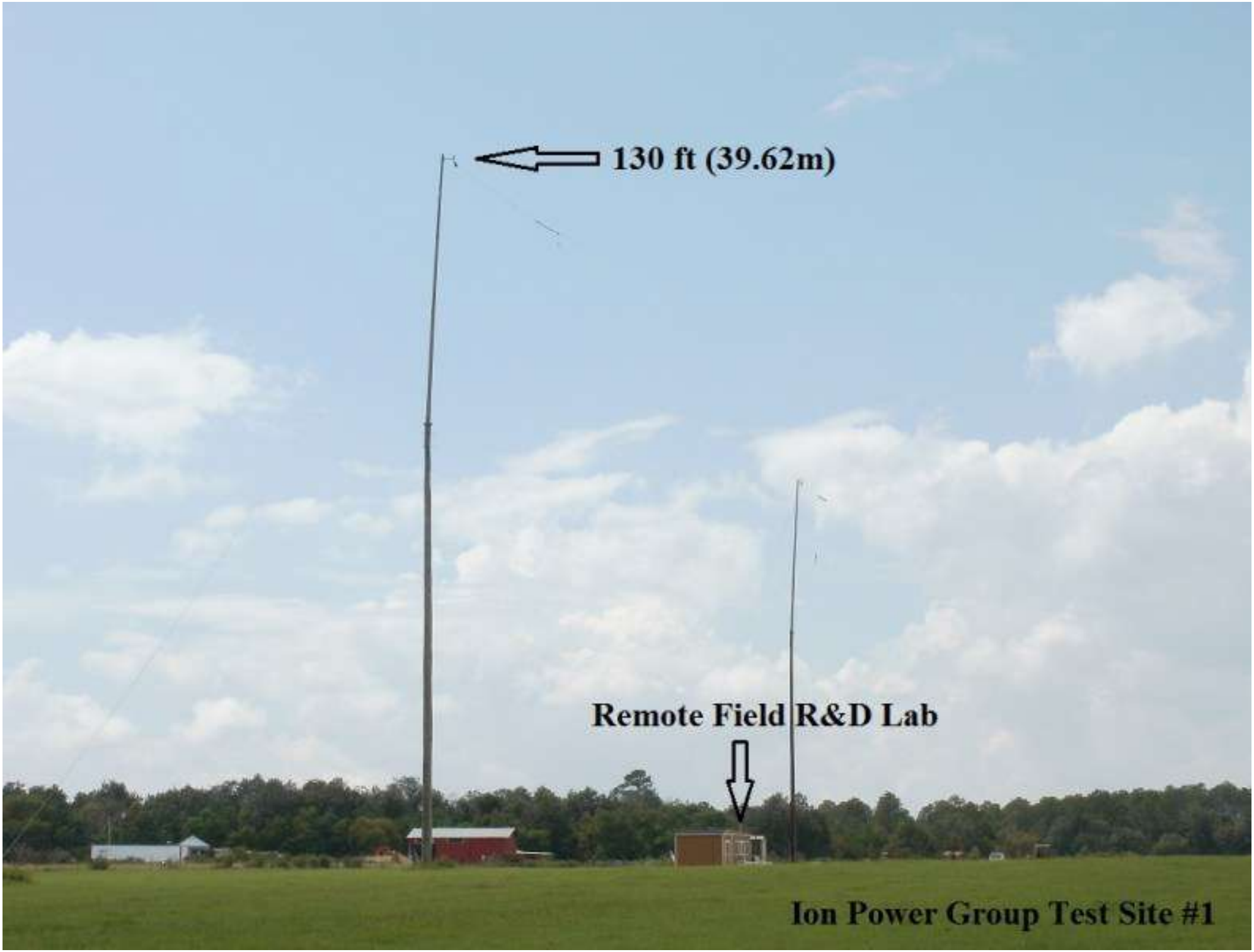
Steve Nichols G0KYA

A Guanella or current balun is very common. Current baluns stop RF from coming back down the outside of the coax shield, and are so called that because they "force equal currents in each side of a dipole"


DİPOLE
DİPOLE
SICAK LEHİM
A
B
C
Ø 12 mm 65 mm FERİT
C
B
A
SO 239 KONNEKTOR
2mm Tel
8 Tur Sar


© Azega.com

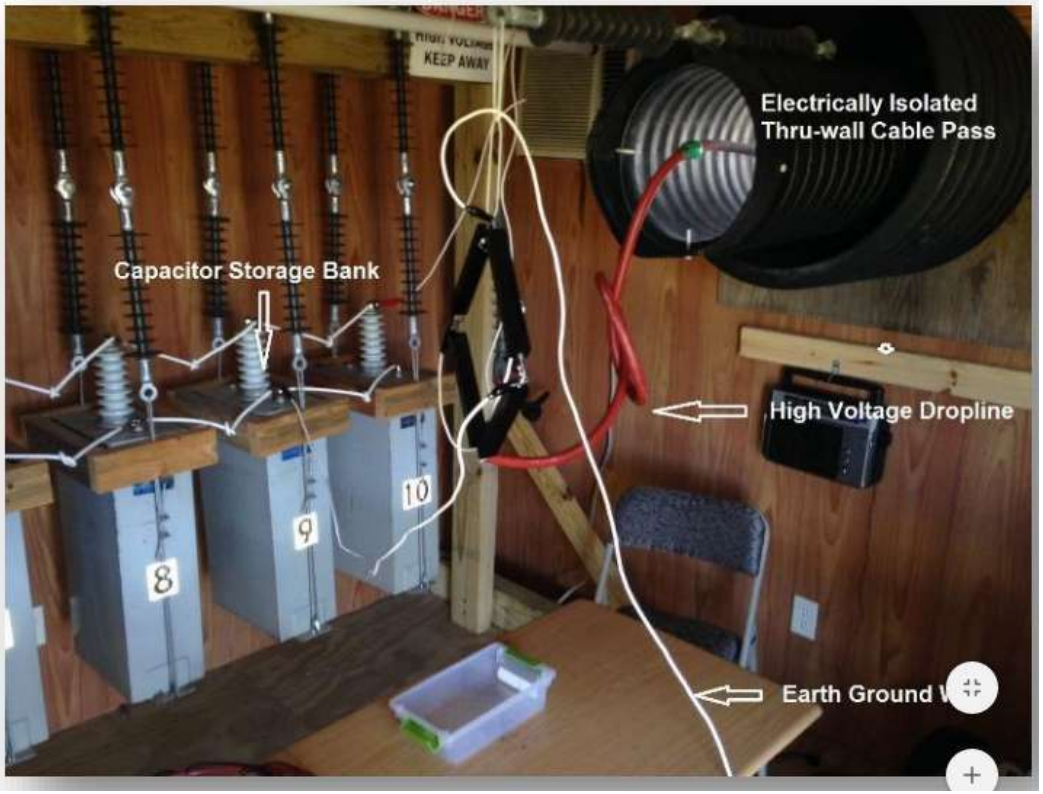

Ion Harvesting Materials Test Fixture
Material being tested
Insulated Wire
Ion Emitters
Multimeter
Earth Electrical
Ground Connection

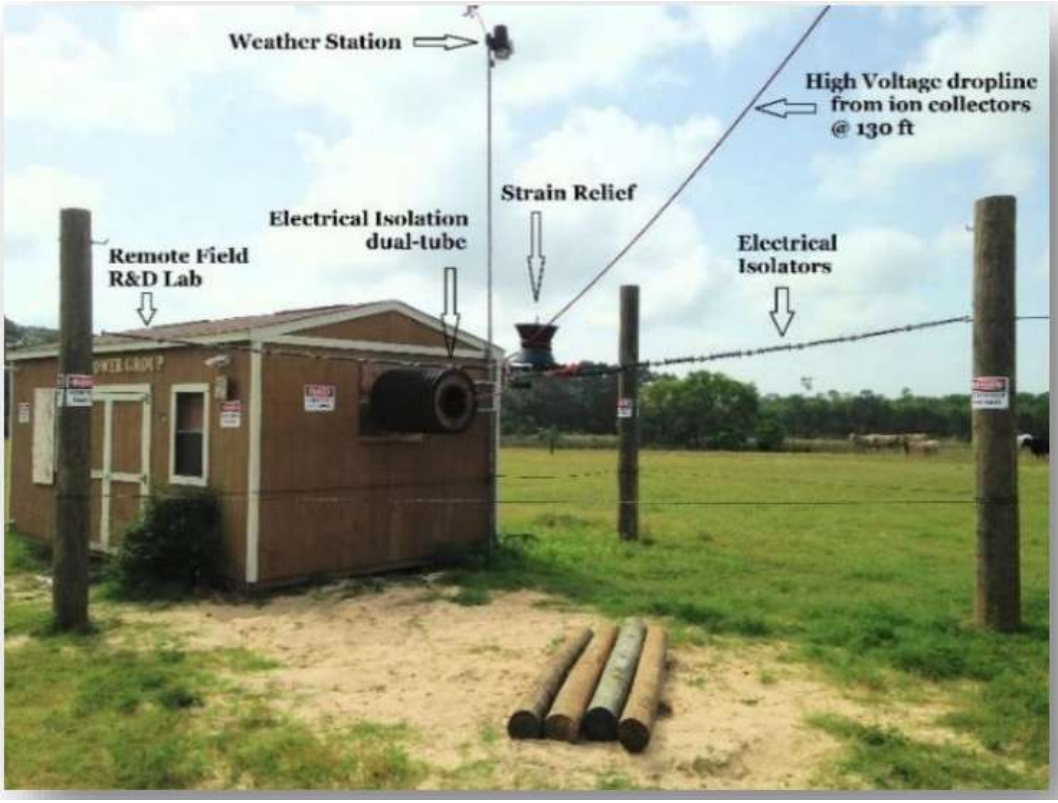

130 ft (39.62m)
Remote Field R&D Lab
Ion Power Group Test Site #1

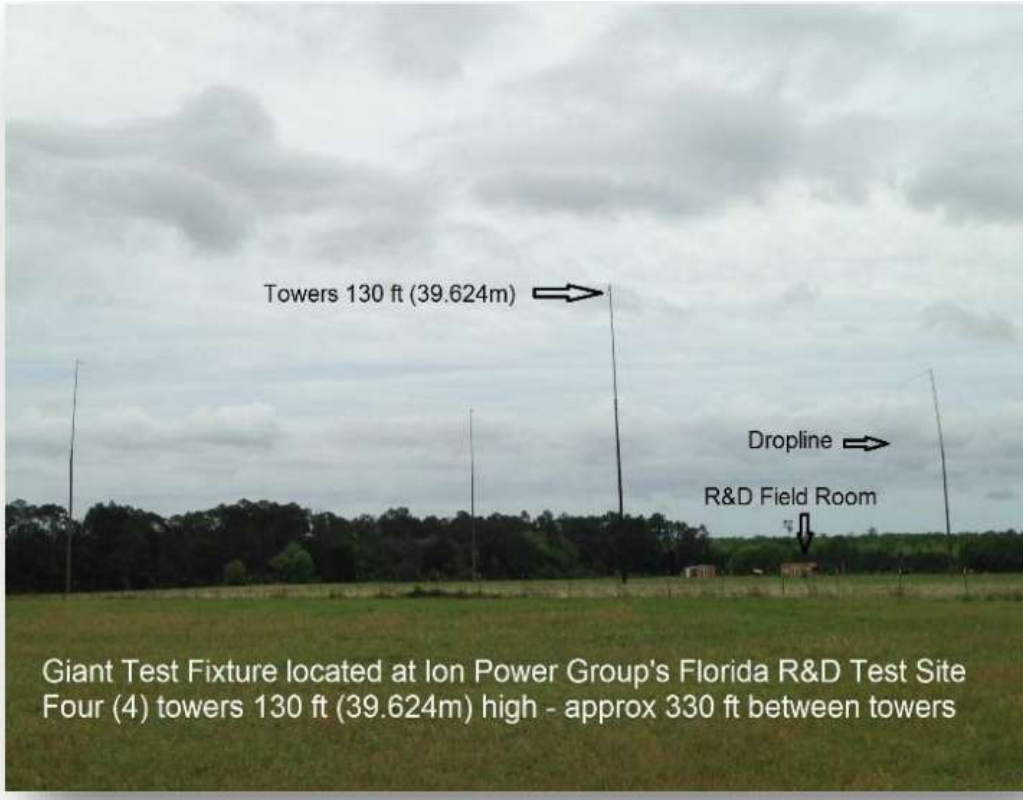

DANGER
HIGH VOLTAGE
KEEP AWAY
1
2
3
4
5
6
7
8
9
10

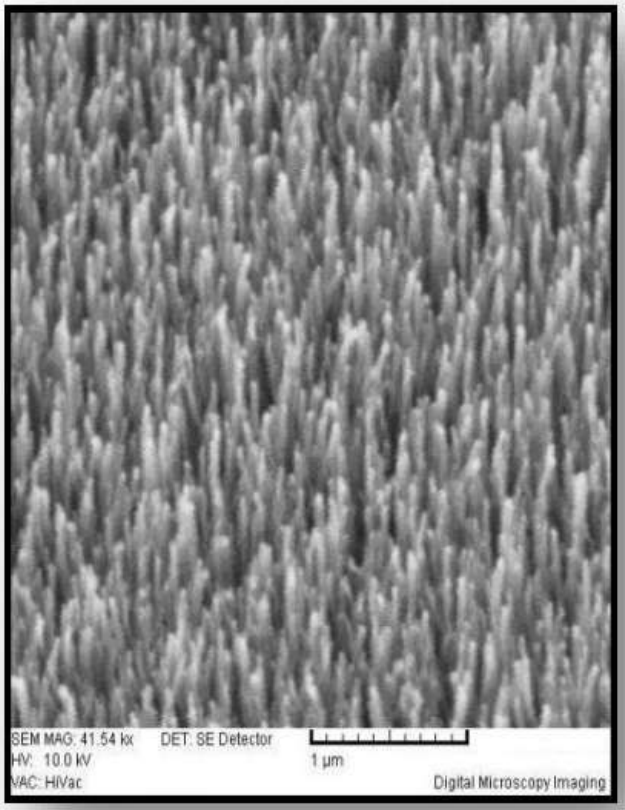



DANGER
HIGH VOLTAGE
KEEP AWAY
1
2
3
4
5
6
7
8
9
10
Ion Harvesting Electrical Storage
(10) General Electric capacitors in parallel
rated at 41.kV totaling 75.uf capacity


KEEP AWAY
Electrically Isolated
Thru-wall Cable Pass
Capacitor Storage Bank
High Voltage Dropline
8
9
10


Weather Station
High Voltage dropline from ion collectors @ 130 ft
Strain Relief
Electrical Isolation dual-tube
Remote Field R&D Lab
Electrical Isolators


Towers 130 ft (39.624m)
Dropline
R&D Field Room
Giant Test Fixture located at Ion Power Group's Florida R&D Test Site
Four (4) towers 130 ft (39.624m) high - approx 330 ft between towers





Ion Power Group's new method of coupling to atmospheric electricity is vastly different from all previous techniques by virtue of our patented breakthrough revealing that carbon nanomaterials such as **Graphite (and Graphene) microscopic shown at left, macroscopic shown at right are significantly more effective at coupling to airborne charge carriers (ions) than metal.** The use of carbon based nanomaterials distinguishes Ion Power Group from all other researchers.

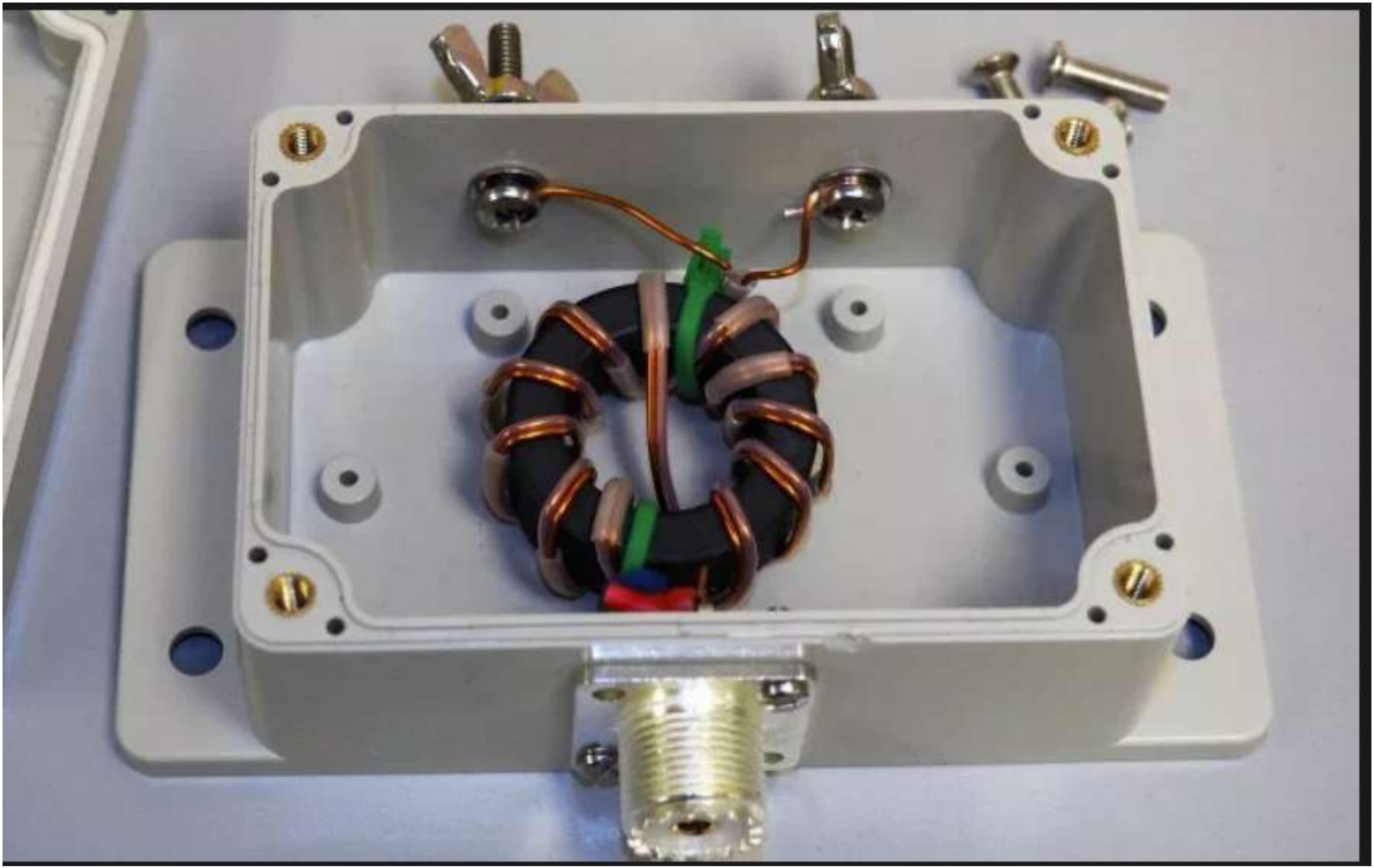


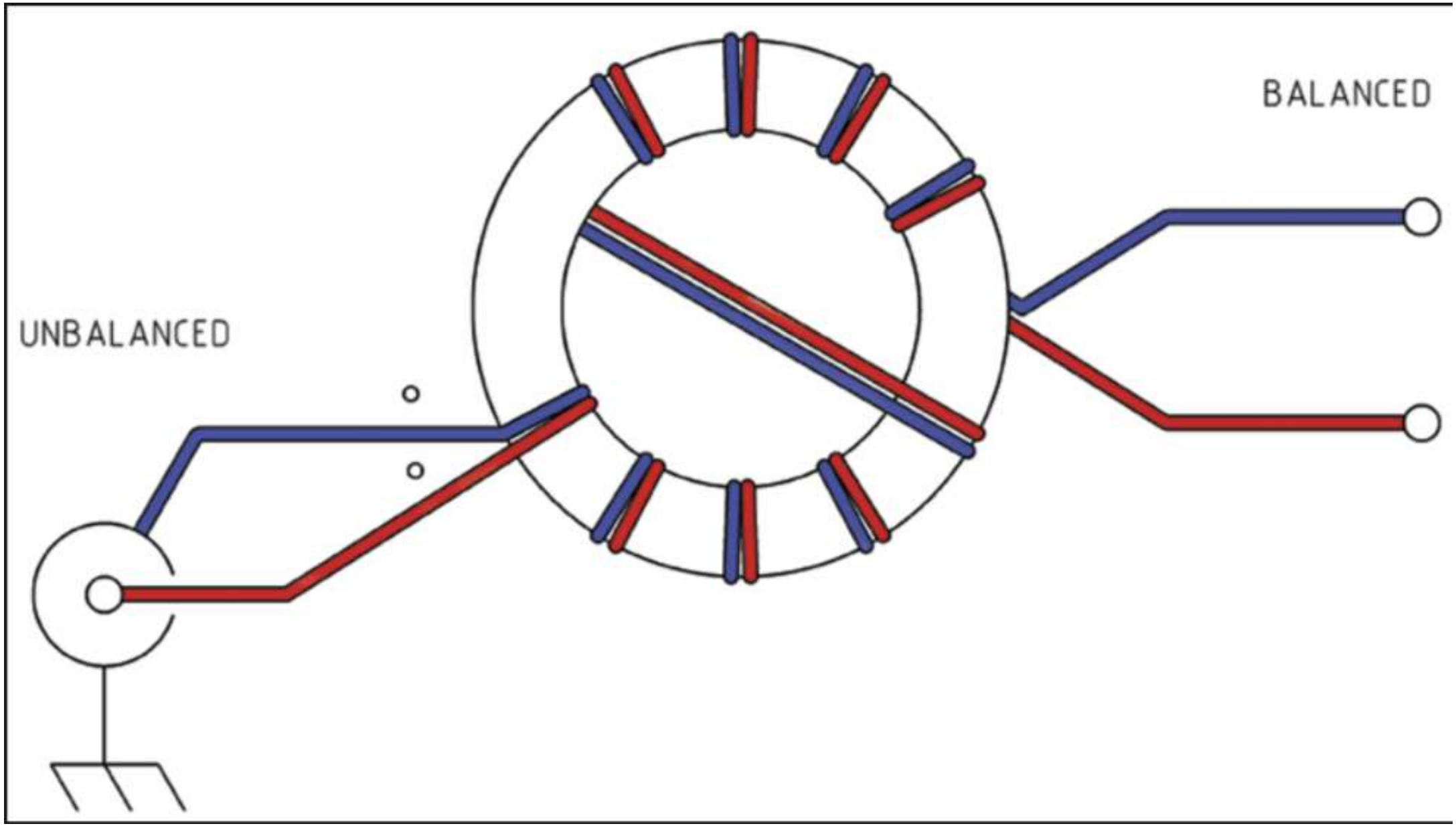
I cut a hole in the side of the balun then cut the end off a piece of coax cable I had and soldered it to the contacts of the coax connection.

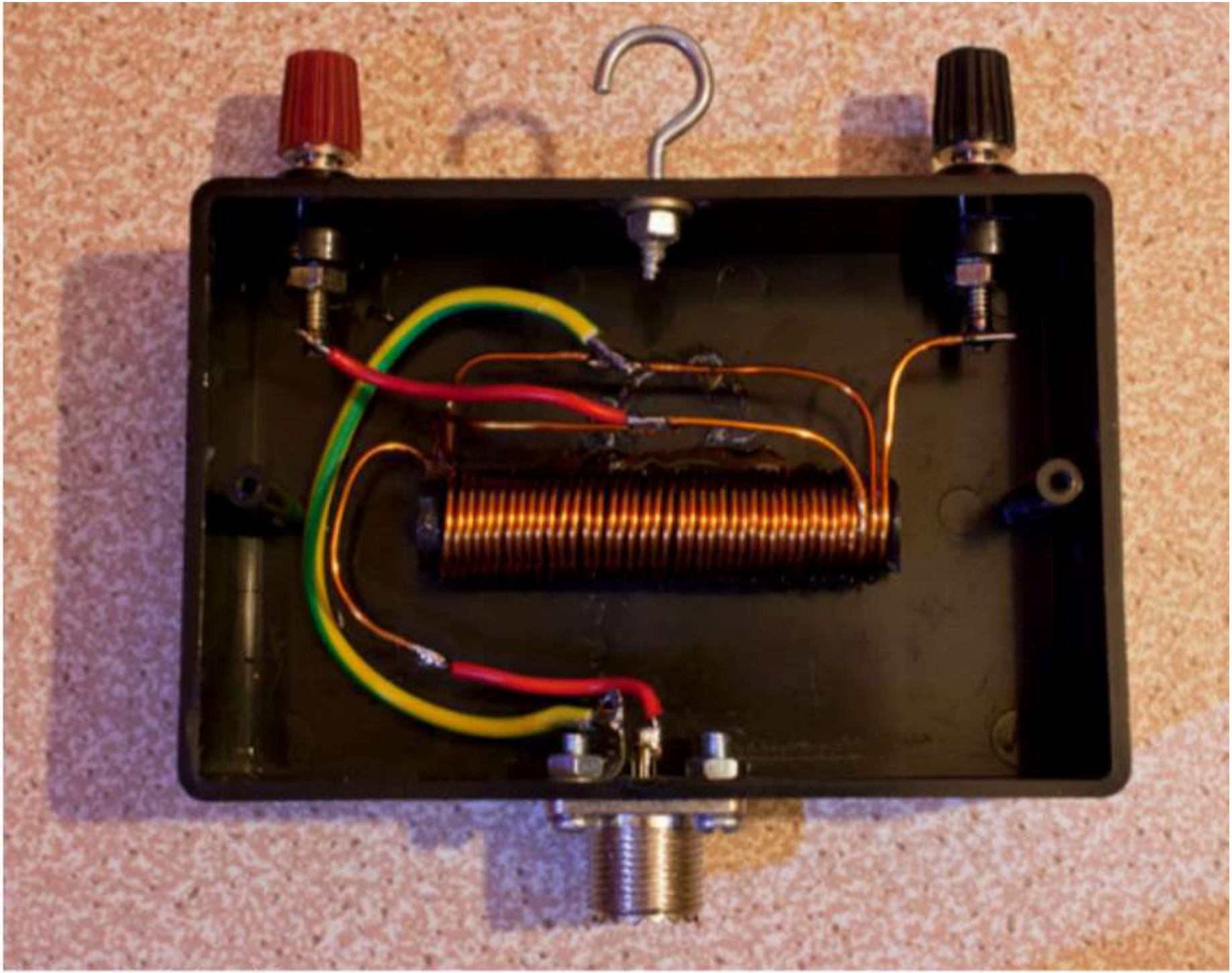


EXAMPLE: W1JR (Reisert) Cross-Winding Method



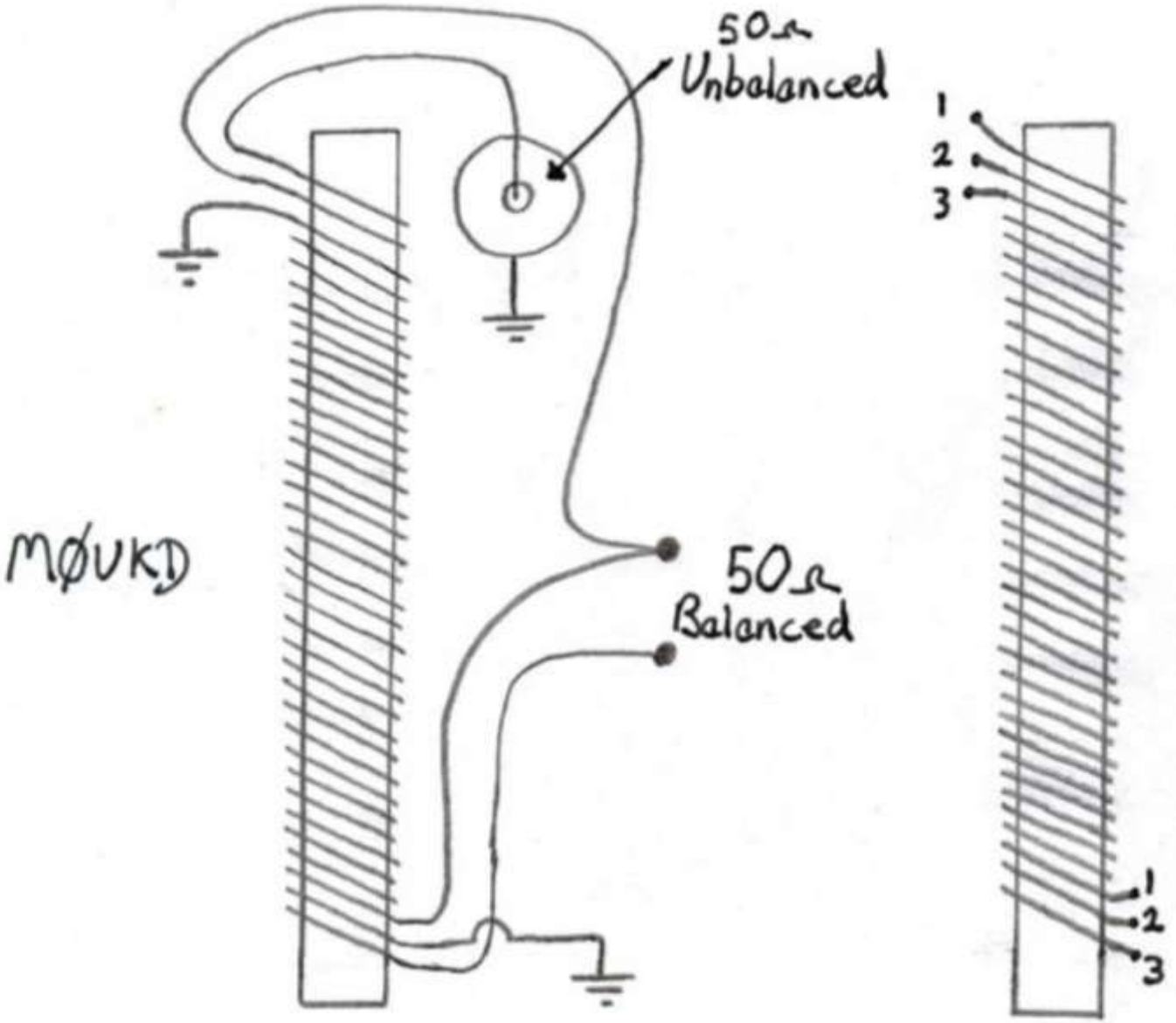



BALANCED
UNBALANCED



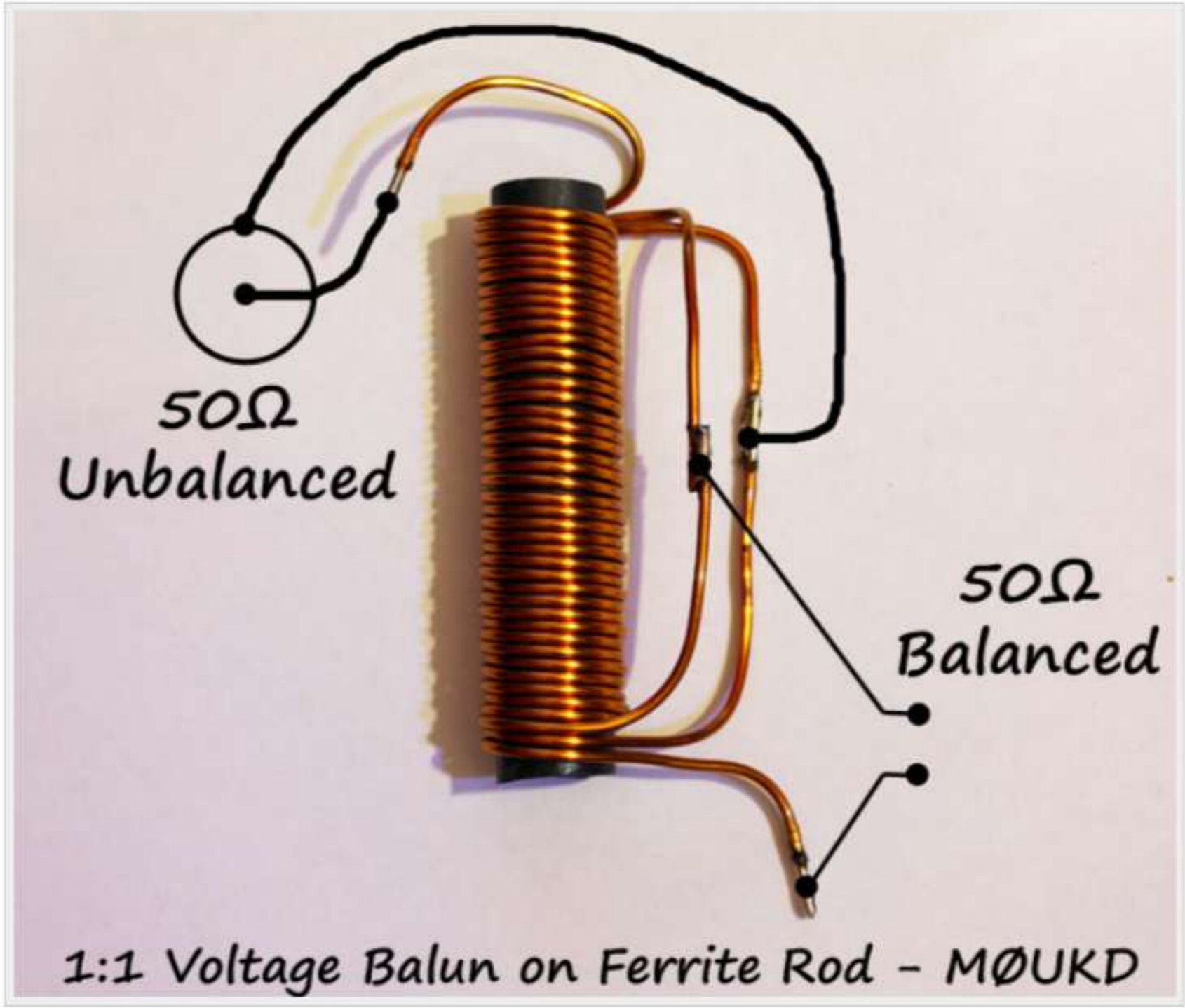
Balun 1: 1 for HF

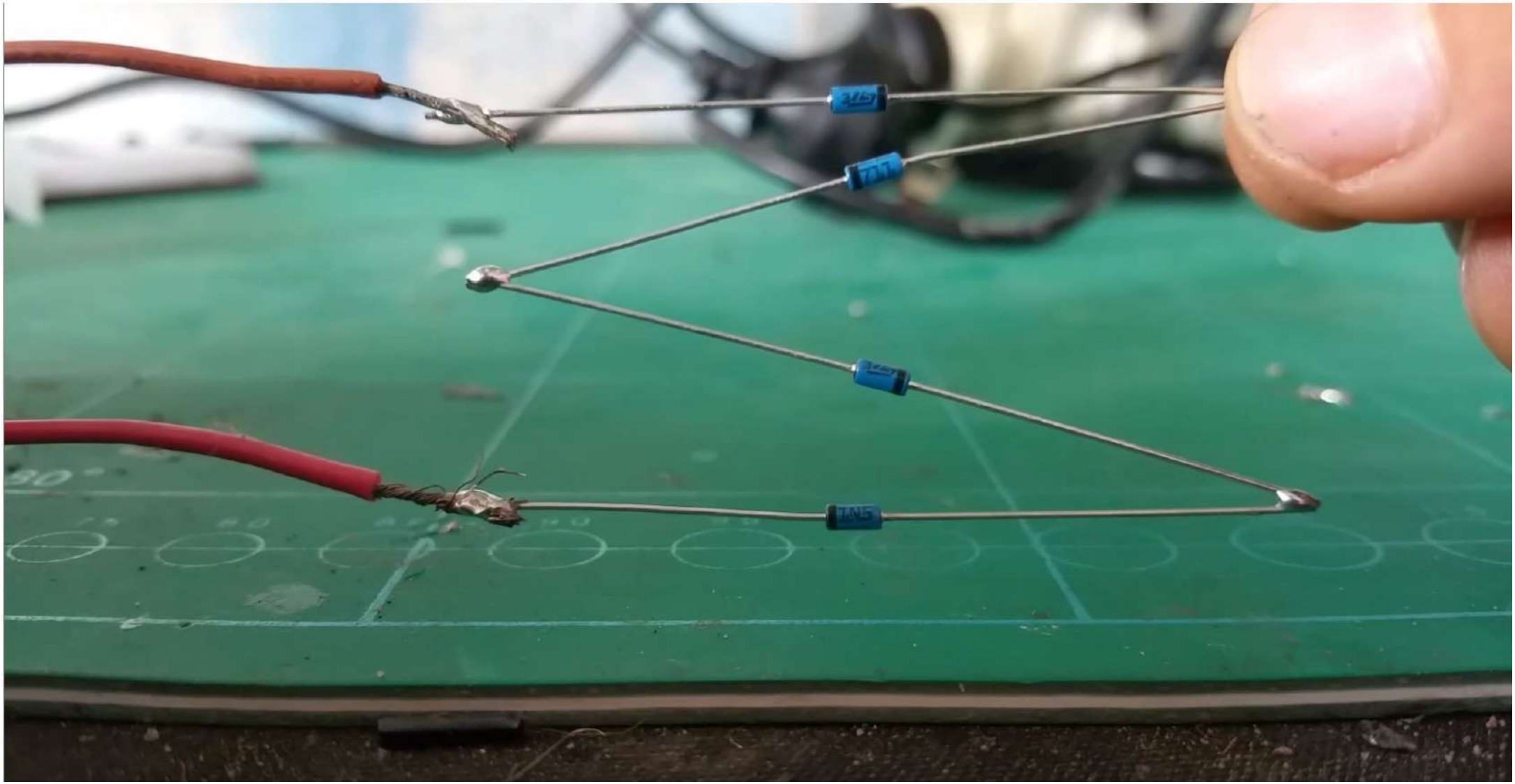
1:1 Voltage balun ("Ruthroff")

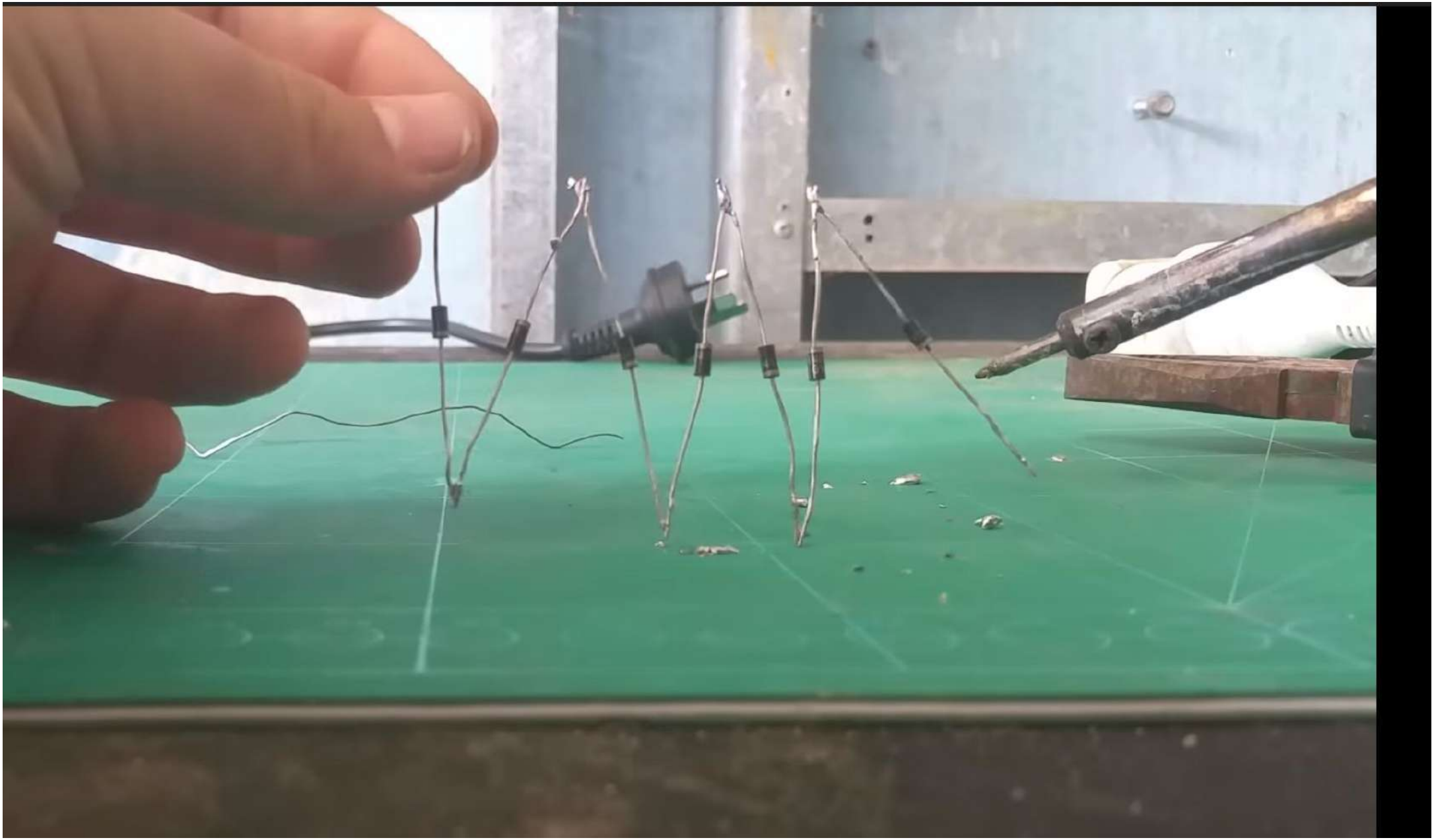


10 - 15 trifilar turns on ferrite rod.

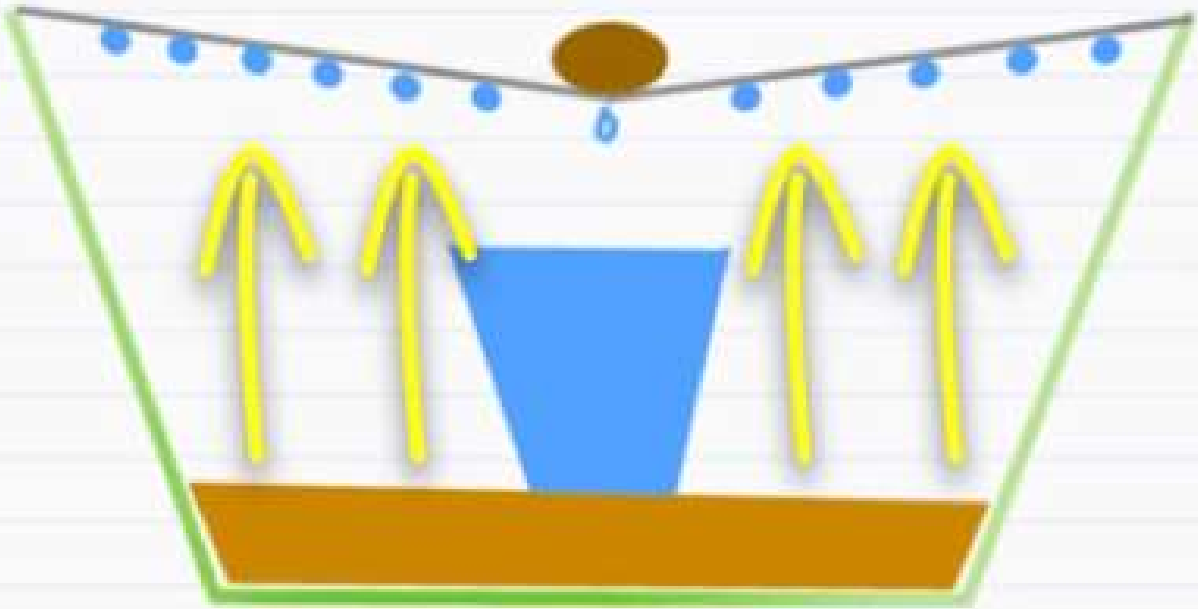
1:1 ferrite rod voltage balun







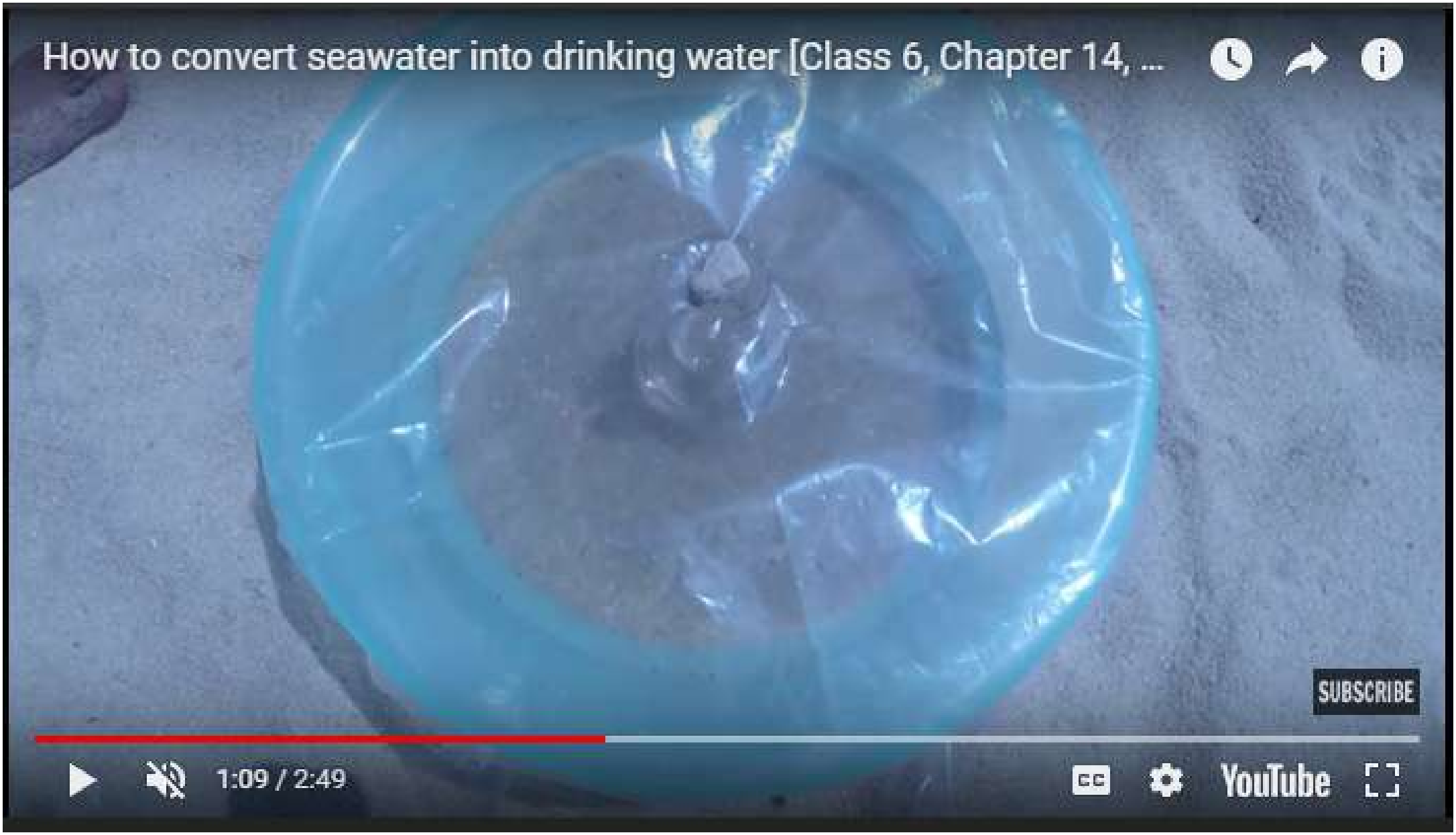
How to convert seawater into drinking water [Class 6, Chapter 14, ...



SUBSCRIBE

2:14 / 2:49

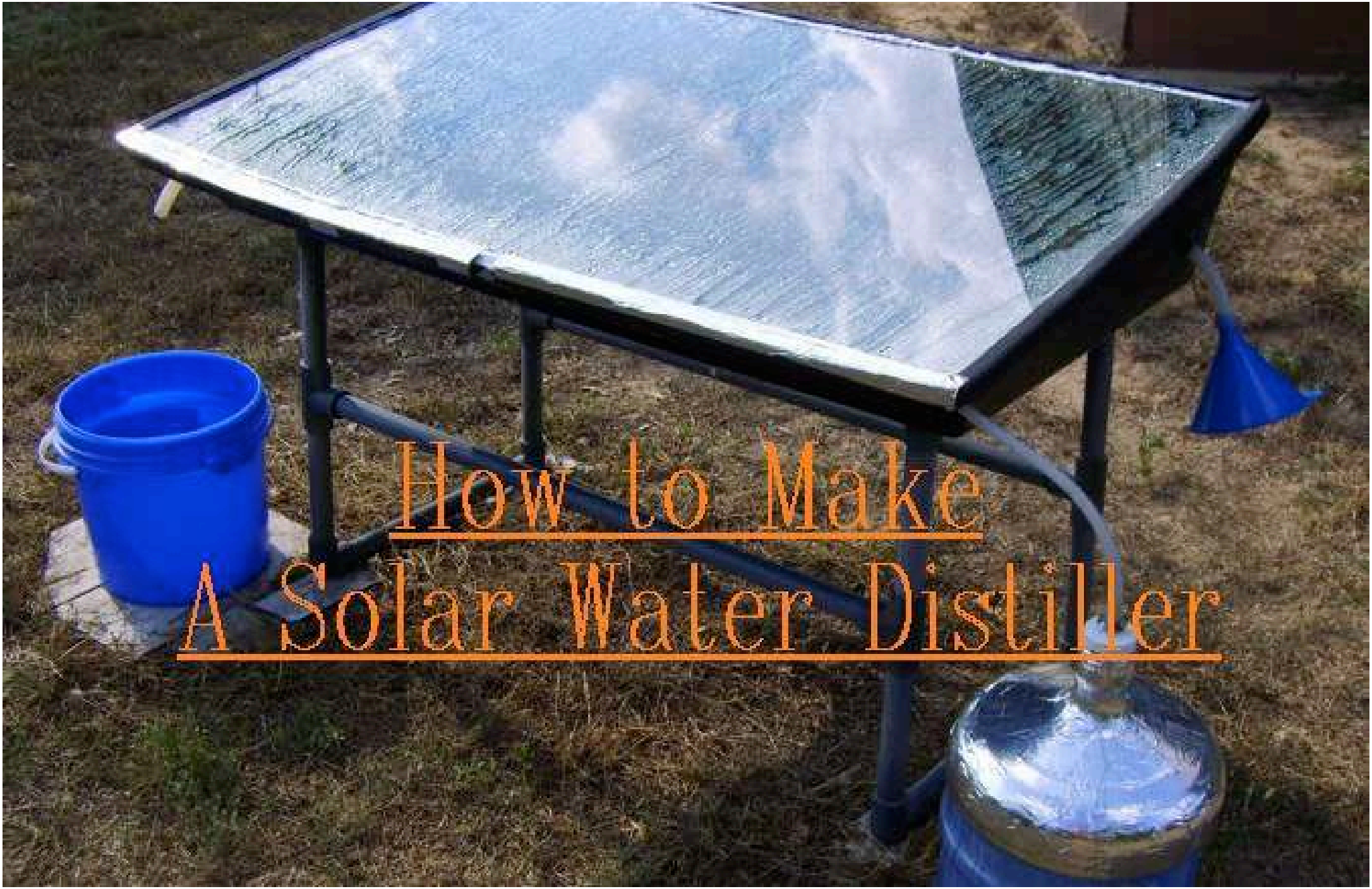
YouTube


How to convert seawater into drinking water [Class 6, Chapter 14, ...
SUBSCRIBE
1:09 / 2:49
YouTube


Emergency DIY Water Distillation for Survival Bug-Out Bag
Three 1/2" Cop El 45 Deg
Wet Rag
1/2" x 22" Cop
Stainless Steel Funnel
Dirty/Salt Water
Clean/Fresh Water
2:59 / 3:27
YouTube


Solar Water Distilling
Simple Survival Water Distilling




How to Make
A Solar Water Distiller

Aquamate Solar Still

Turns Sea Water Into Fresh (Potable) Water

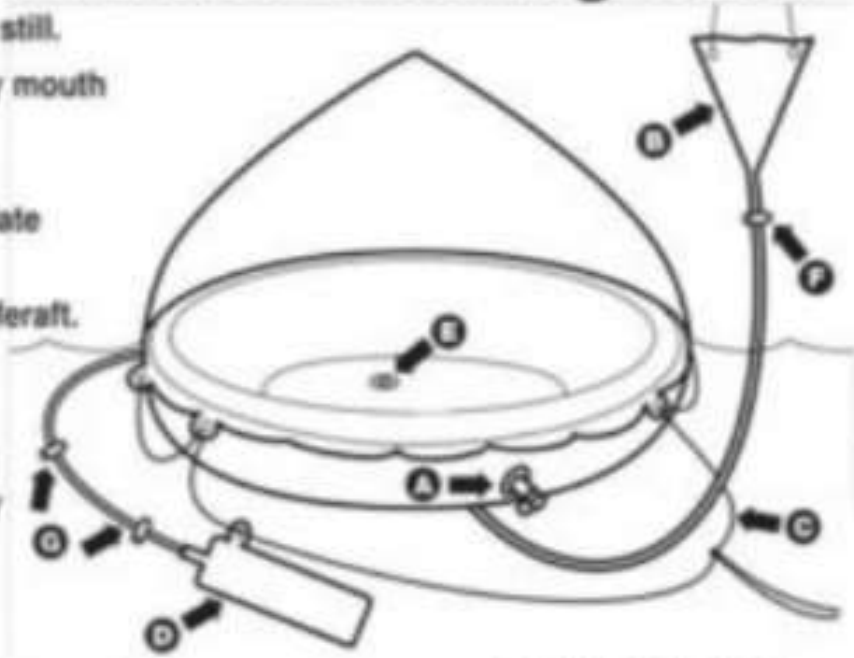


Inflatable & Re-useable

Solar Still

Turns sea water or impure water into drinking water

1. Remove from pack and retain pack to top up salt water in still.
2. Lay out Solar Still and inflate valve (A) on floatation ring by mouth or by liferaft or dinghy pump.
3. Inflate clear dome to obtain shape using valve (E) in base. Do not over inflate. It may be necessary to manually regulate dome pressure during high temperatures.
4. Attach tapered bag (B) and attachment cord (C) to boat or liferaft.
5. Pour 5 litres of sea water into tapered bag (B) using pack which holds 5 litres (approx). Close valve (F) after filling.
6. Ensure both valves (C) are open in reservoir feed tube and drinkable water will start to collect in reservoir (D). Air may need to be squeezed out to assist collection of water.
7. Ensure the Solar Still is kept in direct sunlight whenever possible.
8. Re-fill Solar Still and inflate/deflate dome as required.
9. Daily – Agitate Solar Still to dampen fabric.
10. To drain unwanted water open valve (E) in base.
11. Shelter Solar Still during bad weather.



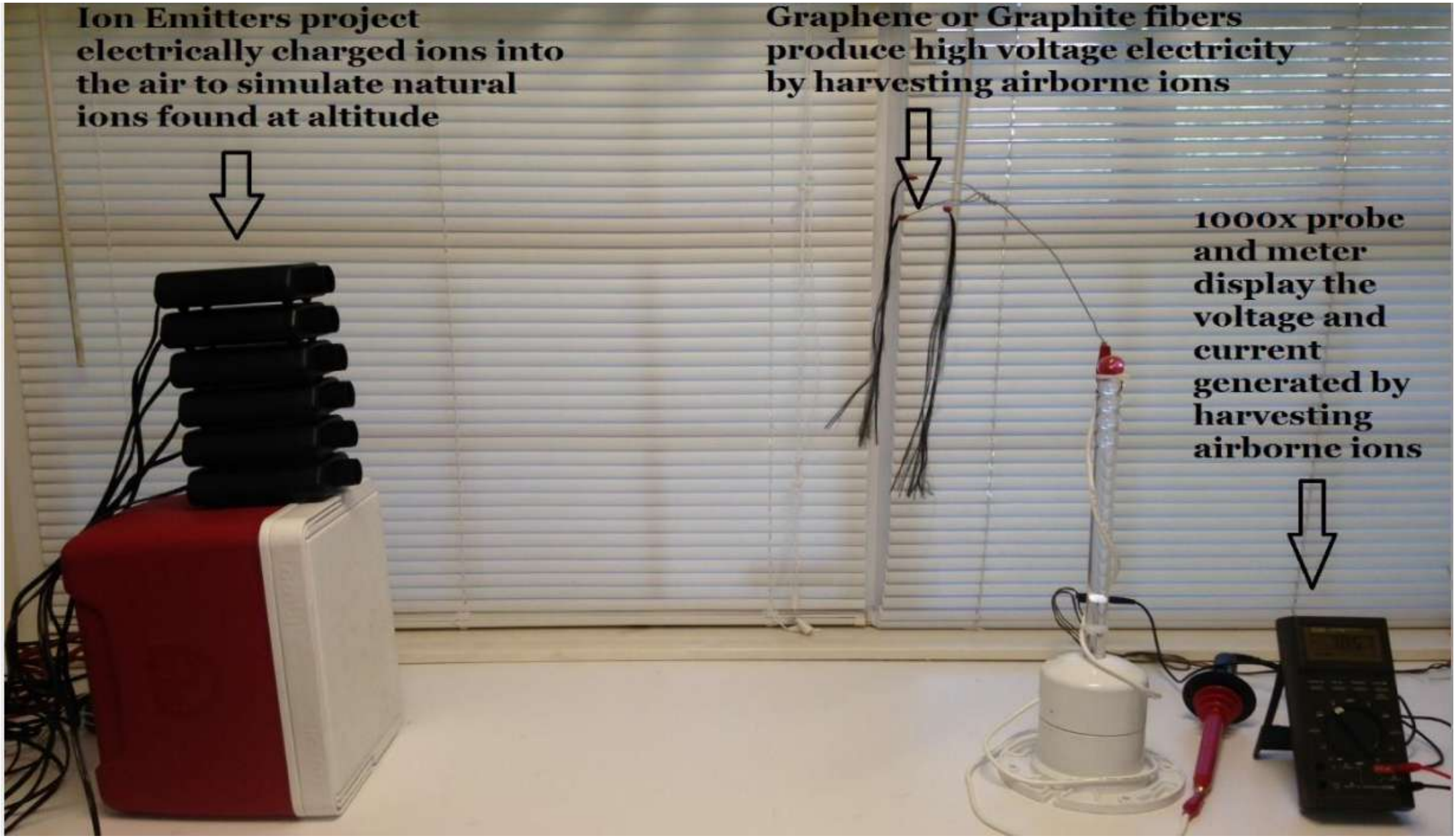
IMPORTANT

IF INNER BLACK MATERIAL SALTS UP FILL WITH SEA WATER AND AGITATE TO CLEAR SALT CRYSTALS AND DRAIN AWAY. PROCESS DRINKING WATER AS INSTRUCTIONS UNTIL SALT IS NO LONGER PRESENT. IN NO CIRCUMSTANCES DRINK WATER THAT TASTES OF SALT.

AQUAMATE PRODUCTS

NATO Stock No. 4610-66-144-2646

P.O. Box 6032 Dunmow CM6 3AS U.K. Tel: +44 (0)1371 830 216 Fax: 831 733 e-mail: aquamatesales@aol.com


Ion Emitters project electrically charged ions into the air to simulate natural ions found at altitude
Graphene or Graphite fibers produce high voltage electricity by harvesting airborne ions
1000x probe and meter display the voltage and current generated by harvesting airborne ions

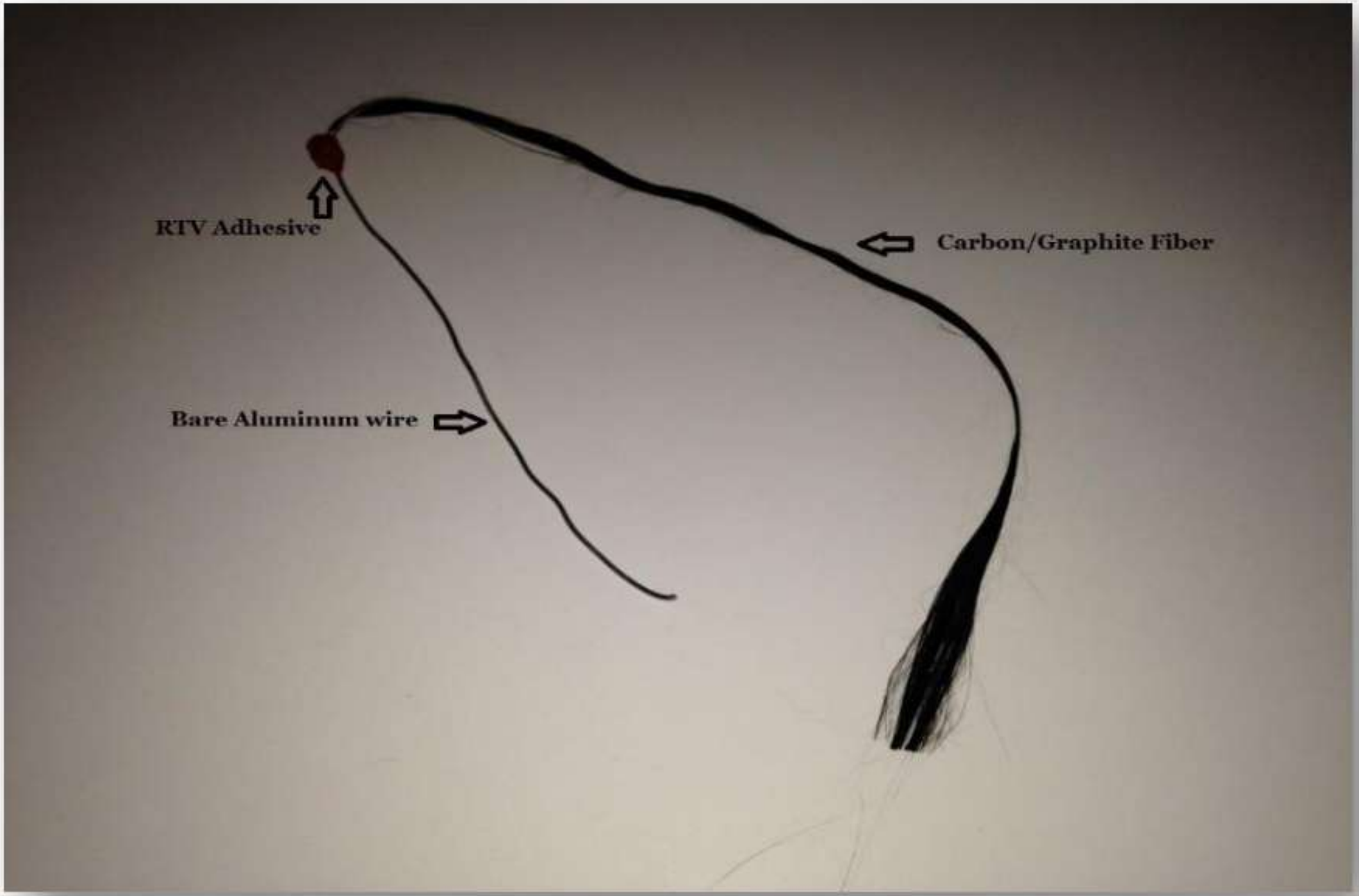
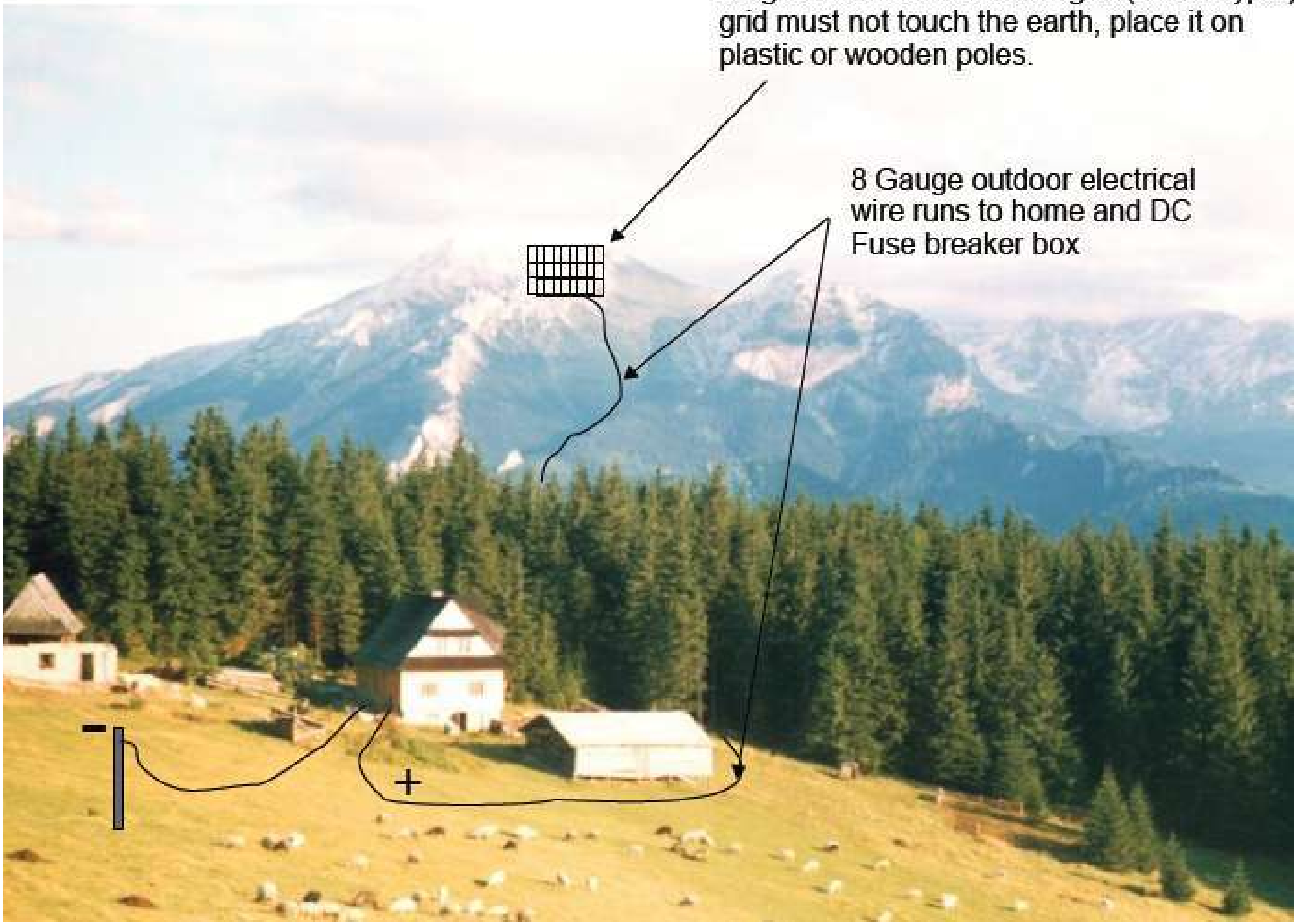


Image of a patented Ion Collector made of carbon/graphite weighing approximately 1 ounce.


Large aluminum collection grid (Mesh type)
grid must not touch the earth, place it on
plastic or wooden poles.
8 Gauge outdoor electrical
wire runs to home and DC
Fuse breaker box
-
+

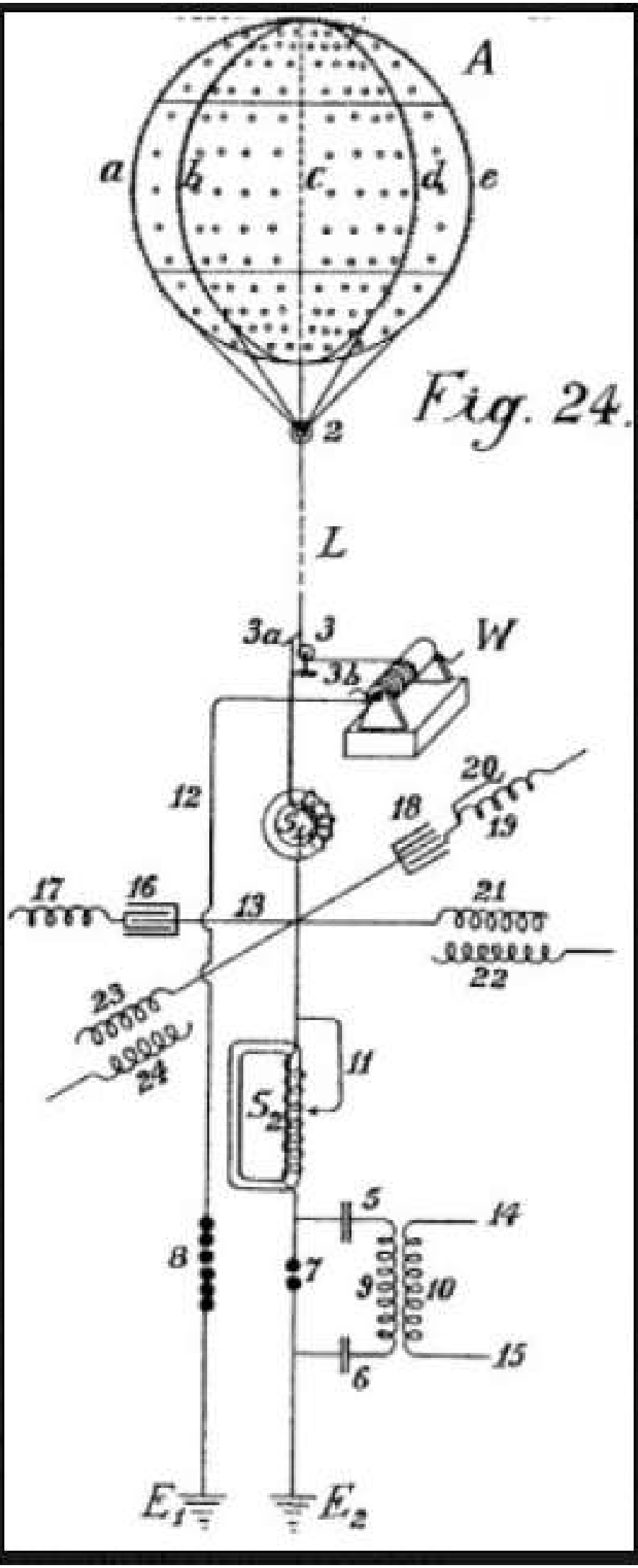
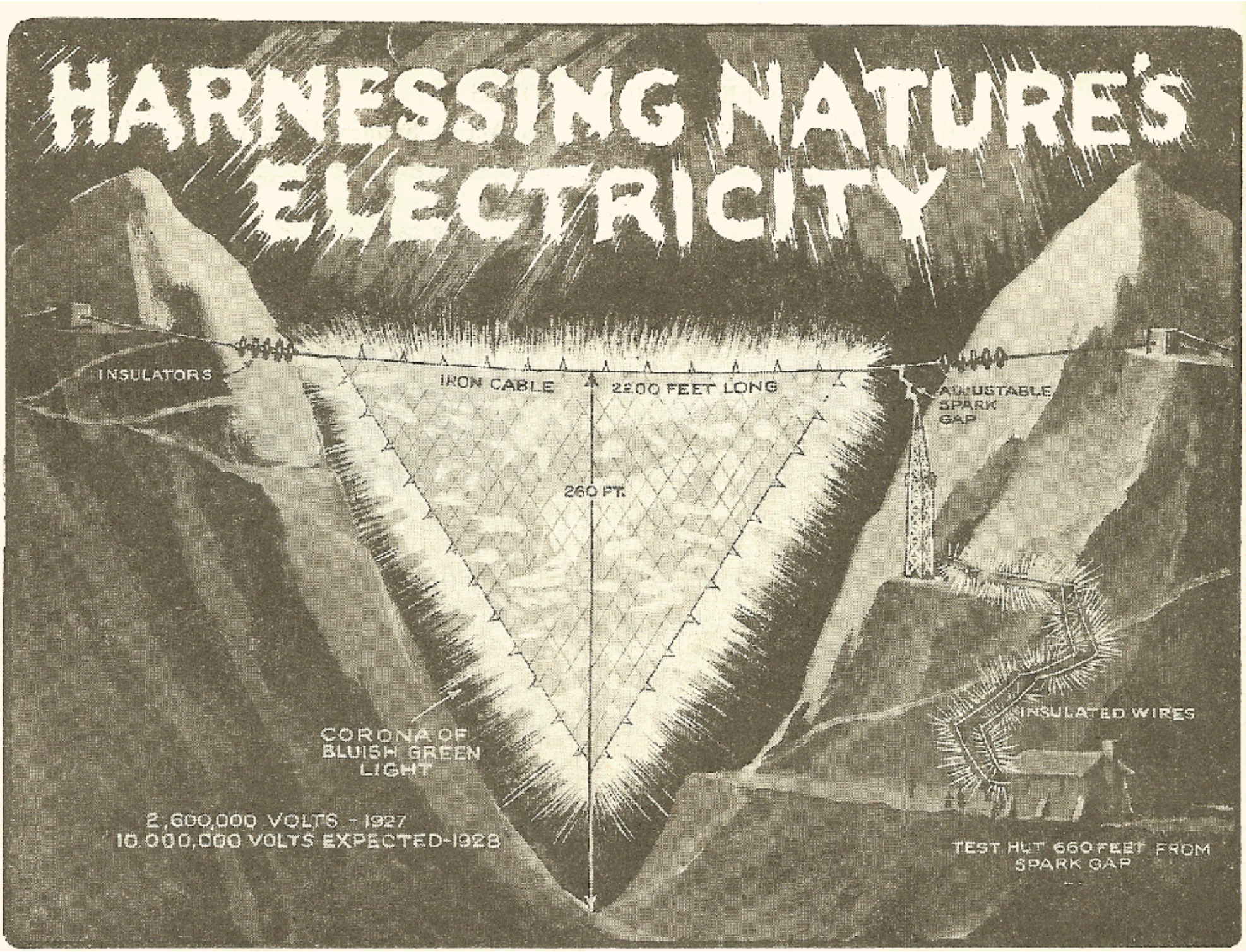

A
a
b
c
d
e
2
L
3a
3
3b
W
12
20
19
18
17
16
13
21
22
23
24
11
5
14
8
7
9
10
15
6
E_1
E_2

Fig. 24.


HARNESSING NATURE'S ELECTRICITY
INSULATORS
IRON CABLE
2200 FEET LONG
ADJUSTABLE SPARK GAP
260 FT.
CORONA OF BLUISH GREEN LIGHT
INSULATED WIRES
2,600,000 VOLTS - 1927
10,000,000 VOLTS EXPECTED-1928
TEST HUT 660 FEET FROM SPARK GAP

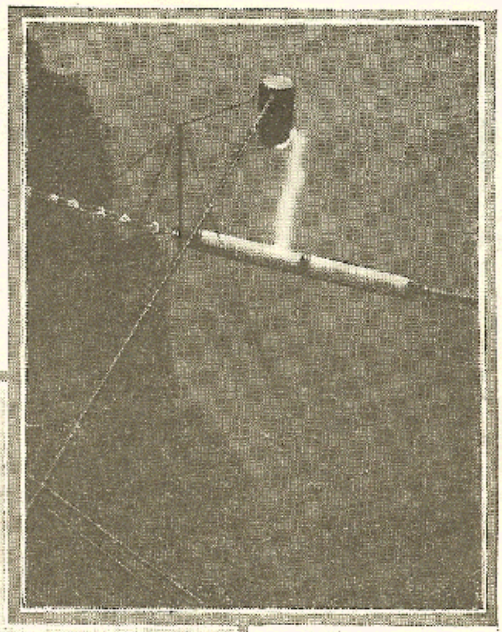
Remarkable European Experiments with Atmospheric Electrical Discharges with Potentials as High as 3,000,000 Volts

By HENRY TOWNSEND

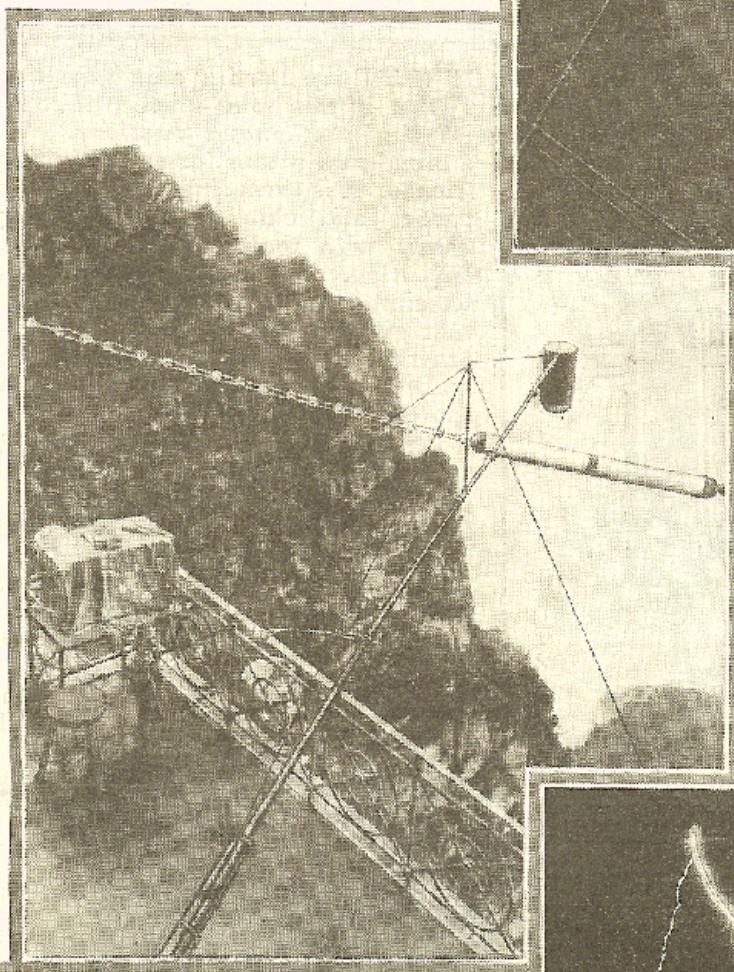
elevation of 350 ft., and these students of natural electrical phenomena have found a very desirable location in the Alps, where they can suspend between one mountain and an adjacent one, a strong iron cable having a length of about 2,000 ft. This cable is about 250 feet above the intervening valley, and from it these daring engineers have suspended a coarsely woven wire net, which serves as an electrical capacity to gather the electricity from the atmosphere. As shown in the pictures, the wire net is supplied with numerous sharp points to aid in collecting the current from the air.

As the accompanying photographs of the actual apparatus and wire cable used last year clearly show, an adjustable spark gap of considerable length is provided. By adjusting this spark gap to various lengths, it is possible to judge the voltage of the discharge which leaps the gap at any moment. Mr. F. W. Peek, Jr., the well-known American worker in the realm of high voltage measurements, together with other engineers, have provided tabulated data and curves for various lengths of both needle and sphere type spark gaps. As one of the accompanying diagrams shows, it is a simple matter to calculate the voltage when a certain length of gap is used. The engineer first checks the length of the gap on the chart; he then follows a line horizontally from the gap length, to where it intersects with the angular line on the chart; and from the point of intersection he looks in a visual line downward to a place where the voltage is given. For needle spark gap measurements, the characteristic curve on the chart is practically a straight line, while for sphere gaps the characteristic curve on the voltage versus gap length, is a curved line. Those interested in high voltage measurements by means of the spark gap method can find the voltage-gap tables and charts in the *Standardization Rules* of the American Institute of Electrical Engineers. According to Mr. Peek's researches, the voltage per foot of atmospheric electrical discharges is about 100,000, while in laboratory measurements with A.C., transformer high potential discharges, the average voltage per foot of spark was found to be about 150,000 volts. The voltage of a lightning flash may

(*Continued on page* 156)

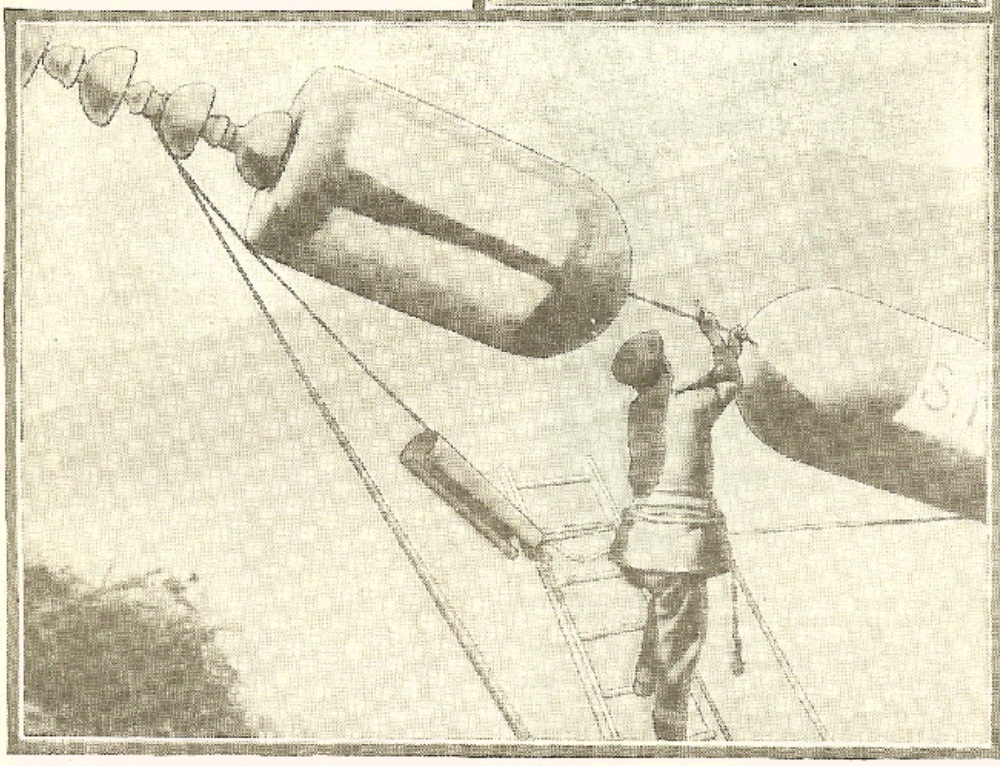


Actual photo above shows 13 ft., heavy spark obtained from the collecting net in the Alps by the German scientists. The voltage is about 2,000,000. The spark occurred once per second for 30 minutes.

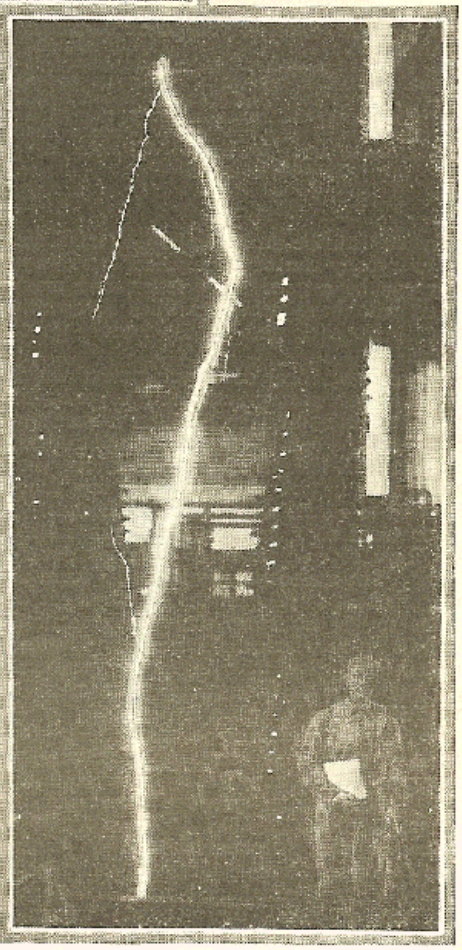


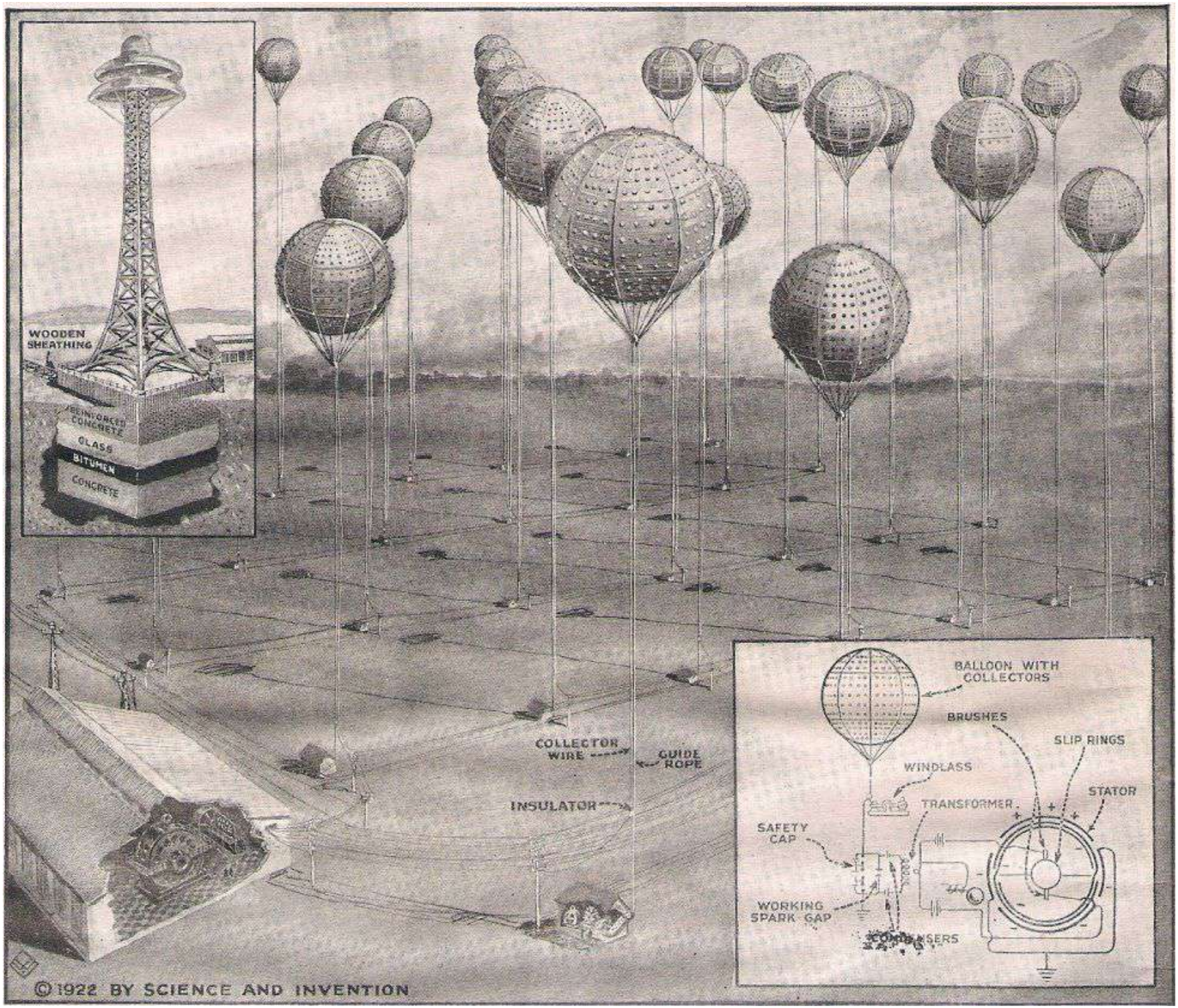
Photo, left, shows the adjustable spark gap used in the Alps. Notice the heavy electrode on the end of the adjustable arm to which the spark jumps.

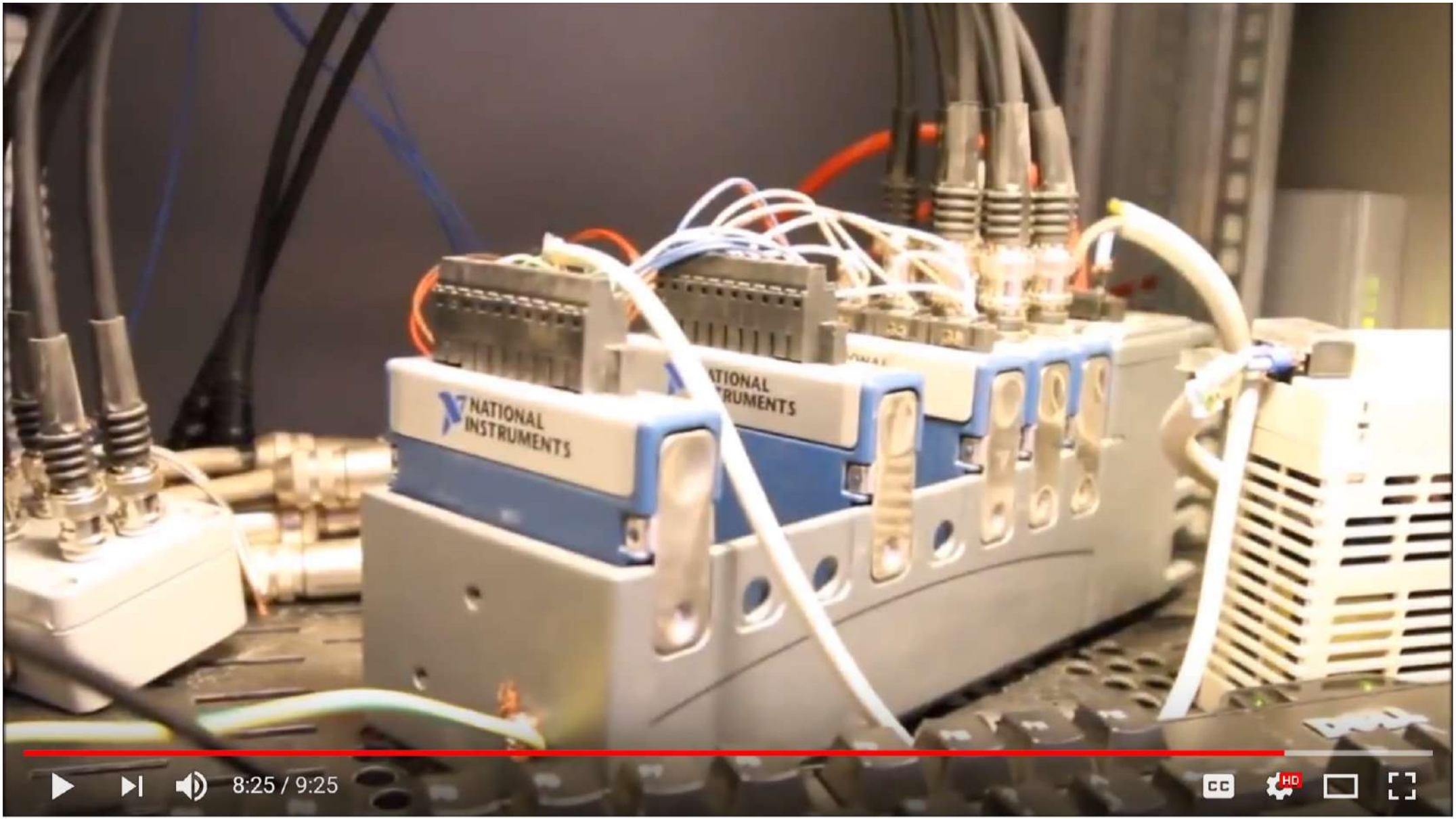
Actual photograph of the experimental "kite" used by the German experimenters in the Alps Mountains, for the purpose of accumulating high potential electrical discharges from the atmosphere. Note the size of the insulators.



Below we see 3,000,000-volt artificial lightning stroke produced in G. E. Laboratory at Pittsfield, Mass. Note man.



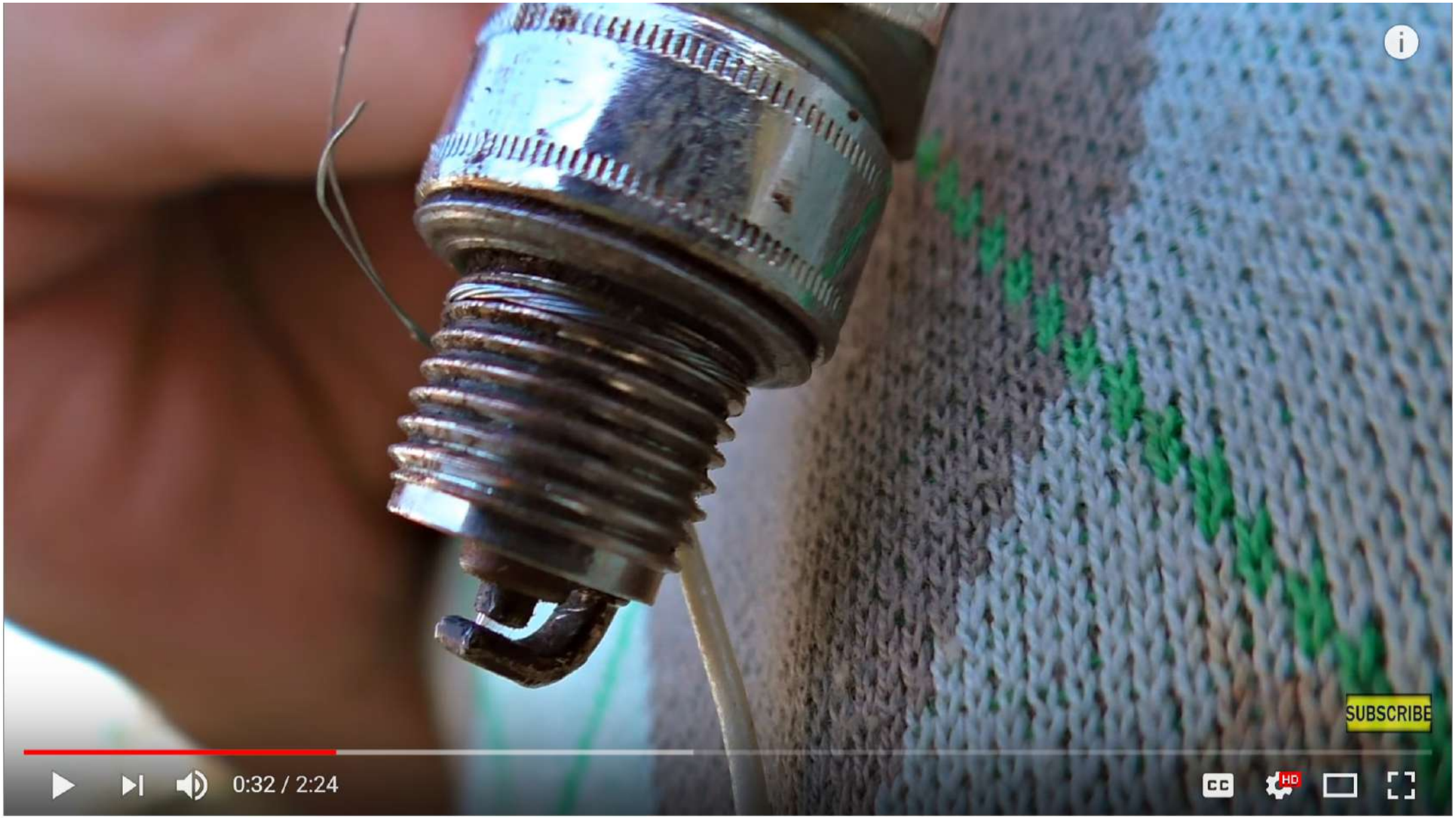

WOODEN SHEATHING
REINFORCED CONCRETE
GLASS
BITUMEN
CONCRETE
COLLECTOR WIRE
GUIDE ROPE
INSULATOR
BALLOON WITH COLLECTORS
BRUSHES
SLIP RINGS
WINDLASS
STATOR
TRANSFORMER
SAFETY CAP
WORKING SPARK GAP
CONDENSERS
© 1922 BY SCIENCE AND INVENTION



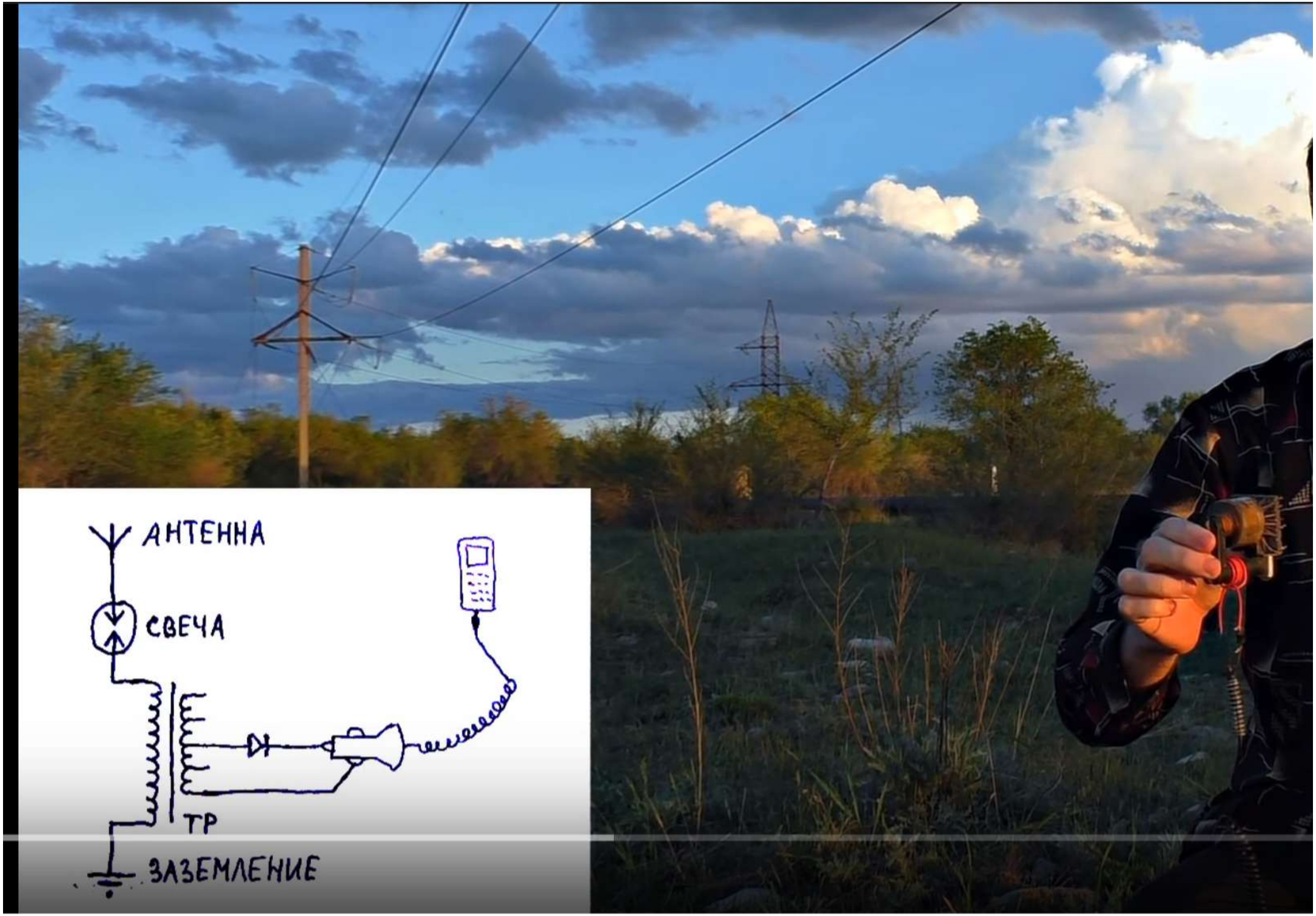
Flat Earth CON SPIRES! Cathedral Spires Are Secretly Atmospheric Electricity Ma


NOT FOR BROADCAST
1:02 / 10:38
HD


1:45 / 9:25
CC
HD



Charging from the power lines.


АНТЕННА
СВЕЧА
ТР
ЗАЗЕМЛЕНИЕ






MULTI DISPLAY DMM
10.1
POWER
Ω
2K 20K 200K 2M 20M
200
200M
hFE
200m
2 V⎓
20
200
1000
700
200
V~
A⎓ 2m
20m
200m
20
A~
2m
200µ
2µ
200n 20n 2n 200p
2
Cx
F
COM
VΩ
mA
A
PNP NPN
CE
IEC 1010
DT-92


SPARK PLUG DIODE CAR CHARGER FLYBACK TRANSFORMER TV ANTENNA
POWER
COM

must depend on the area occupied by the building; for instance, a church of ordinary design and size would require four "down" rods, that is, one from the spire, one on both sides of the nave, and one at the extreme end. It is advantageous to run two conductors from the top of the spire or tower, one on each side.

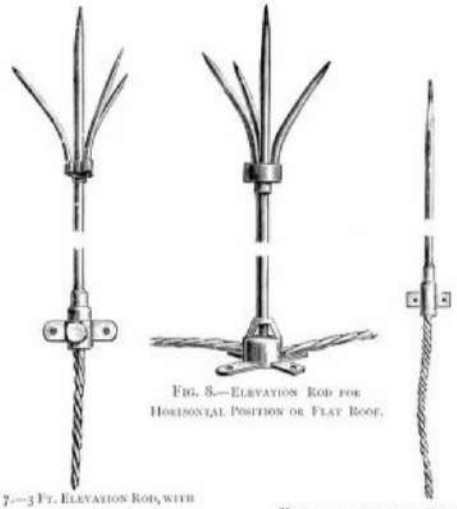


FIG. 8.—ELEVATION ROD FOR HORIZONTAL POSITION OR FLAT ROOF.

FIG. 7.—3 FT. ELEVATION ROD, WITH POINTS BRAZED TOGETHER, USED WHERE EXPOSED TO MUCH HEAT.

FIG. 9.—PLAIN POINT ELEVATION ROD.

Horizontal Conductors (see L.R.C. Suggestion 2, page 15). To complete the system, all the down conductors should be intersected by at least one horizontal rod, with the object of having a path for any side flash or portion of the main stroke which may not be carried away harmlessly by the main rod. Where there is a considerable length of roof, aigrettes (Fig. 11) should be fixed as shown by Fig. 10, which is taken from a model of the roof of Westminster Abbey. The down conductros on their way to earth should be connected to any metal work in the neighbourhood, also to rain-water gutters,

pipes, etc.; the number of these subsidiary down conductors depends on the length of the roof.

At a conference held on behalf of the L.R.C., in April, 1904, Sir Oliver Lodge suggested that these down conductors should, in the case of a church, be run between each of the windows.

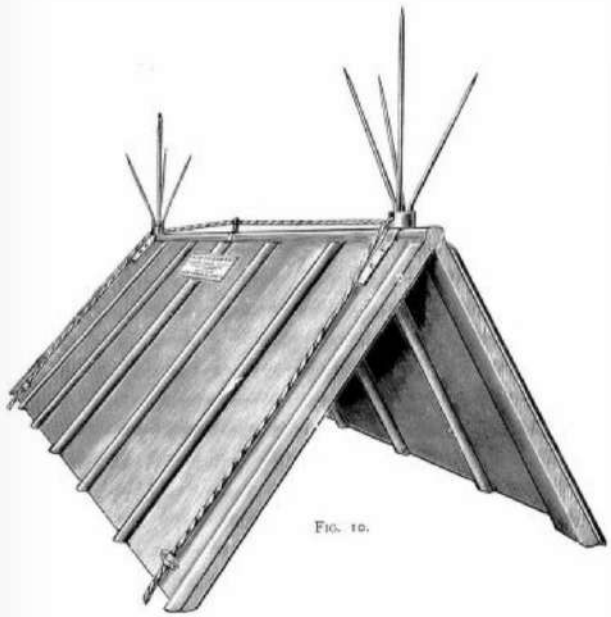


FIG. 10.

Method of running Conductors. These, whether vertical or horizontal, should be kept away from the structure (L.R.C. Rule 10) so as to avoid all sharp bends, and facilitate straining, and secondly, to prevent the corrosion which may take place where the metal is in contact with the brick or stone work. It is found advisable

Modern lightning conductors: an illustrated

surface of the joint need not necessarily exceed that of the cross section of the conductors. The joint should be put together previously by screws or rivets, and the soldered joint, especially if used in underground work, should be carefully protected from local electrical action by tarred rope. Stranded iron conductors can be connected (as previously described) by use of a box joint; the box, Fig. 28, must be of the same metal as the conductors.

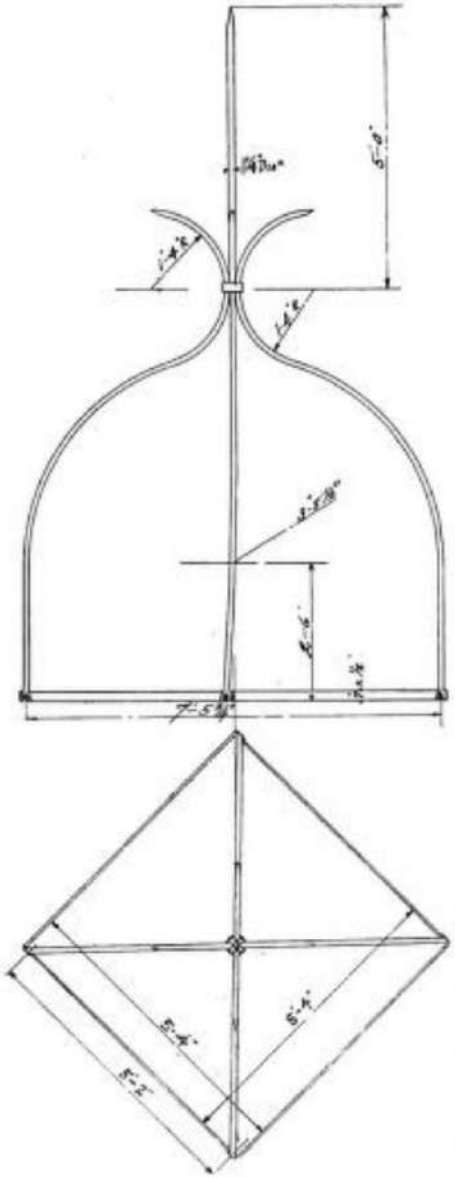


FIG. 27.—TERMINALS IN FORM OF AN ARCH FOR CHIMNEY STACK.

Vanes.—Particular attention must be paid to the necessity of making a permanent joint to the spindle. A clamp is prepared of the same material as the spindle, and is furnished with two bolts to tighten; if iron is used it is well to line the clamp with a piece of sheet lead. The conductor is sweated into a socket which is fitted with an eye, through which one of the tightening bolts passes. In the case of the vanes of churches and those fixed in inaccessible positions, two separate clamps should be used.

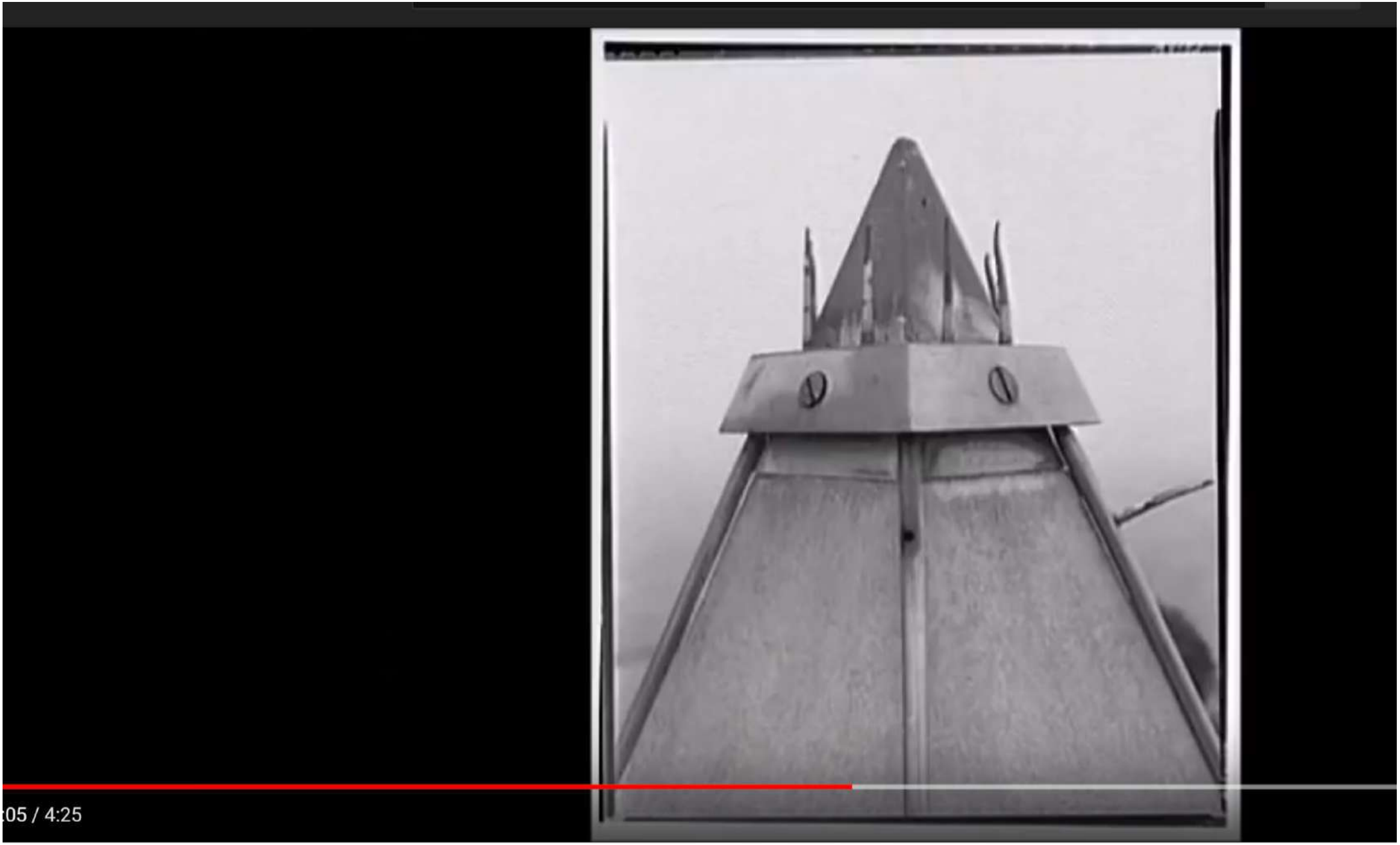


FIG. 28.

Internal Masses of Metal.—Roof trusses fitted with longitudinal iron tie rods will, as a rule, be found to be electrically connected, but should this not be the case each truss must be joined to the conductors. All large and long masses of metal, such as beams, girders, roof trusses, tie rods, hot water systems, traveller ways, hoisting crabs, engines, boilers, large machines, and ventilators fixed in the interiors of buildings, should be connected to all conductors that pass near them, and as far as possible with one another. The discontinuous parts of traveller rails should be connected by straps, or in some cases tramway bonds might be used. If electric light wires are run in tubes, such as the "SIMPLEX," this should be earthed. Metallic contact between lead or zinc sheeting and flashings should be carefully studied, and for special work strips of sufficient size should be either burnt on to lead or soldered in such a way that the joint will stand rough usage, and allow for expansion or contraction.

Earth Connection.—"*It is essential that the lower extremity of the conductor be buried in permanently damp soil; hence proximity to rain-water pipes, and to drains, is desirable. It is a very good plan to make the conductor bifurcate close below the surface of the ground, and adopt two of the following methods for securing the escape of the lightning into the earth. A strip of copper tape may be led from the bottom of the rod to the nearest gas or water* main—*not merely to a lead pipe—and be soldered to it; or a tape may be soldered to a sheet of copper* 3 *feet by* 3 *feet and* $\frac{1}{16}$ *inch thick, buried in permanently wet earth, and surrounded by cinders or coke; or many yards of the tape may be laid in a trench filled with coke, taking care that the surfaces of copper are, as in the previous cases, not less than* 18 *square feet. Where iron is used for the rod, a galvanised iron plate of similar dimensions should be employed.*

"The use of cinders or coke appears to be questionable owing to the chemical or electrolytic effect on copper or iron. Charcoal or pulverised carbon (such as ends of arc-light rods) is better. **A tubular earth** consisting of a perforated steel spike driven tightly into moist ground and lengthened up to the surface, the conductor reaching to the bottom and being packed with granulated charcoal, gives as much **effective area** as a plate of larger surface, and can easily be kept moist by connecting it to the nearest rain-water pipe. The resistance of a tubular earth on this plan should be very low and practically constant."—*Lightning Research Committee, 1905.*



Washington Monument is an Atmospheric Electricity Mast

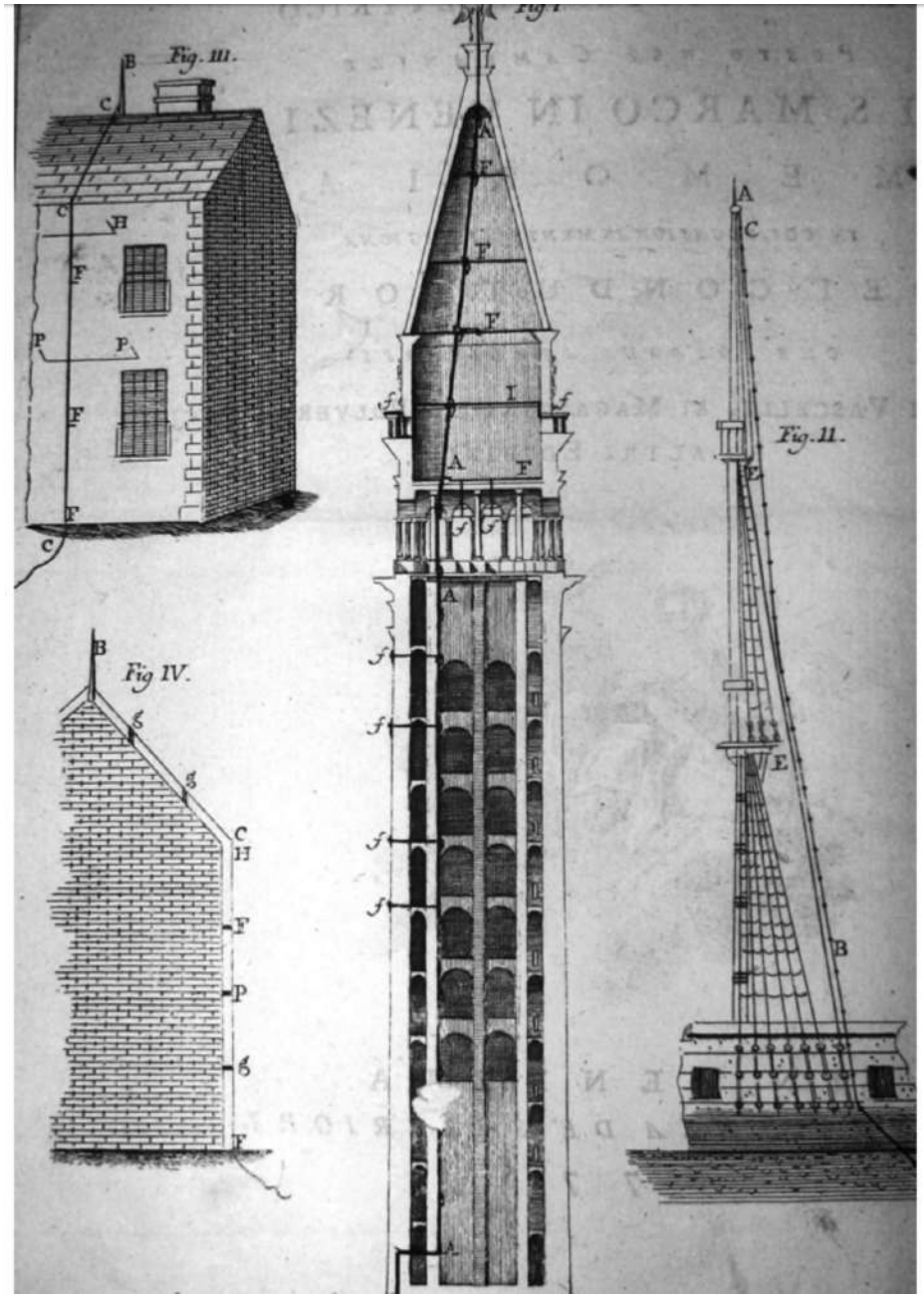
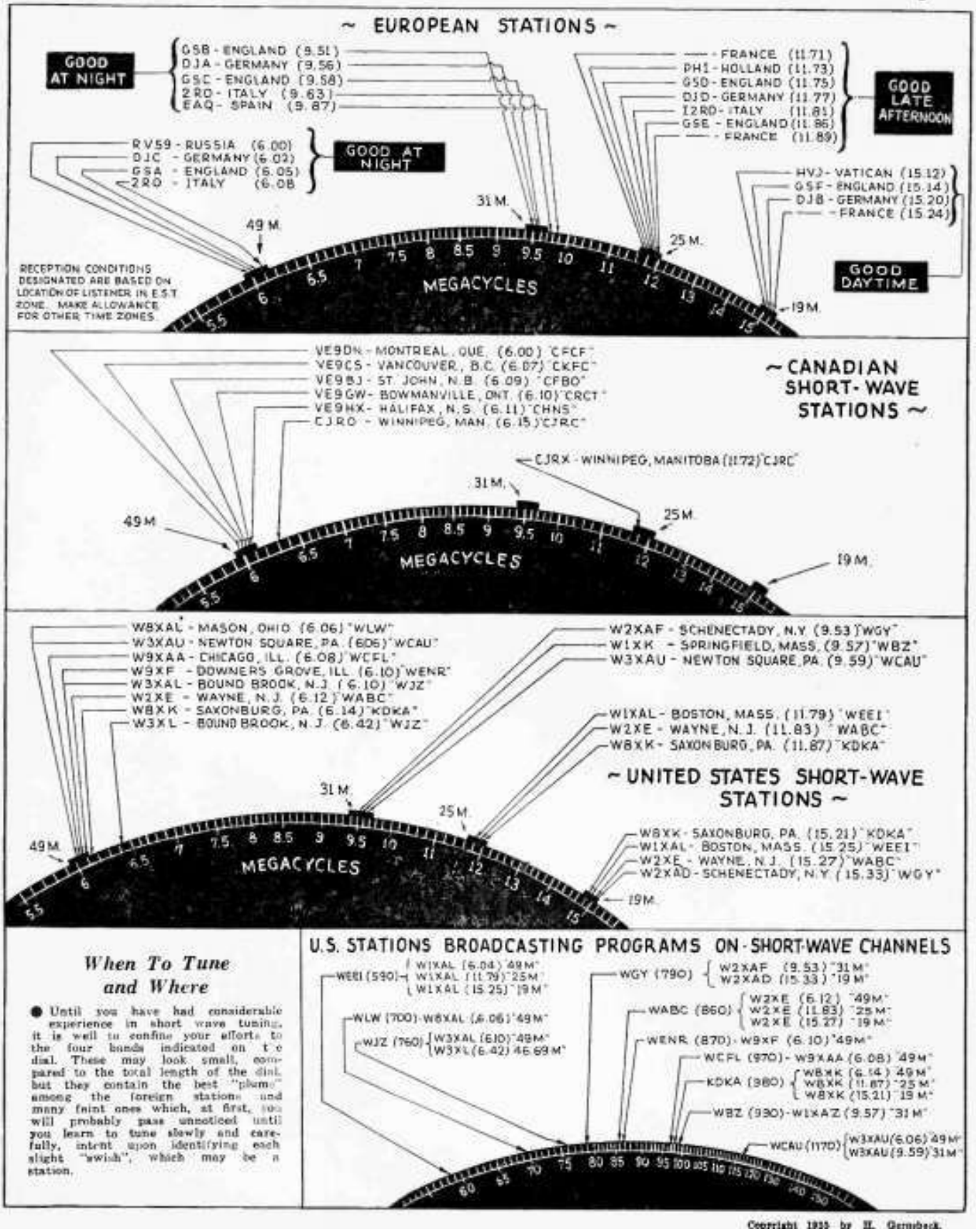


Figure 2.3. The lightning rod that Toaldo designed for the church of San Marco in Venice. GiuseppeToaldo, "Del conduttore elettrico posto nel campanile" (Padua, 1776). Franklin Collec-



Gilded Temples Are Secretly Atmospheric Electricity Masts

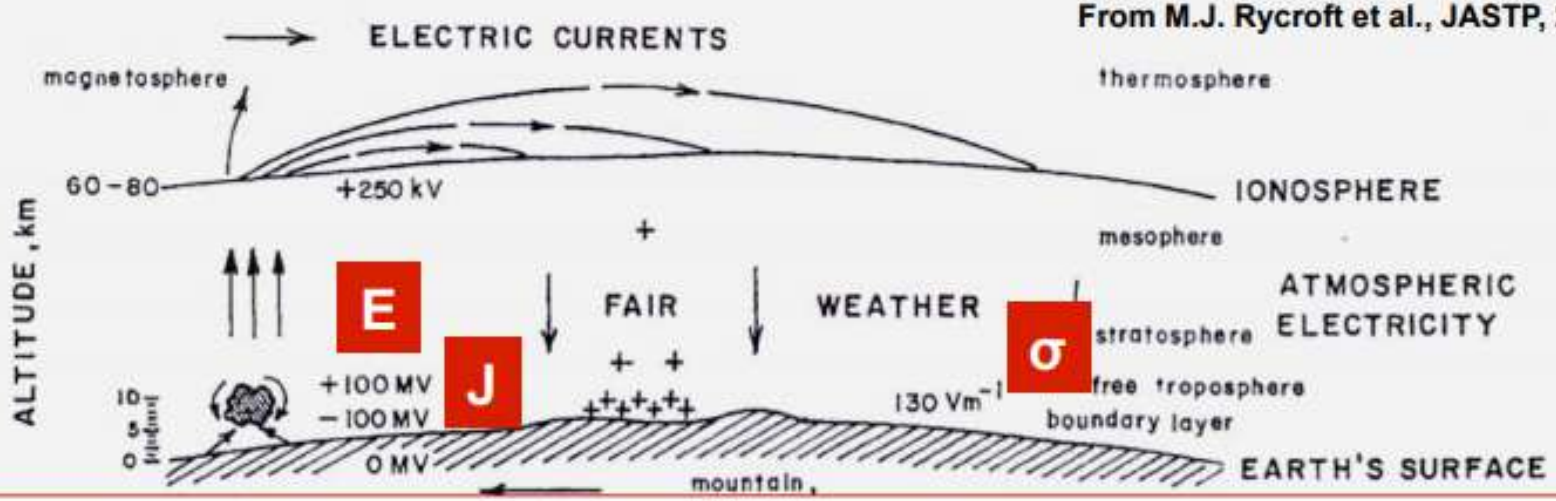


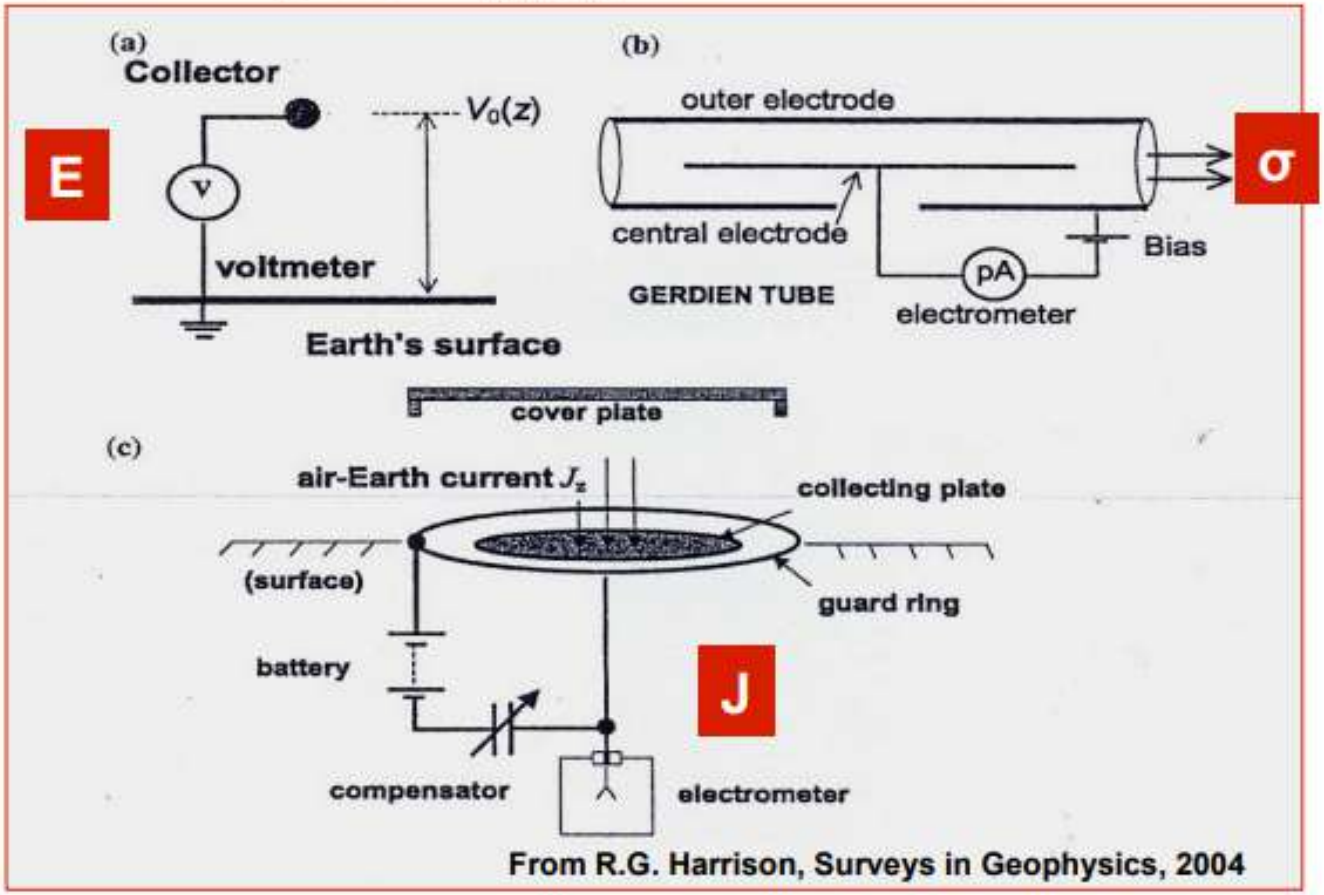
When To Tune and Where

● Until you have had considerable experience in short wave tuning, it is well to confine your efforts to the four bands indicated on the dial. These may look small, compared to the total length of the dial, but they contain the best "plums" among the foreign stations and many faint ones which, at first, you will probably pass unnoticed until you learn to tune slowly and carefully, intent upon identifying each slight "swish", which may be a station.

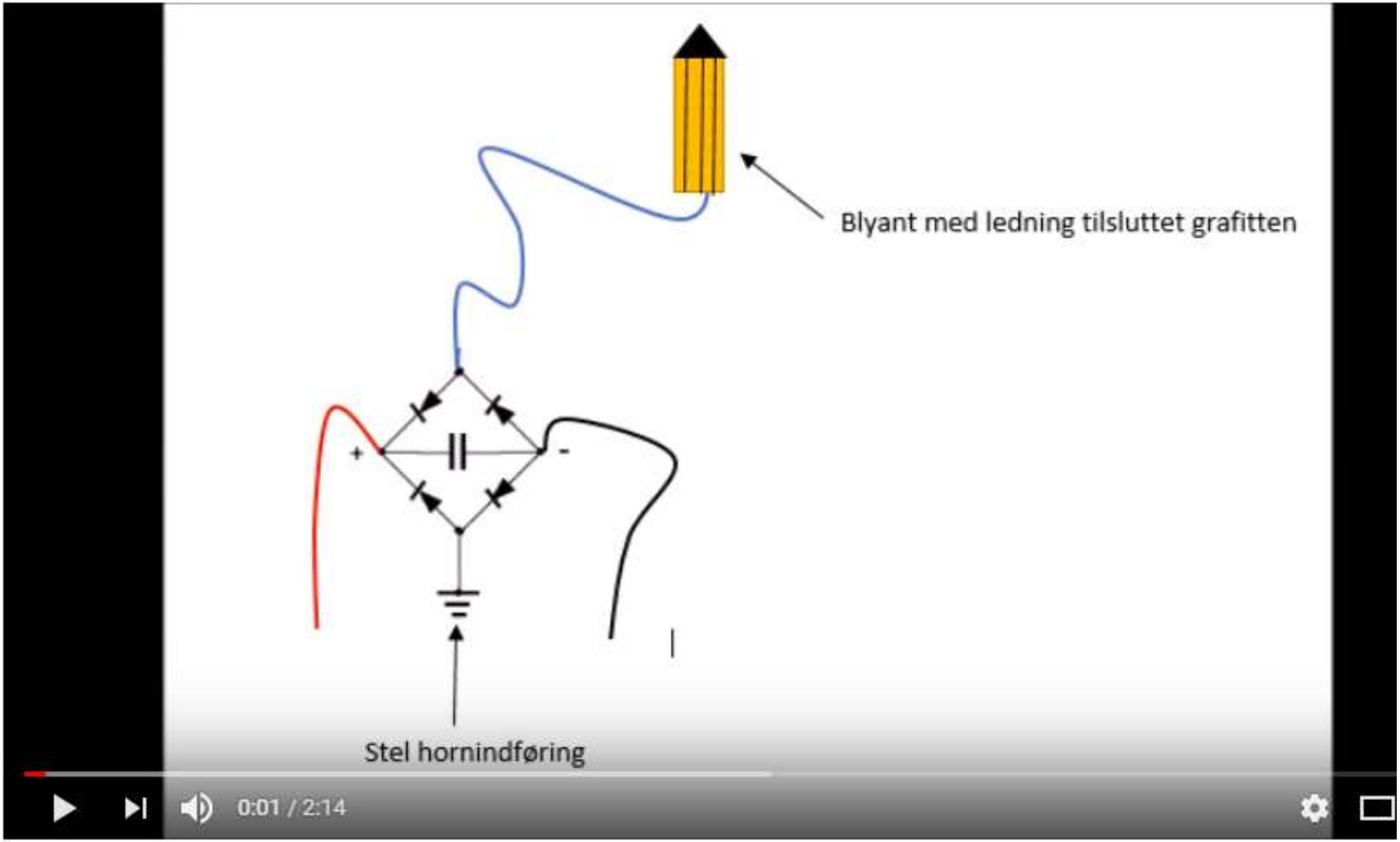
Copyright 1935 by H. Gernsback.

From M.J. Rycroft et al., JASTP, 2000





From R.G. Harrison, Surveys in Geophysics, 2004



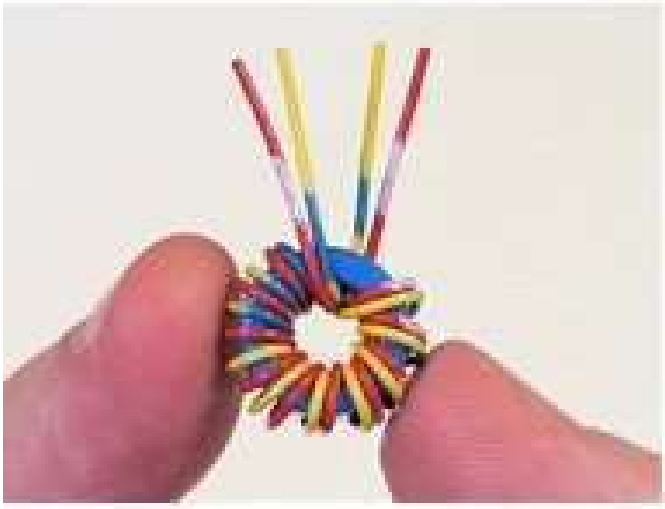
tesla radiant collector/ion collector with pencil



Keeping the two wires together, make a few more turns through the center.



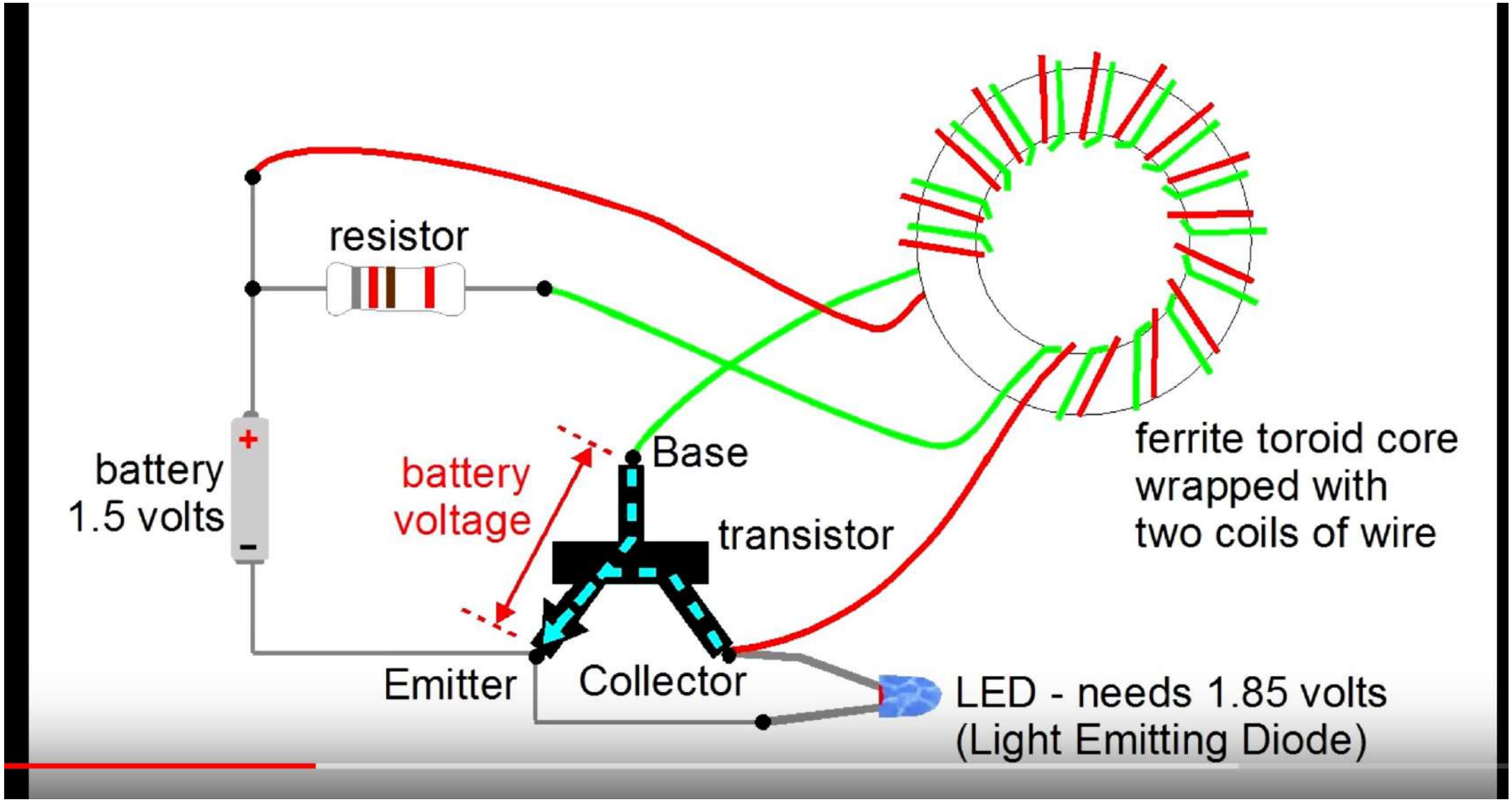
Keep winding until you fit as many turns as will fit in a single layer around the toroid, typically 7-10 turns with thin insulated wire.

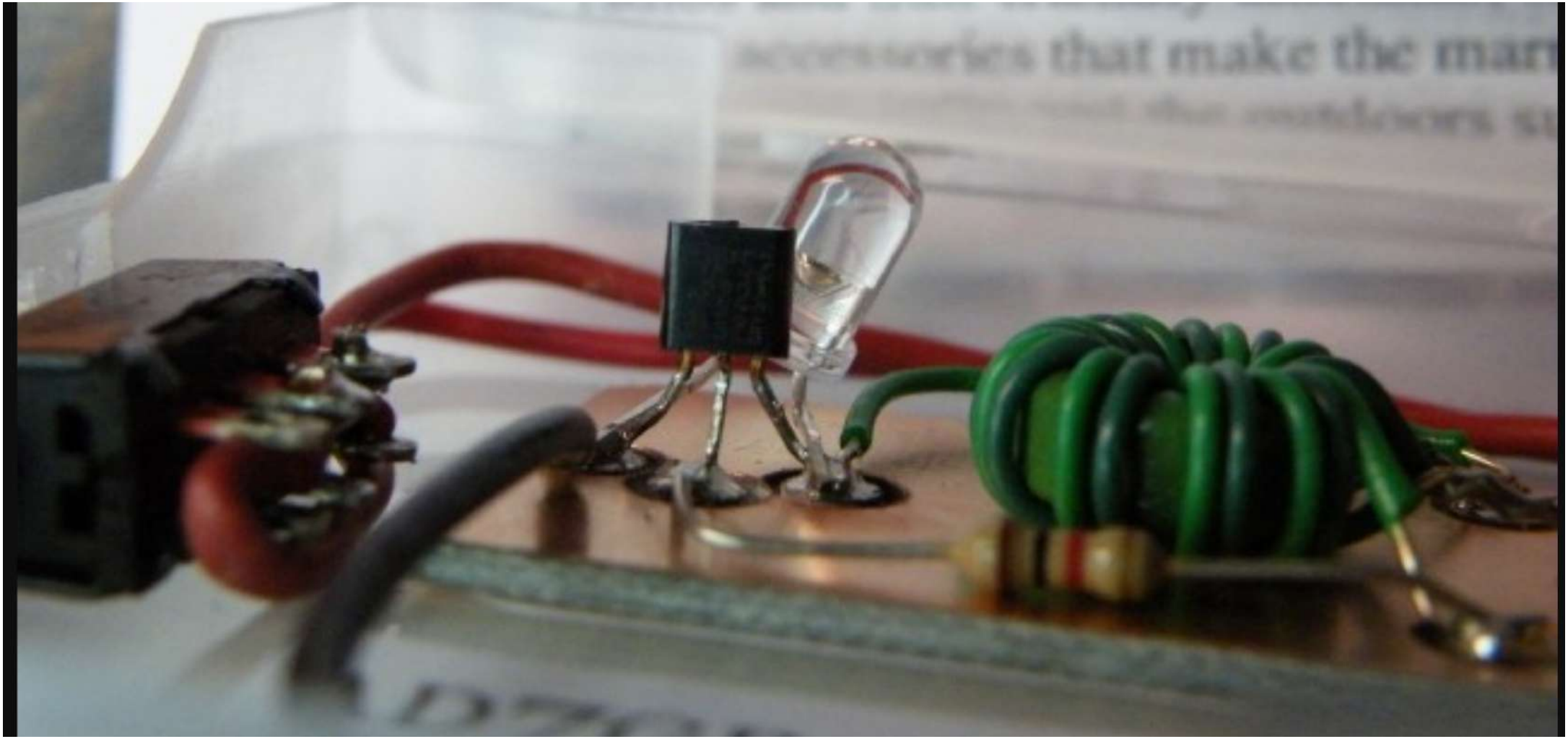


Clip the wire leads down. Note that we have two pairs of wires: one coming out the front, and one coming out the back.

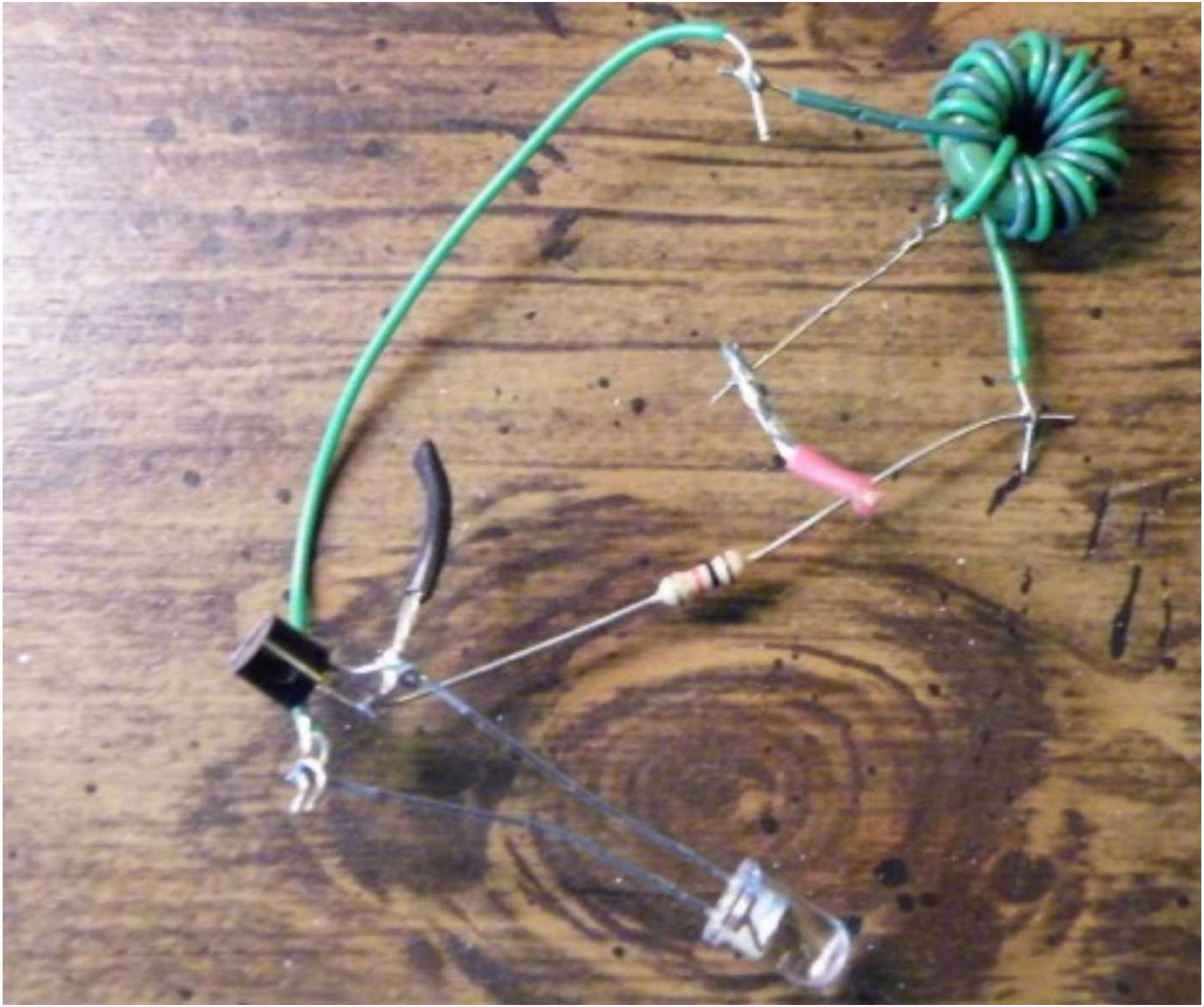


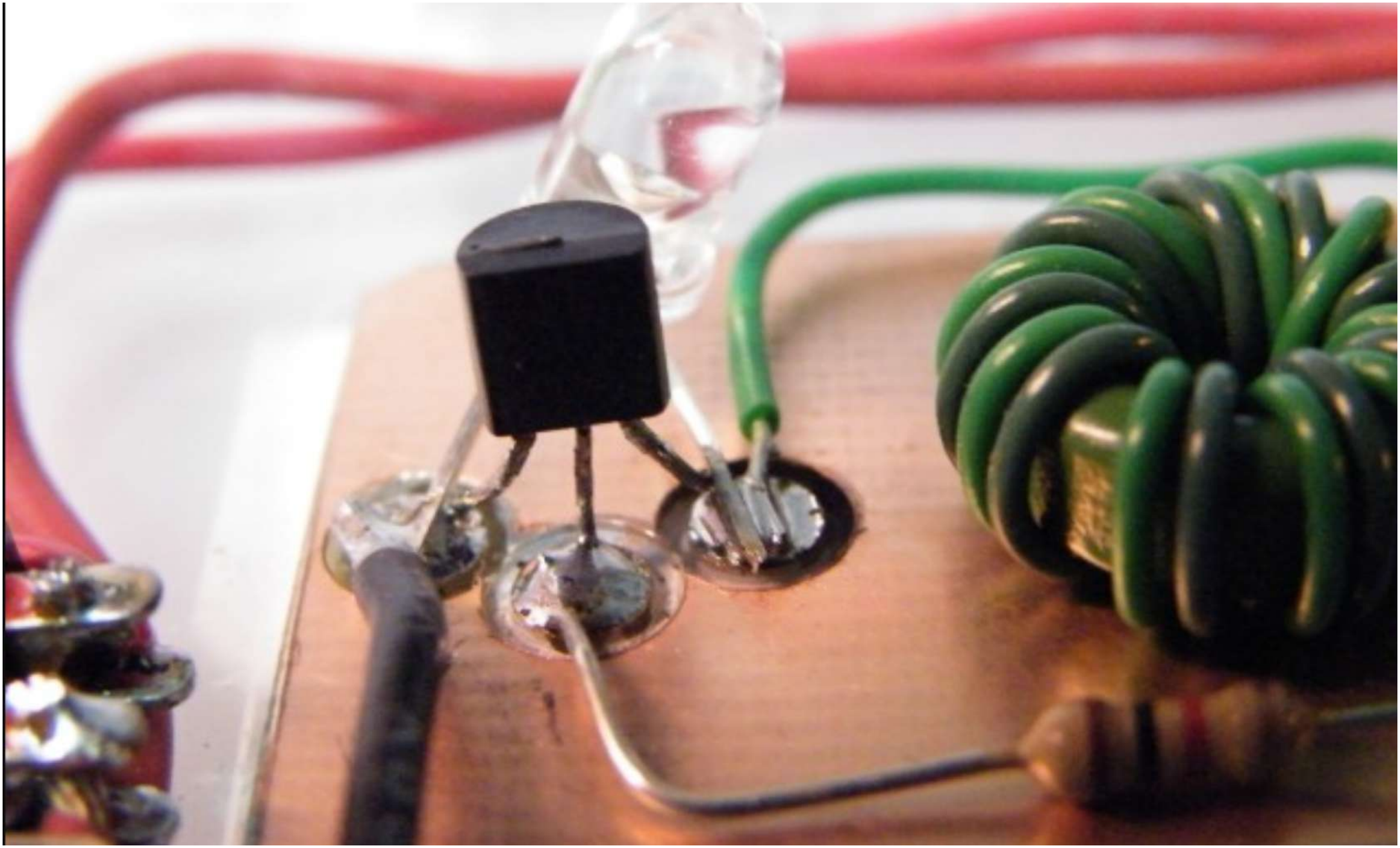
Strip the wire ends. Take one wire from each pair *of different color* and attach them together.


resistor
battery
1.5 volts
+
–
battery
voltage
Base
transistor
Emitter
Collector
ferrite toroid core
wrapped with
two coils of wire
LED - needs 1.85 volts
(Light Emitting Diode)



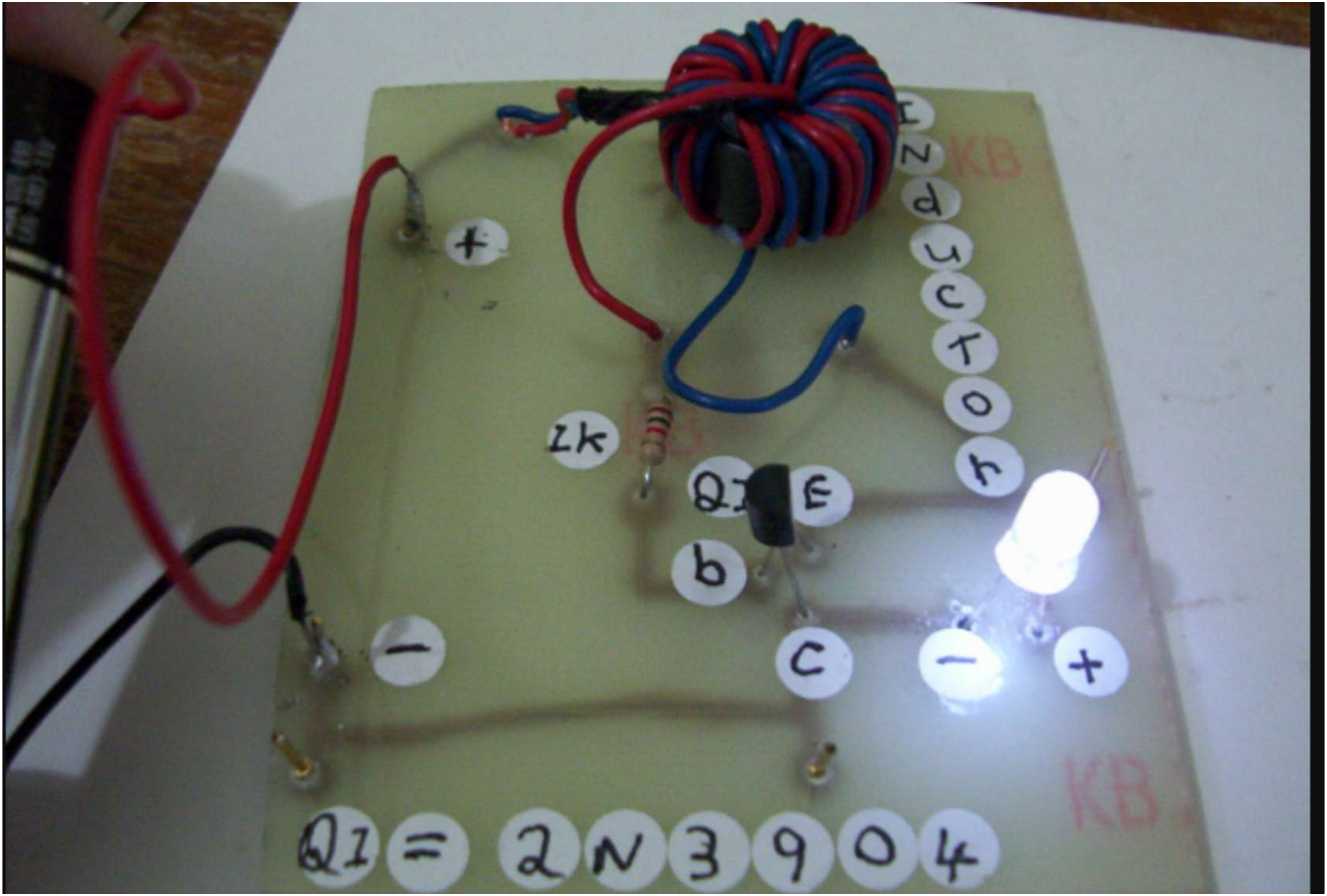
CIRCUIT
HOME
TOUCH
CIRCUIT
HOME
TOUCH

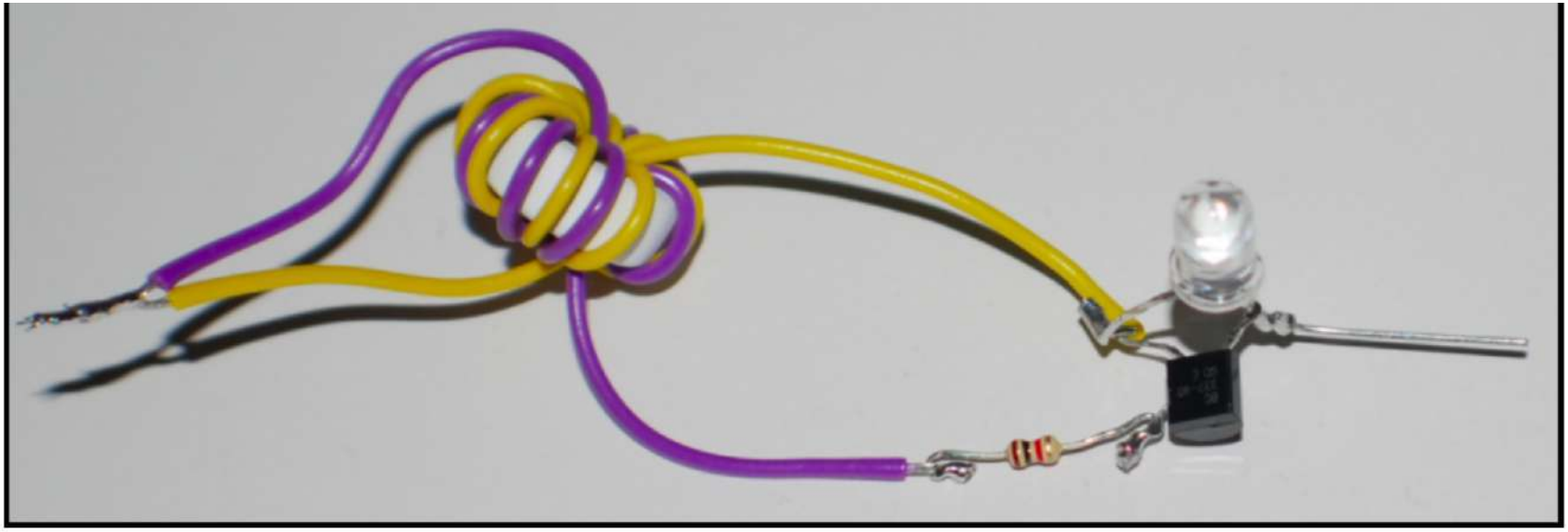







Panasonic
DIGITAL POWER
AD7GR - Joule-Thief
January 2009


+
1k
Q1
E
b
C
−
+
−
Q1 = 2N3904



... and these are the components you need:

Two wires
Different colours

A 'dead' battery

A npn transistor
This one is a BC337-40 -
but any kind will do

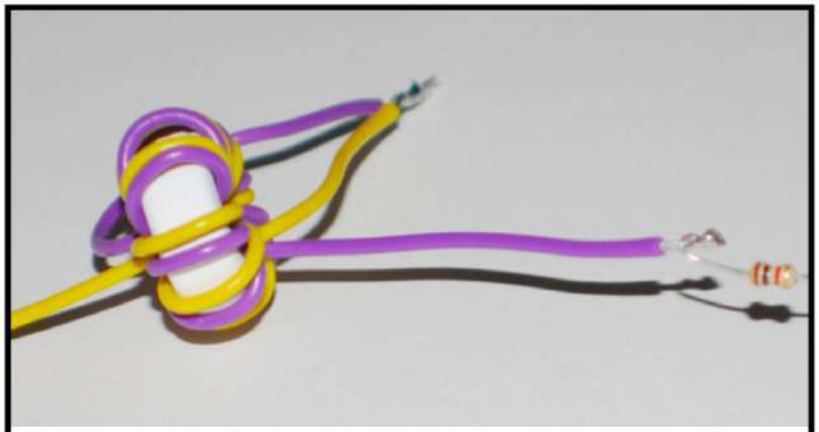
A light emitting diode (LED)
Any colour, but not flashing

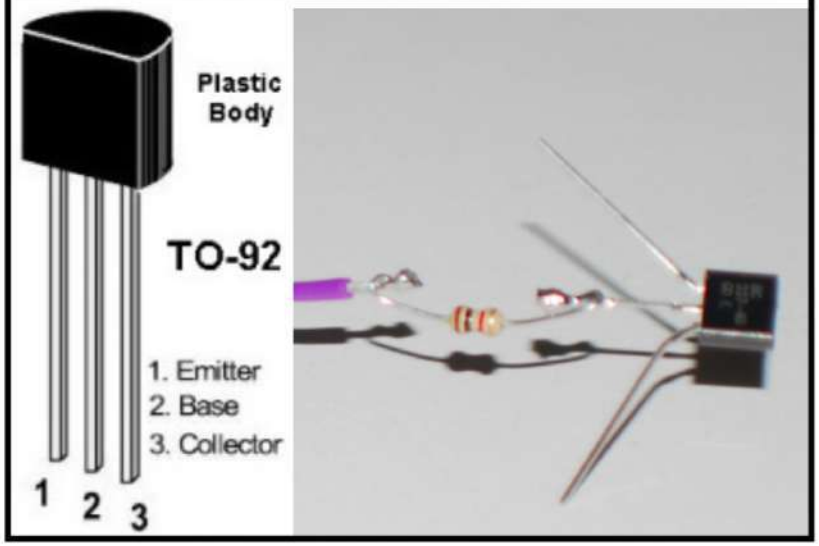
A ferrite core

A 1kΩ Resistor

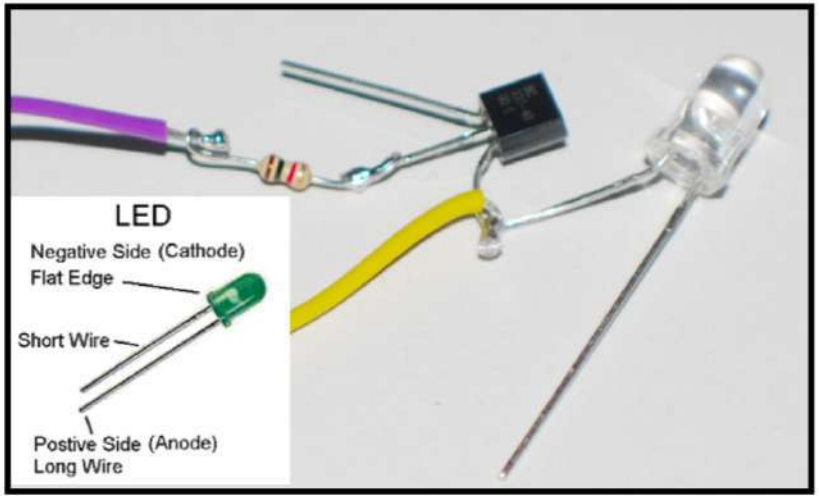
Solder the 1kΩ Resistor to either of the unsoldered wires coming from the inductor.

Solder the other end of the resistor to the base lead of the transistor.
On the transistor used here, that is the middle lead.
Cut off the spare ends of leads.





Solder the anode of the LED (the longer leg) to the collector lead of the transistor AND the remaining wire from the inductor.
Cut off the ends of the leads.



Solder the other leg of the LED (the cathode) to the emitter lead of the transistor.
Do NOT cut off the LED leg.
(Don't wory if you have cut it off - you'll just need to solder another wire to this leg so that you can connect it to the battery.)

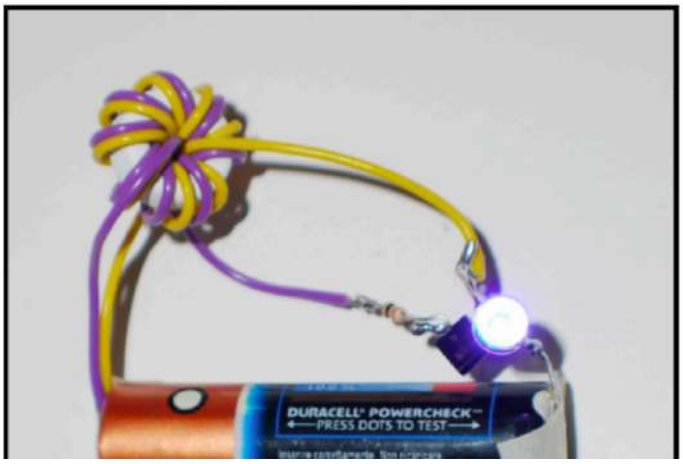


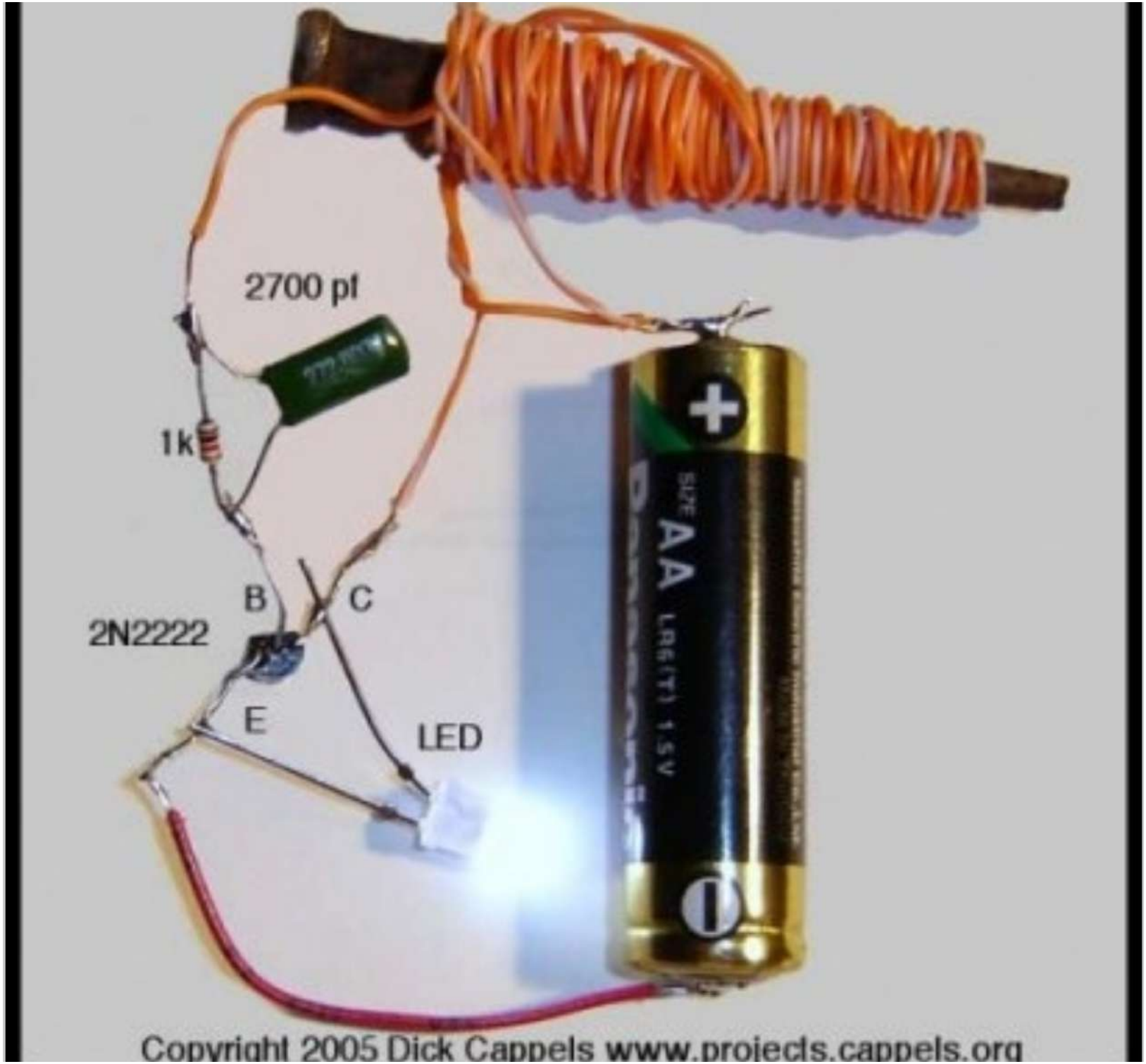
That's the circuit finished. Now use it.

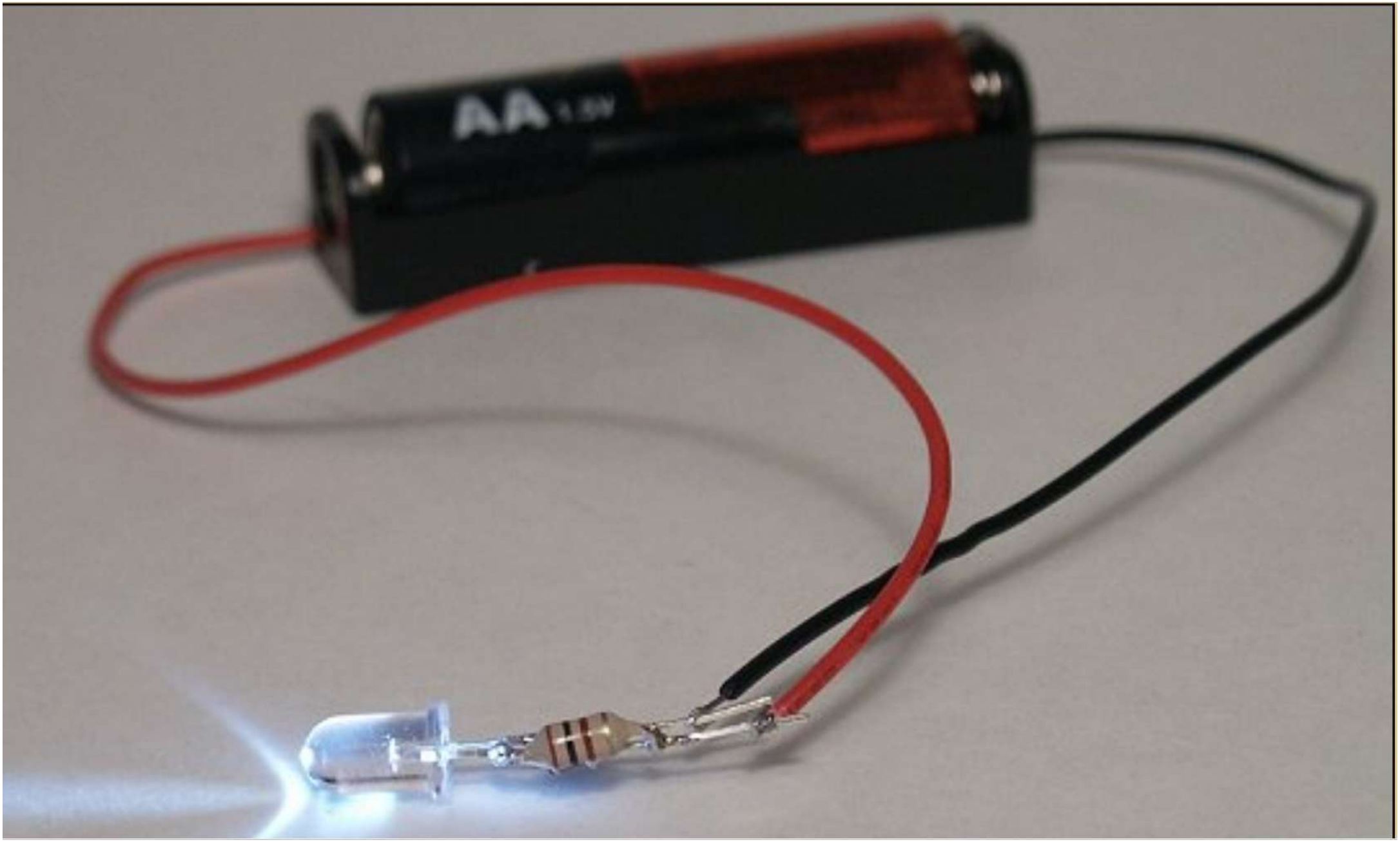
First you need a 'dead' battery - that means one where the voltage is less than 1.3V.
You can see that the battery used here has a Voltage of just over 1V.

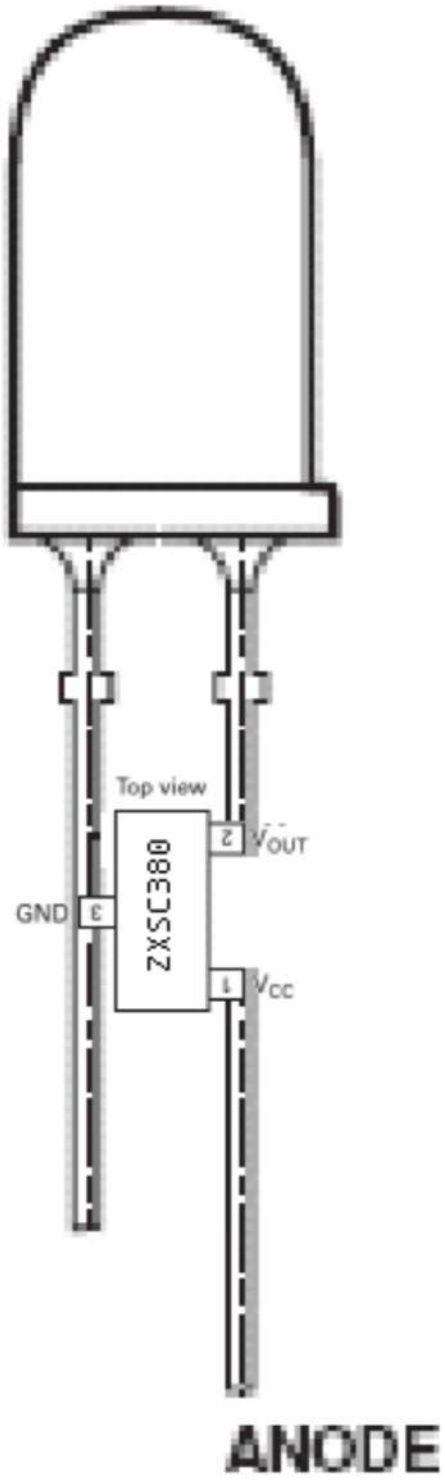


Connect the two soldered wires coming from the inductor to the positive (+) side of the battery.
Connect the uncut LED leg (the athode) to the negative (-) side of the battery.




2700 pf
1k
B
C
2N2222
E
LED
SIZE AA
Copyright 2005 Dick Cappels www.projects.cappels.org


AA 1.5V

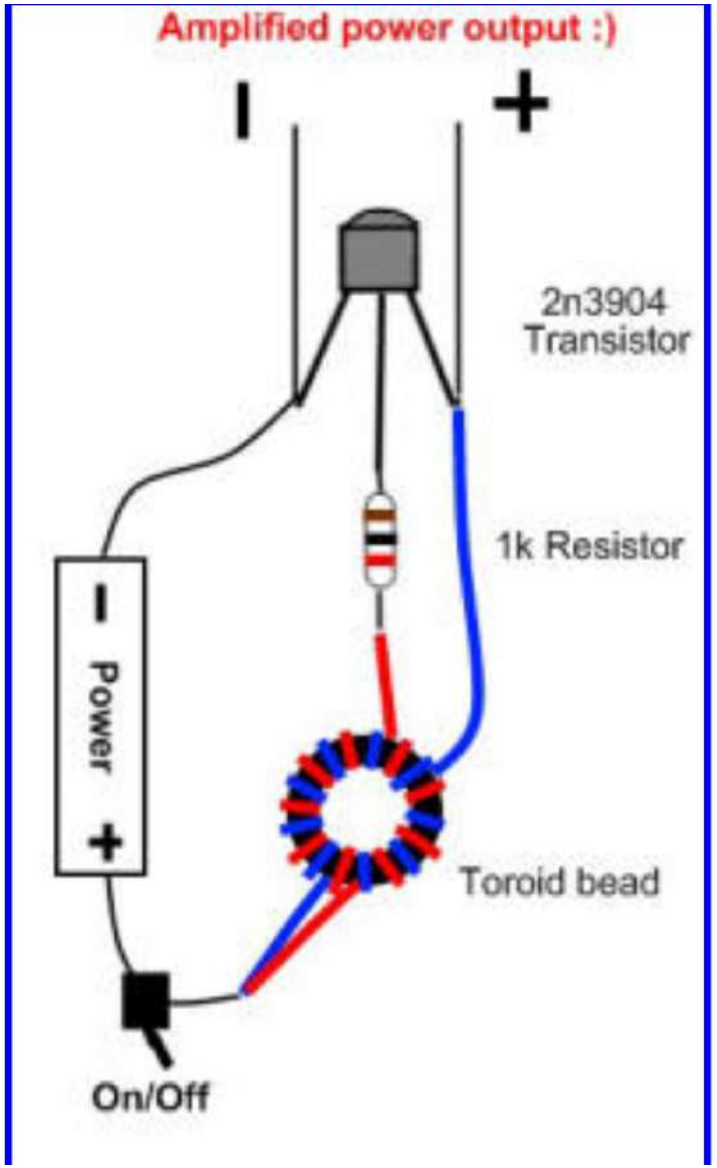


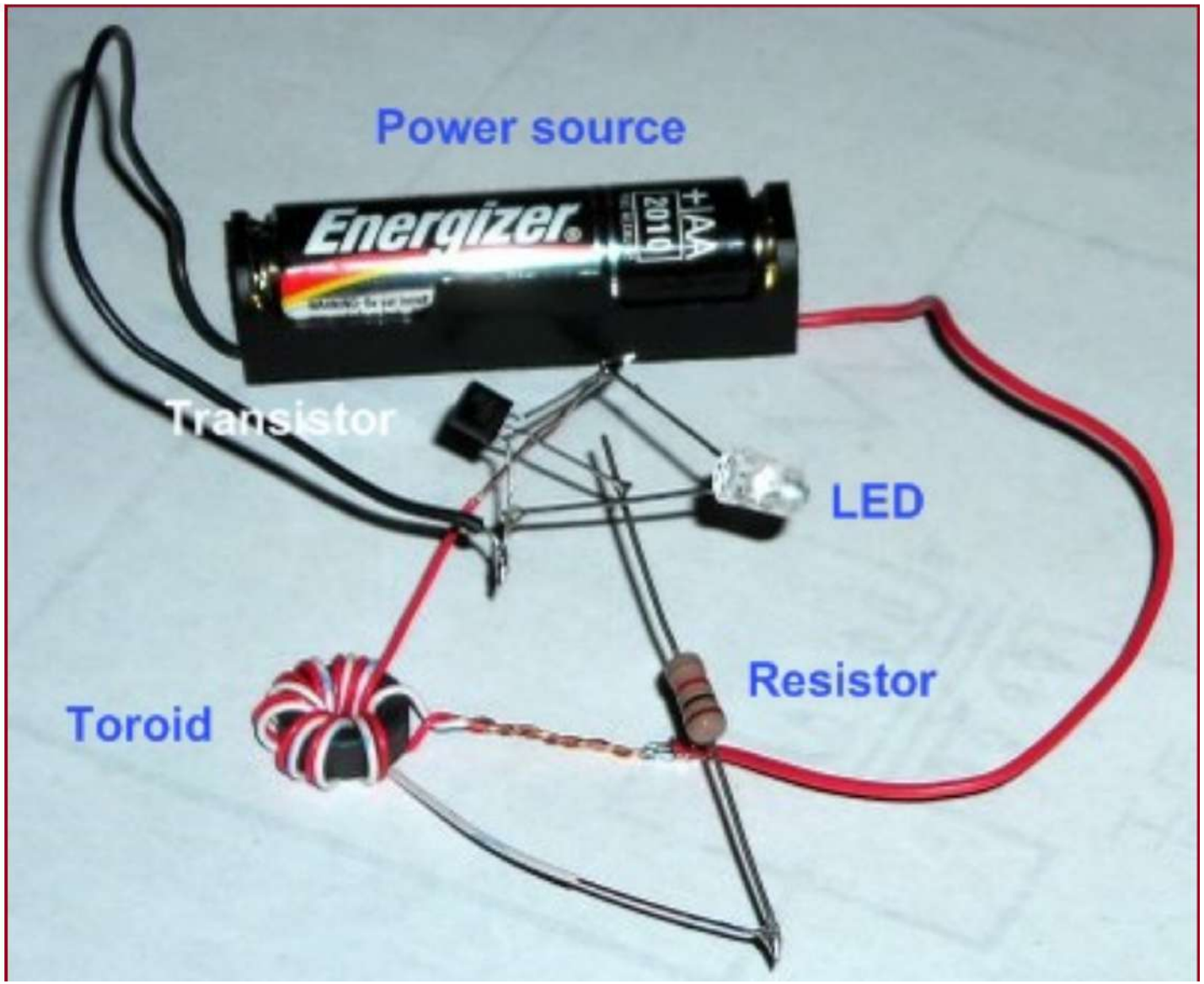
The chip is soldered onto the legs of the LED and then the wire between pins 1 and 2 is cut out so there is no connection. The inductor is then soldered so as to bridge pins 1 and 2. I soldered the inductor on before cutting out the wire but it might be easier to try some other method.

As I said previously, this is a tedious solder job, and the SOT23 IC is easily damaged (ask me how I know!) It takes patience and a steady hand to assemble these few parts.

This circuit would work for the LED indicator in the 1.5v boosters and would most likely be a better choice than the Joule Thief that I posted previously.

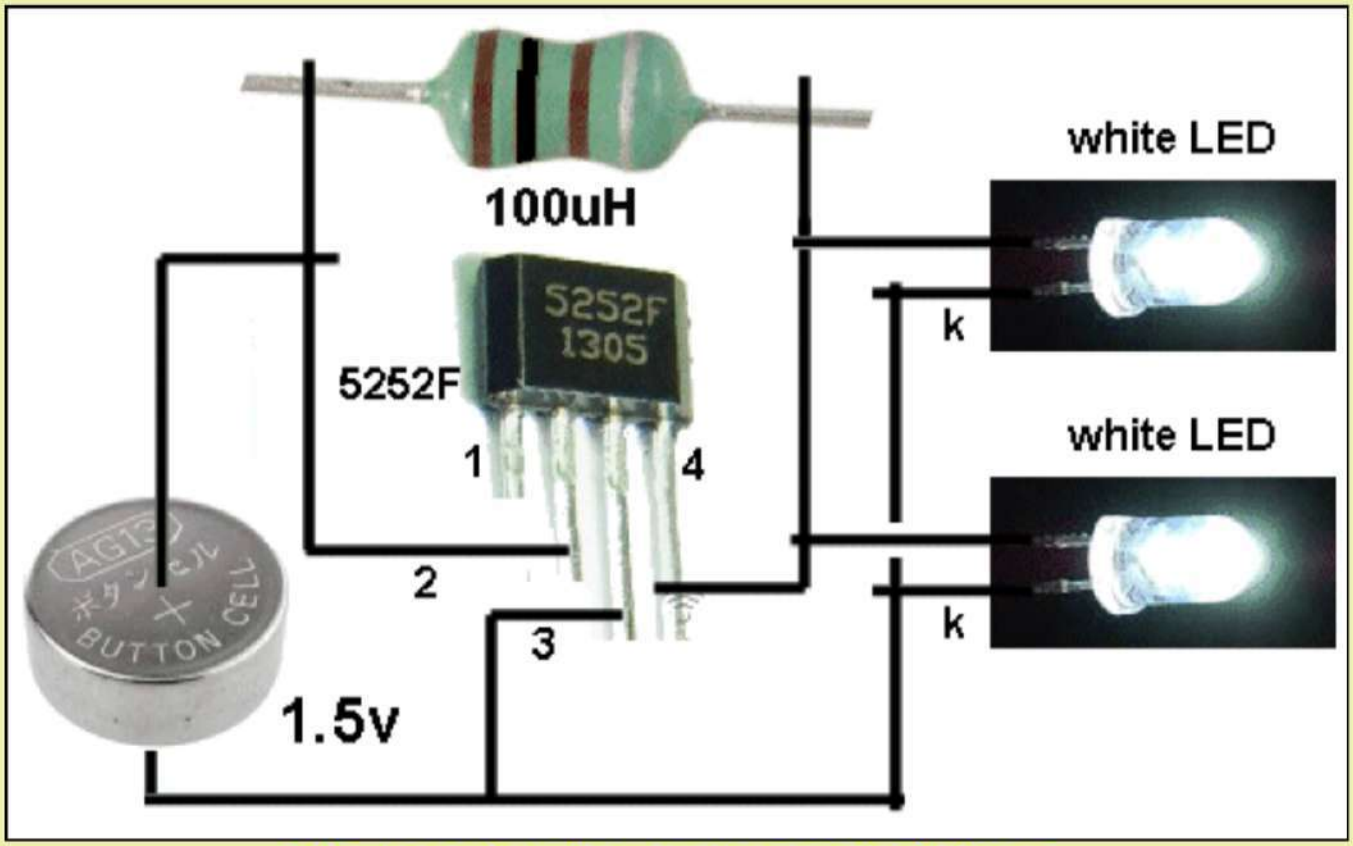



Amplified power output :)
2n3904
Transistor
1k Resistor
Power
Toroid bead
On/Off


Power source
Energizer
Transistor
LED
Resistor
Toroid

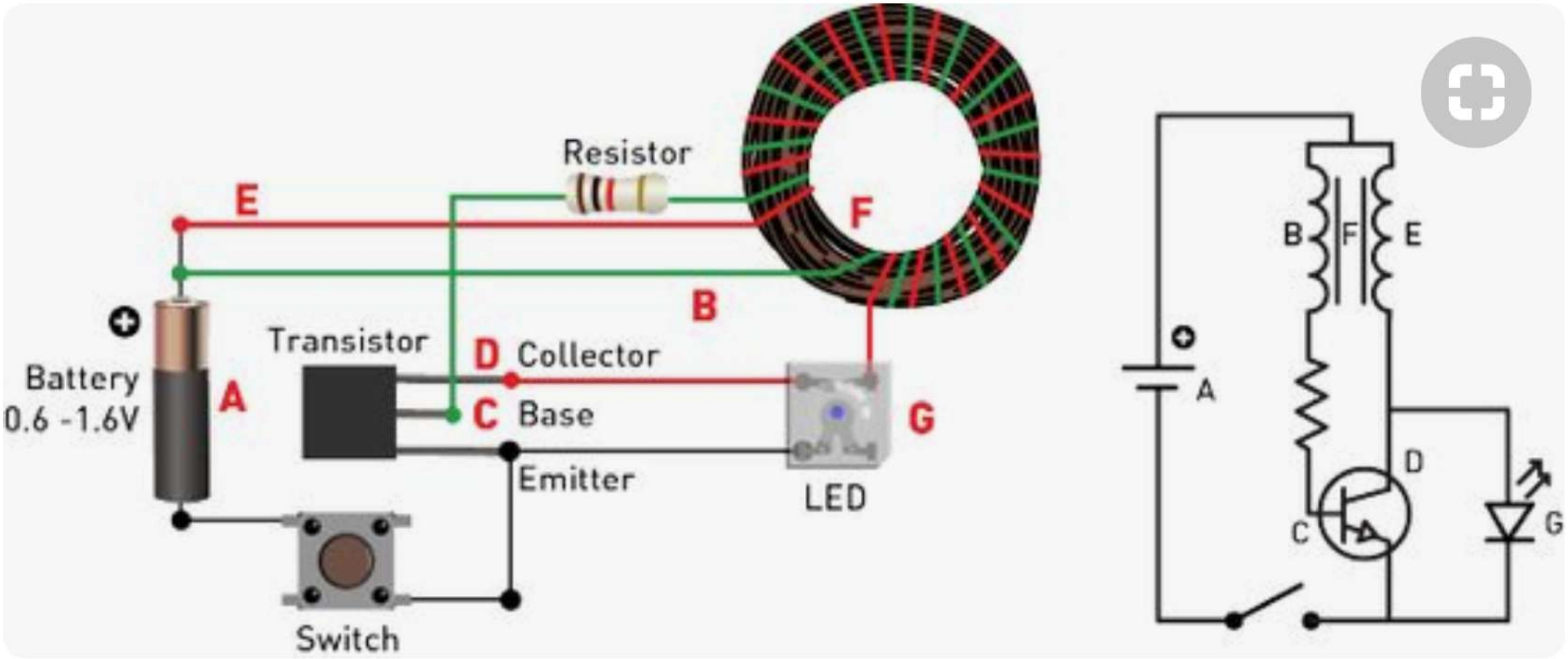
The CIRCUIT

The circuit is very simple. All the work is done by the 5252F chip.
It contains an oscillator, a high speed diode and a power transistor. All these components inside the "IC" that looks like a 4-leaded transistor!
This IC is smaller and cheaper than all the parts individually and is less expensive than the competition (that costs 70 cents).
We can produce a complete project for a few dollars and it has two "test features."
You can place a LED across one of the LEDs on the board and find out the colour as many LEDs come in a "clear-as-glass" package and you cannot tell the colour until they are illuminated.
The other feature is INDUCTOR TESTING.
The current taken by the circuit changes according to the value of the inductor.
You just need a few reference values and you can work out the value of an inductor within the range of the inductors you have used as samples, or slightly higher or lower values.



The layout using component pictures.

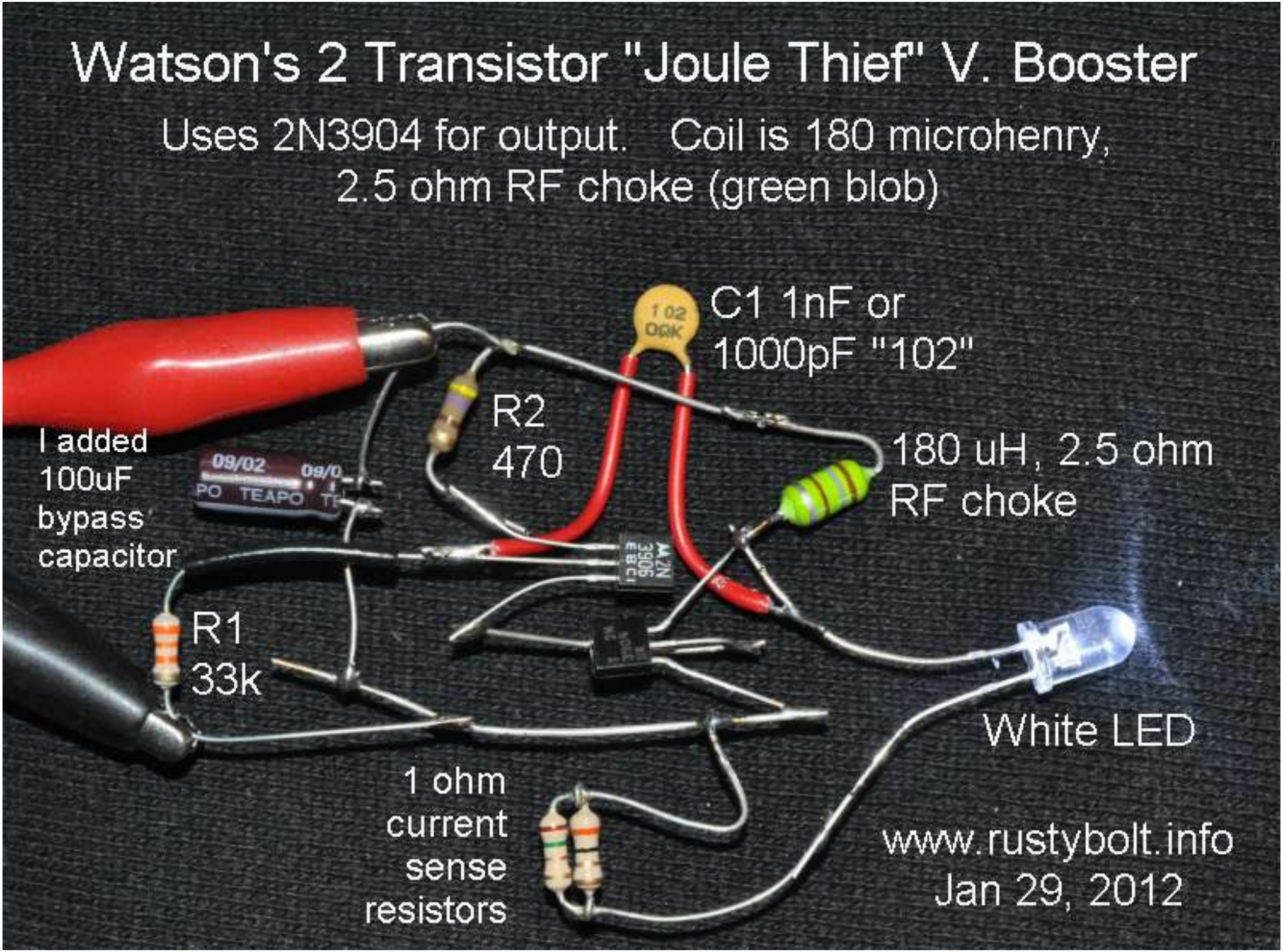
Using a 220uH, the circuit takes 13mA and illuminates 2 white LEDs very brightly.
Using 100uH the circuit takes 30mA and the LEDs are really the same brightness.
Using 33uH the circuit takes 80mA and the LEDs are just about the same brightness.
Obviously the 220uH creates the most efficient circuit.
The QX5252F is capable of delivering more than 100mA to the LEDs but we only need


Resistor
E
F
B
Transistor
D Collector
Battery
0.6 -1.6V
A
C Base
G
Emitter
LED
Switch
B
F
E
A
D
C
G



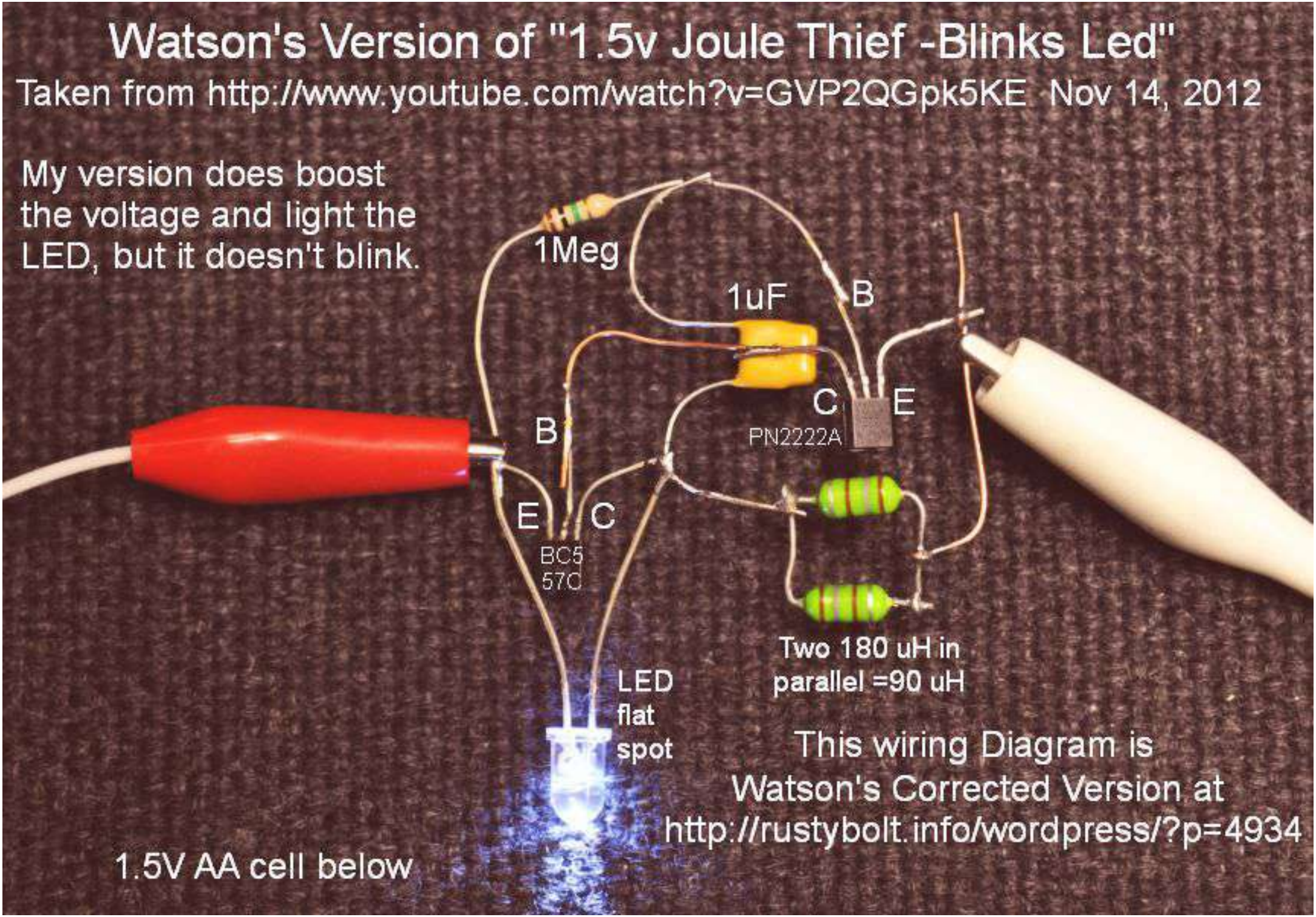





Watson's 2 Transistor "Joule Thief" V. Booster
Uses 2N3904 for output. Coil is 180 microhenry,
2.5 ohm RF choke (green blob)
C1 1nF or
1000pF "102"
R2
470
180 uH, 2.5 ohm
RF choke
I added
100uF
bypass
capacitor
R1
33k
White LED
1 ohm
current
sense
resistors
www.rustybolt.info
Jan 29, 2012

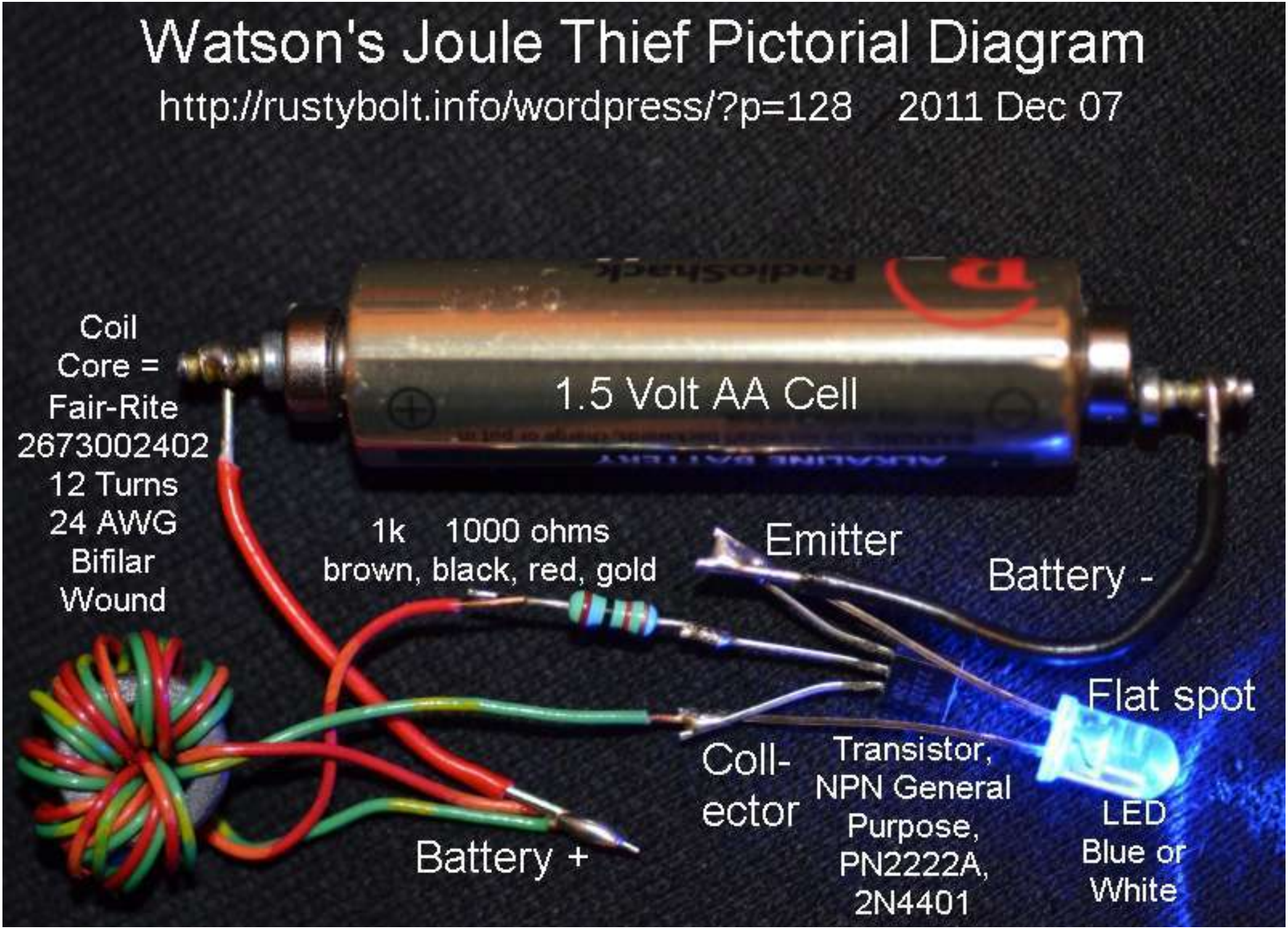
Watson's Version of "1.5v Joule Thief -Blinks Led"

Taken from http://www.youtube.com/watch?v=GVP2QGpk5KE Nov 14, 2012



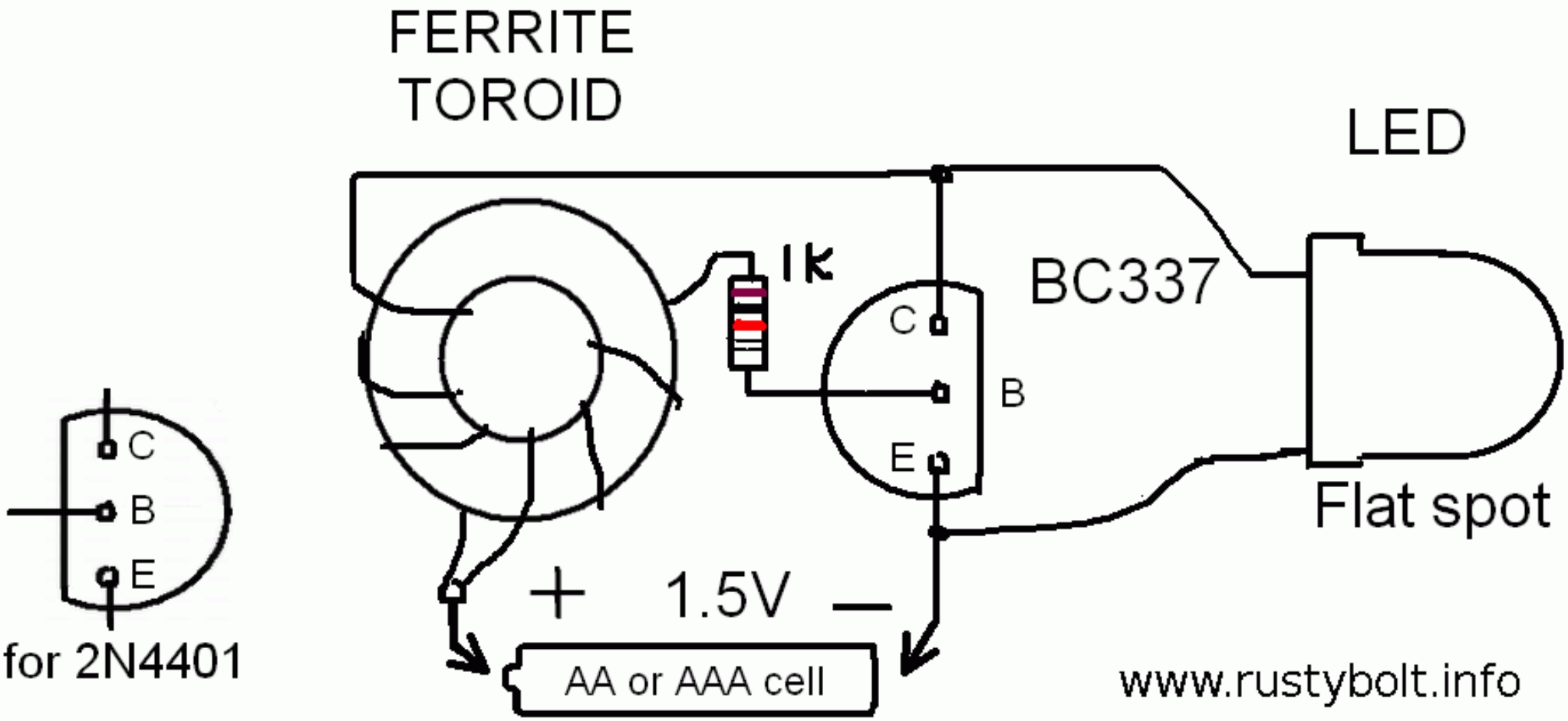
Watson's Joule Thief Pictorial Diagram

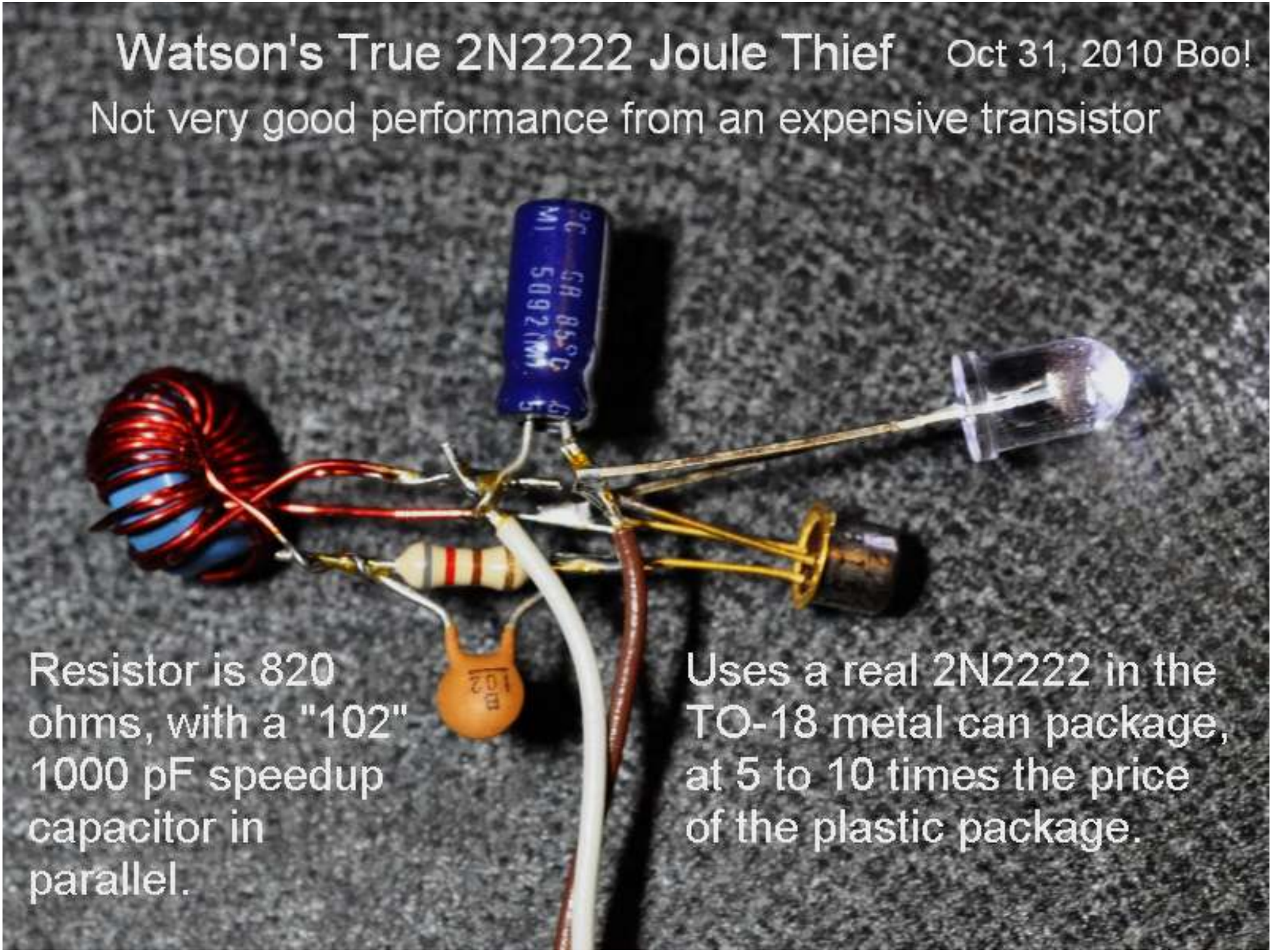
http://rustybolt.info/wordpress/?p=128 2011 Dec 07

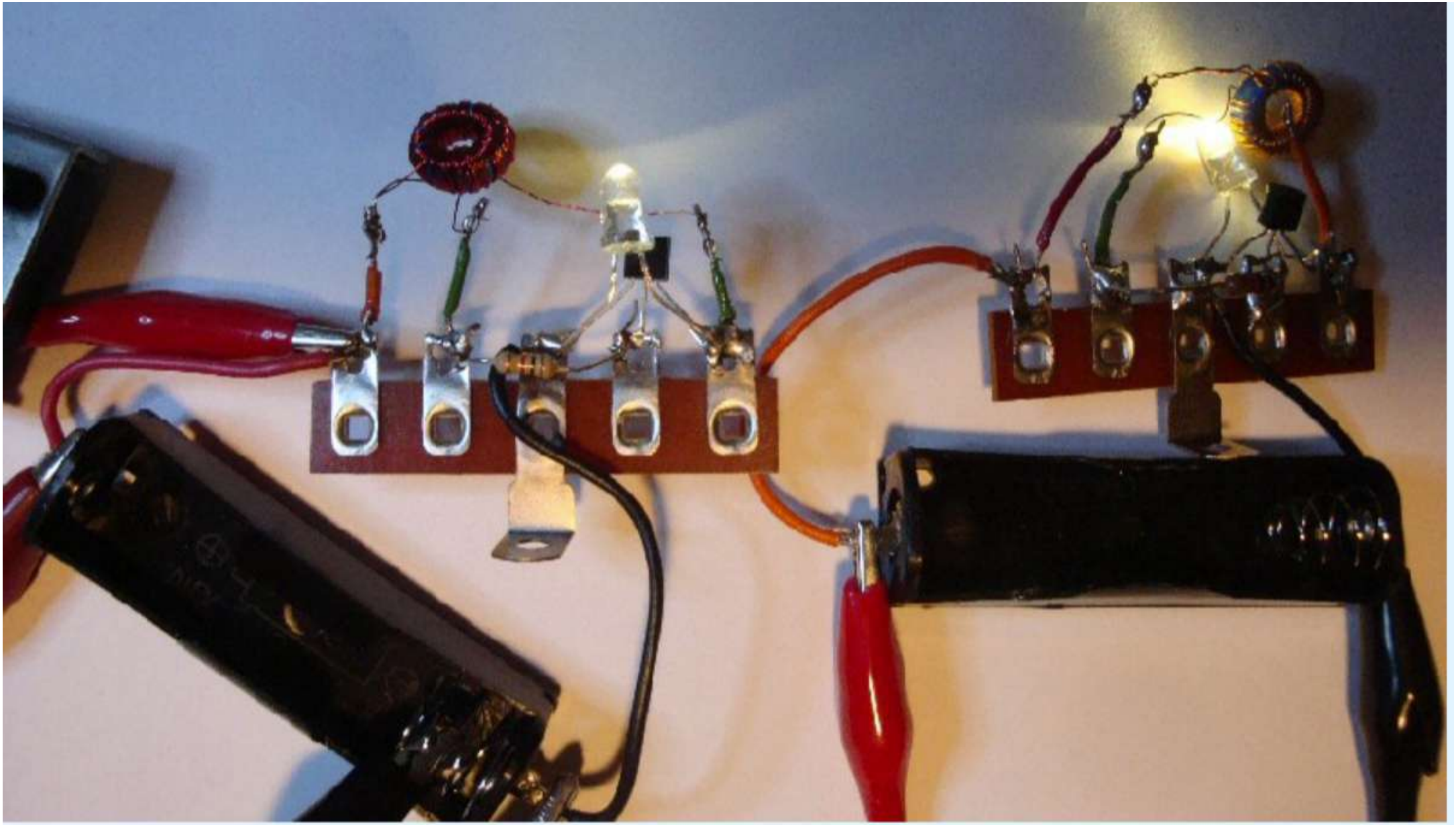


Joule Thief

Pictorial Wiring Diagram Dec 11, 2009



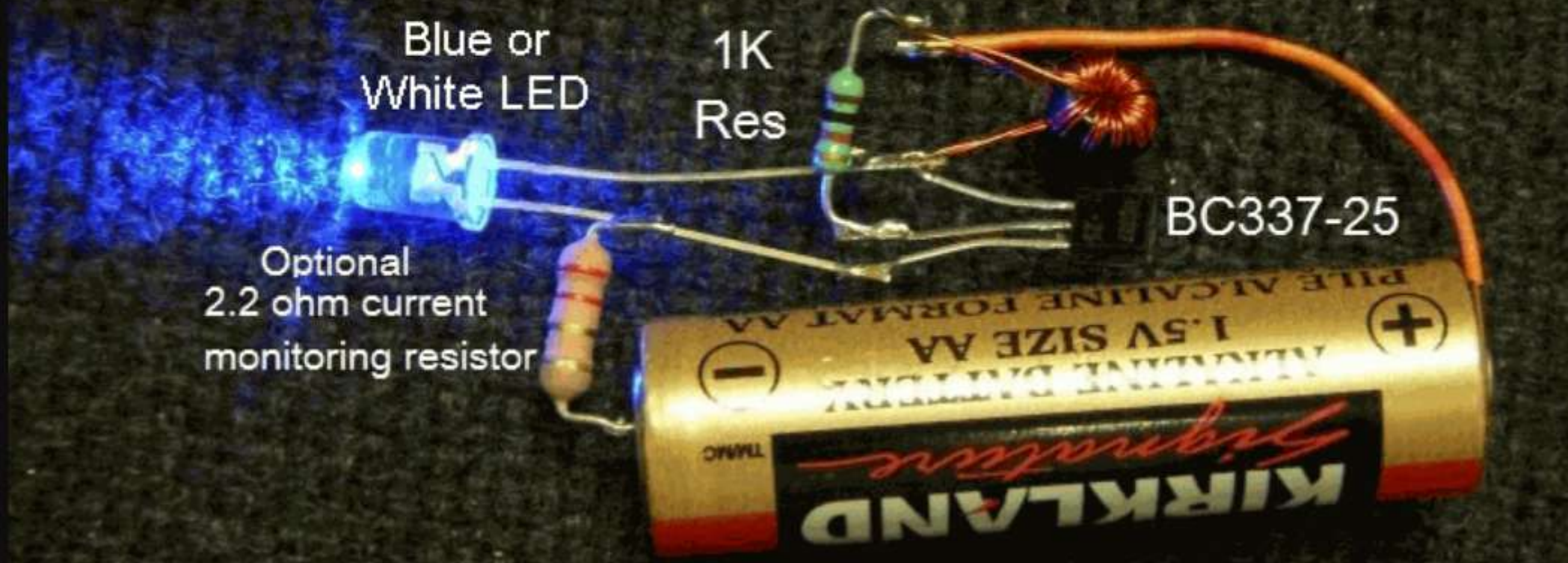

Watson's True 2N2222 Joule Thief
Oct 31, 2010 Boo!
Not very good performance from an expensive transistor
Resistor is 820 ohms, with a "102" 1000 pF speedup capacitor in parallel.
Uses a real 2N2222 in the TO-18 metal can package, at 5 to 10 times the price of the plastic package.



Watson's Tiny Toroid Conventional Joule Thief - Nov 18, 2009

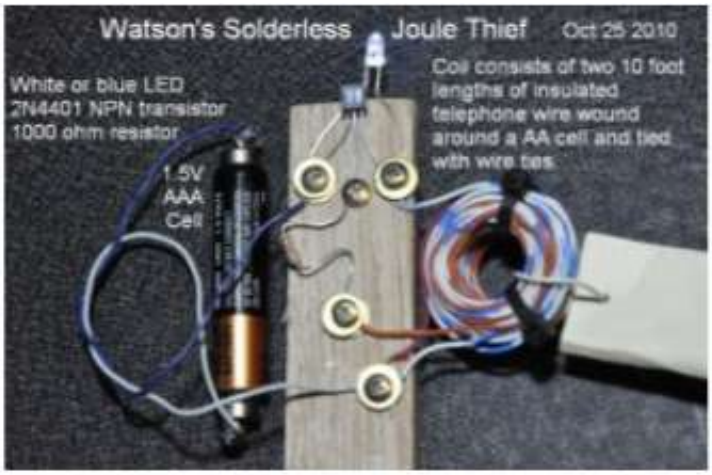
Not much bigger than the transistor!

www.rustybolt.info



Three windings 30 AWG, each about 6 inches long, trifilar wound on 0.229 inch O.D. toroid, 2 in parallel for main winding.

I took this photo just before Halloween back in 2010, after I made this Joule Thief without solder and without a toroid. It shows that you don't have to know how to solder and you don't have to have a toroid to make a working Joule Thief – all you need is a screwdriver. So do your thing and experiment a bit, and see what you can come up with.

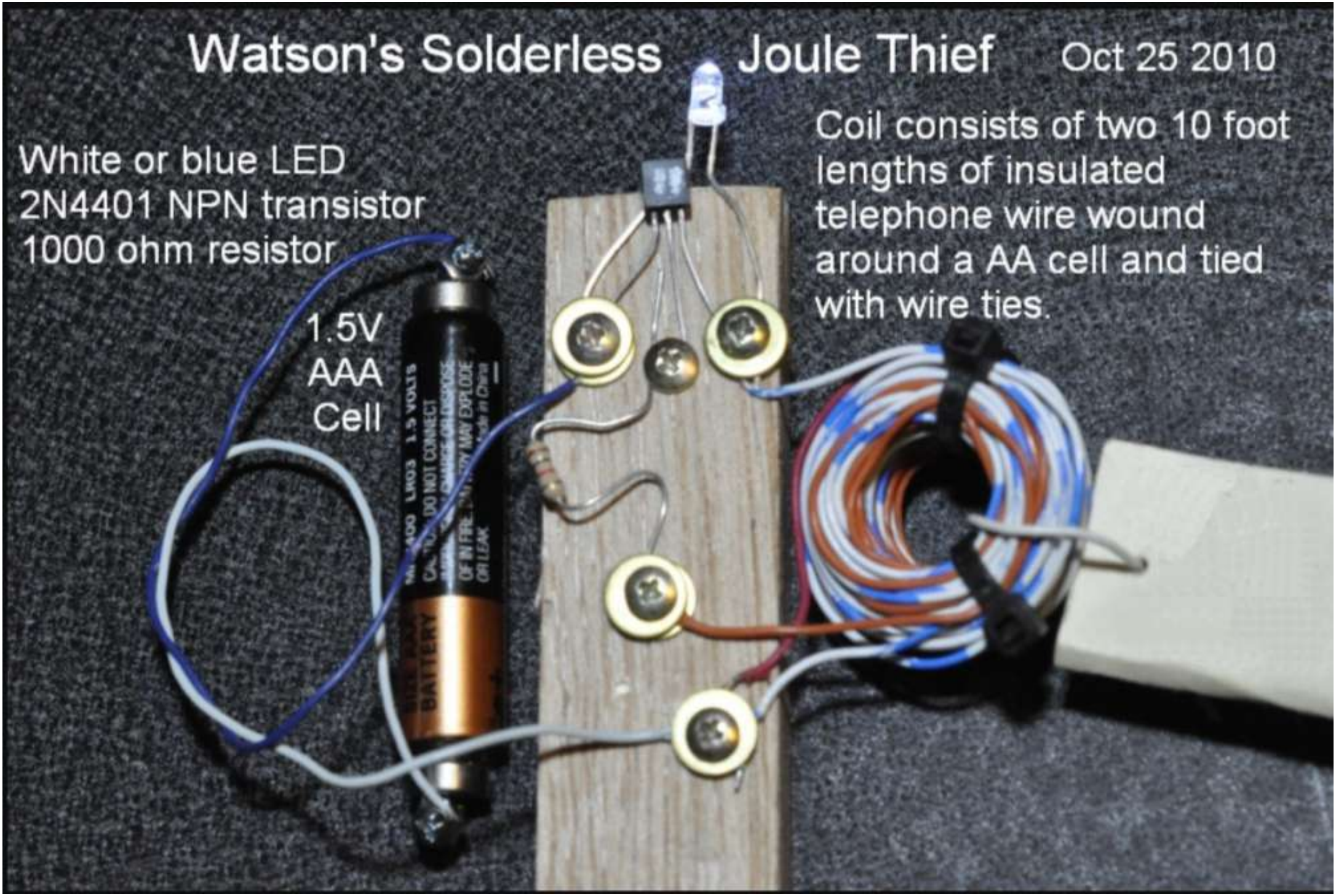


Each screw (except for one) has two washers to hold the wires. Putting two or more wires under the screw head without the washers will be difficult and the wires will try to come loose. Two or three washers makes it easier and the wires are held much firmer. The wood block is a piece of solid oak that is about a half inch (12mm) thick. The oak is very hard and the screw holes have to be drilled out before the screws are put in. This also makes it possible to use small screws with a flat end which were used for holding plastic parts together. The screw size is about #3 by 3/8 inch long, with coarse threads like a sheet metal screw.

The LED is not very bright because it's a cheap 3 mm white LED I got from an eBay seller, and it has been used a bit so it has dimmed. Use a decent LED and this circuit will be as bright as a toroid JT.

Another Joule Thief I put together is shown in the second photo. This uses the bare wires to wrap around the joints in place of solder. The joints are not as mechanically strong as solder but for a quick experiment they should work okay. If the JT is going to be used, the wire joints may become intermittent or loose. The solder joints are a much better connection.




Watson's Solderless Joule Thief
Oct 25 2010
White or blue LED
2N4401 NPN transistor
1000 ohm resistor
1.5V
AAA
Cell
Coil consists of two 10 foot lengths of insulated telephone wire wound around a AA cell and tied with wire ties.


Watson's 'Toroid Free' Air Core Joule Thief
2.2k Red, Red, Red, Gold
rustybolt.info/wordpress/?p=2872 May 21, 2012

Watson's Nearly Disposable Joule Thief Light

rustybolt.info/wordpress/?p=2133 Fri. Apr 13 2012

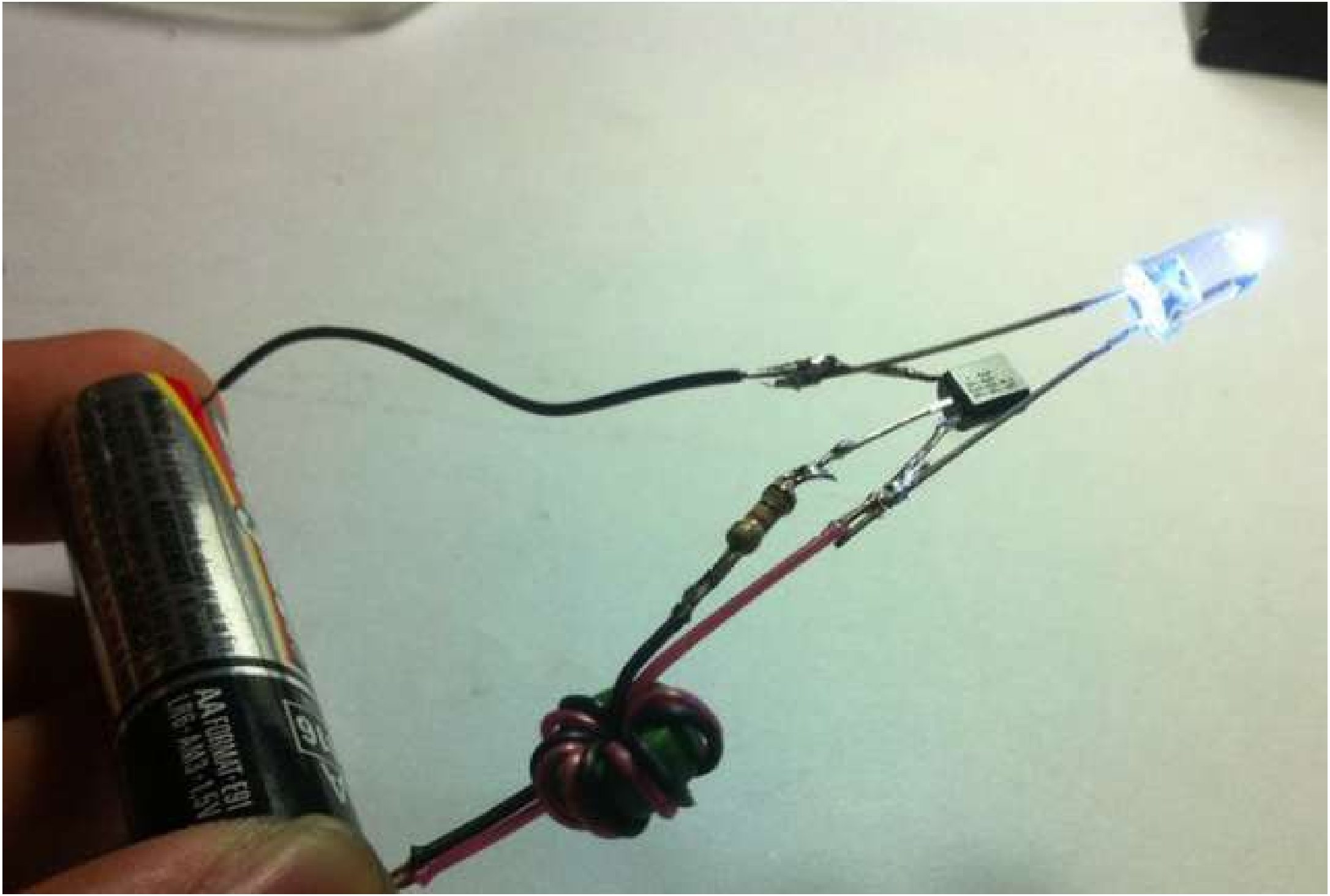
Completed circuit ready for coating of silicone sealant.
Transistor is a BC337. If it was a PN2222A or 2N4401,
the flat side would be facing up.

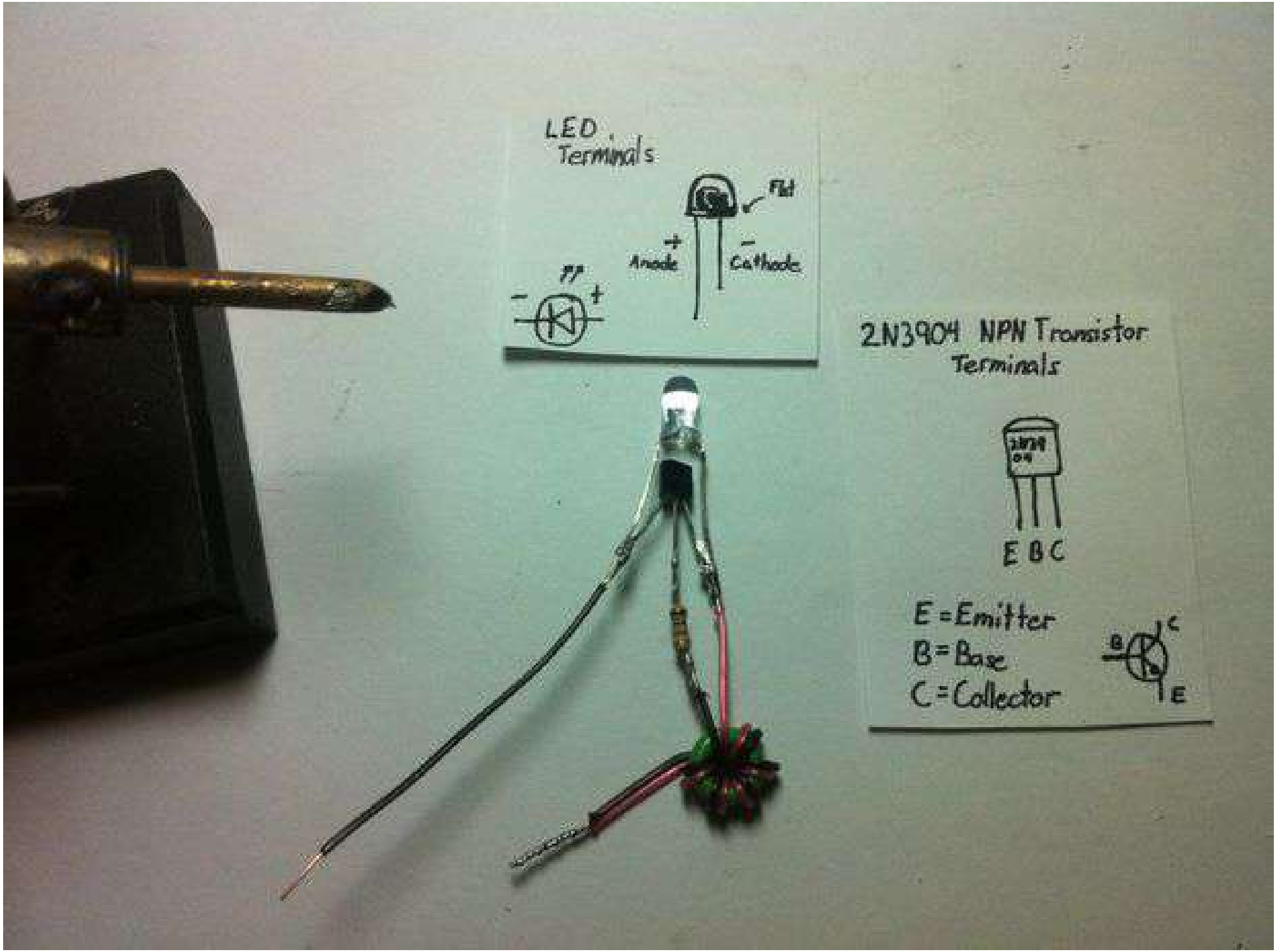


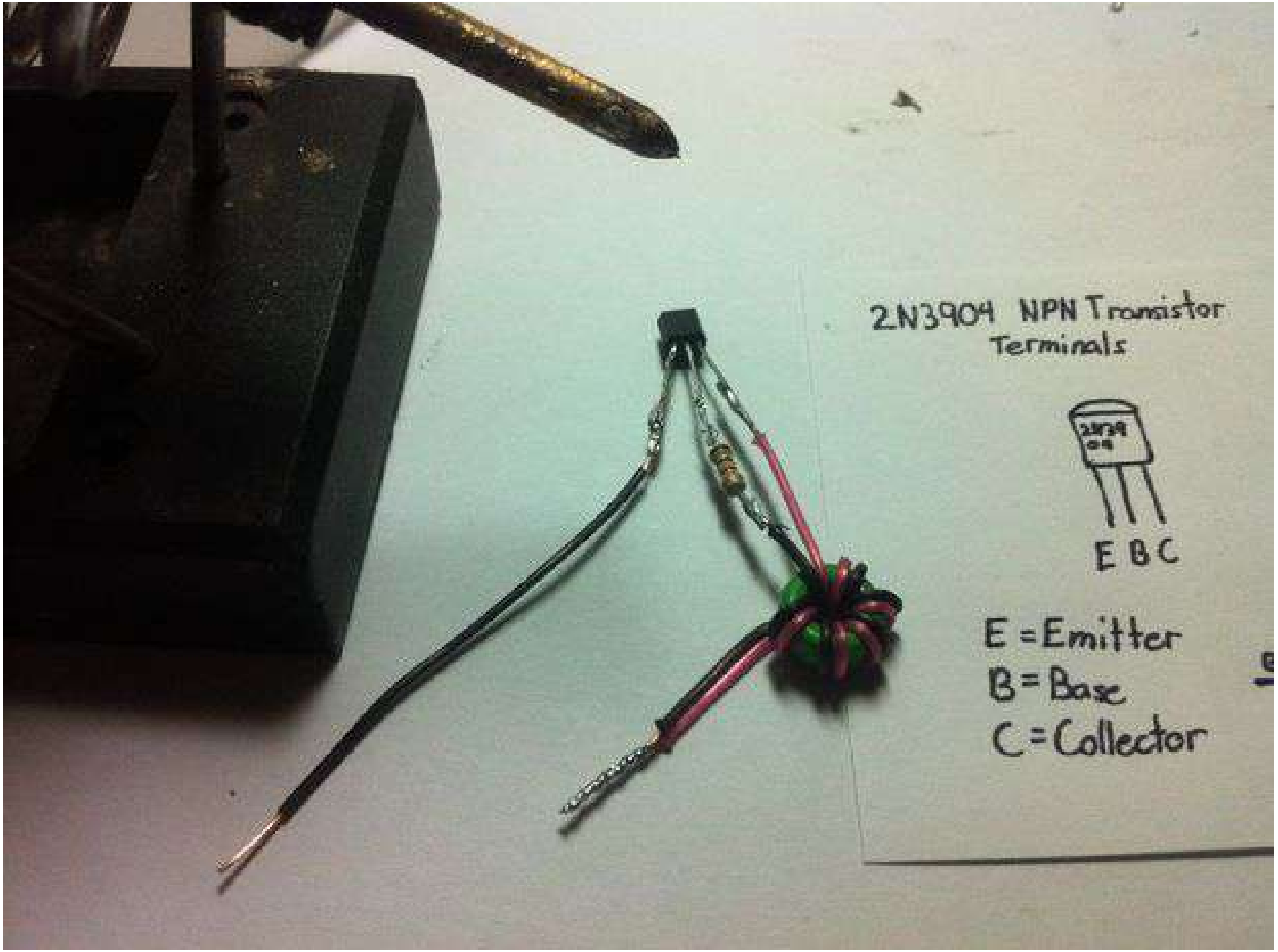

AA
AA SIZE FORM
LR6 - AWG
2017
ALINE


Watson's Solderless Joule Thief
http://rustybolt.info/wordpress/?p=5210


AA 1.5V
SANYO Energy (U.S.A.) Corporation




LED
Terminals
Flat
+
Anode
-
Cathode
-
+
2N3904 NPN Transistor
Terminals
E B C
E = Emitter
B = Base
C = Collector
B
C
E


2N3904 NPN Transistor
Terminals
2N39
04
E B C
E = Emitter
B = Base
C = Collector

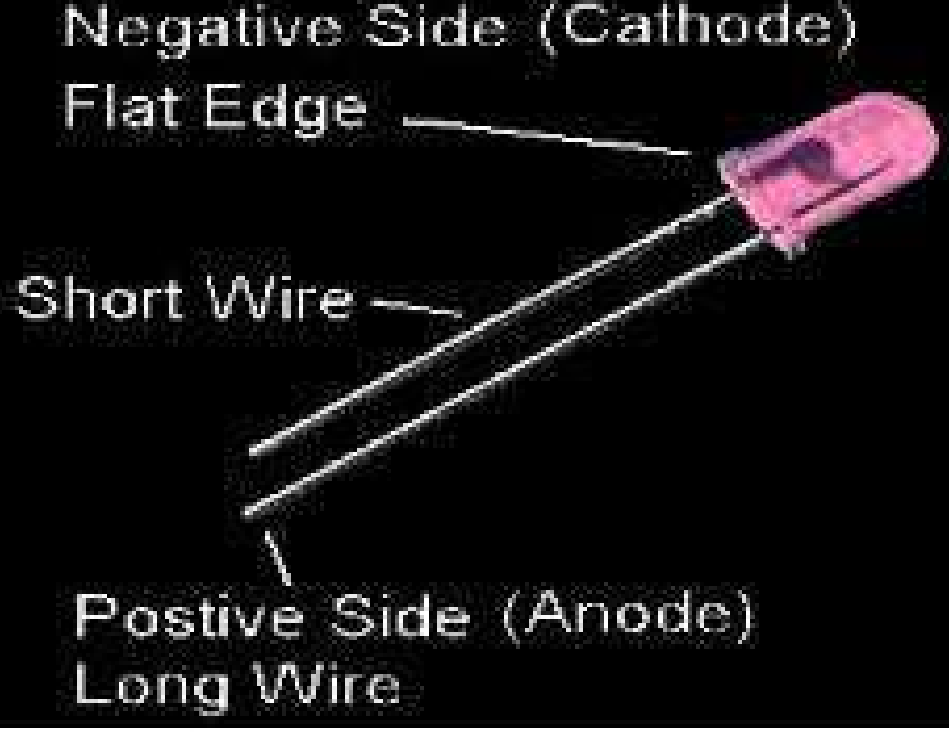


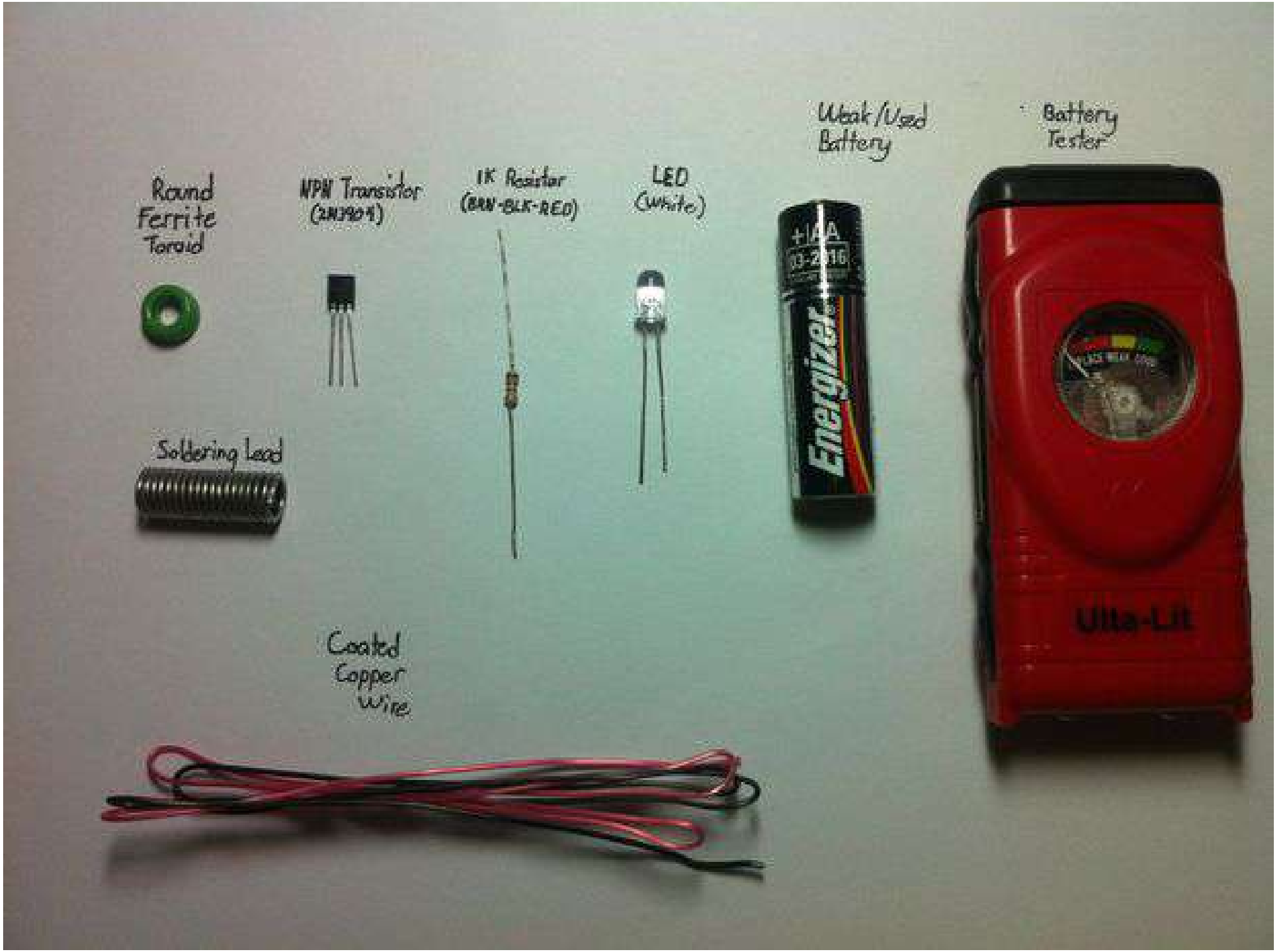
Transistor Terminals

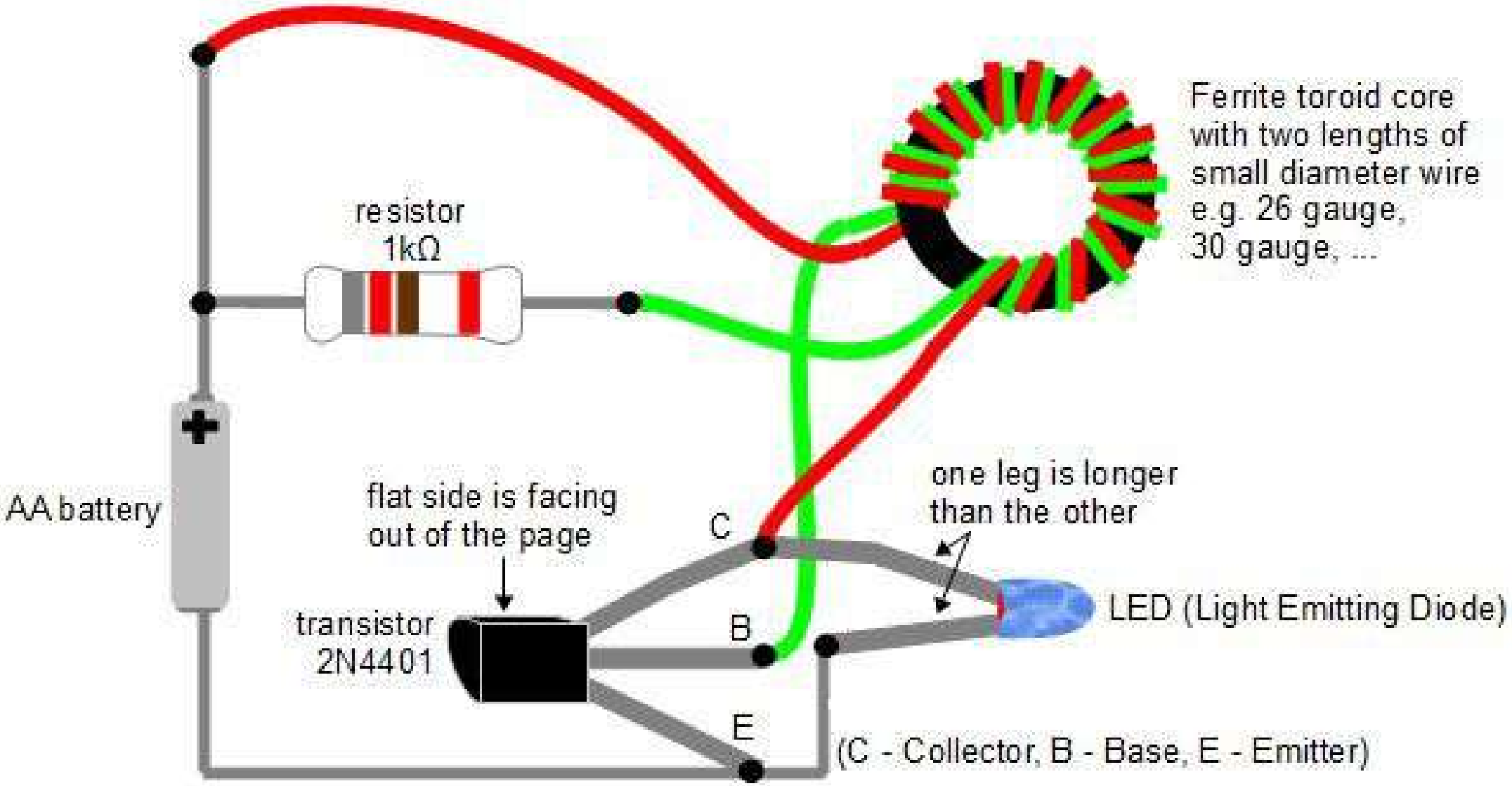


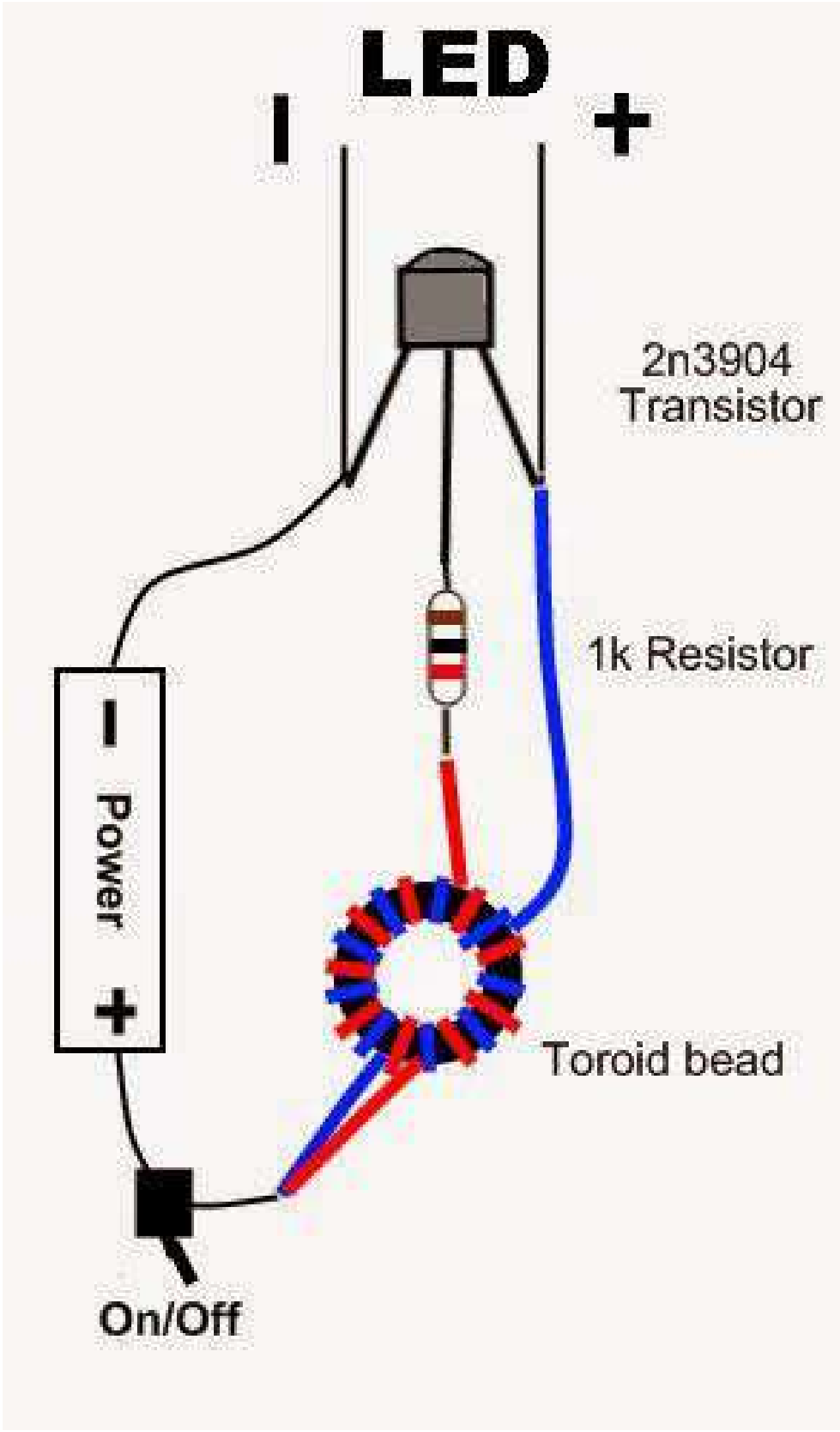
2N3904
(NPN Transistor)

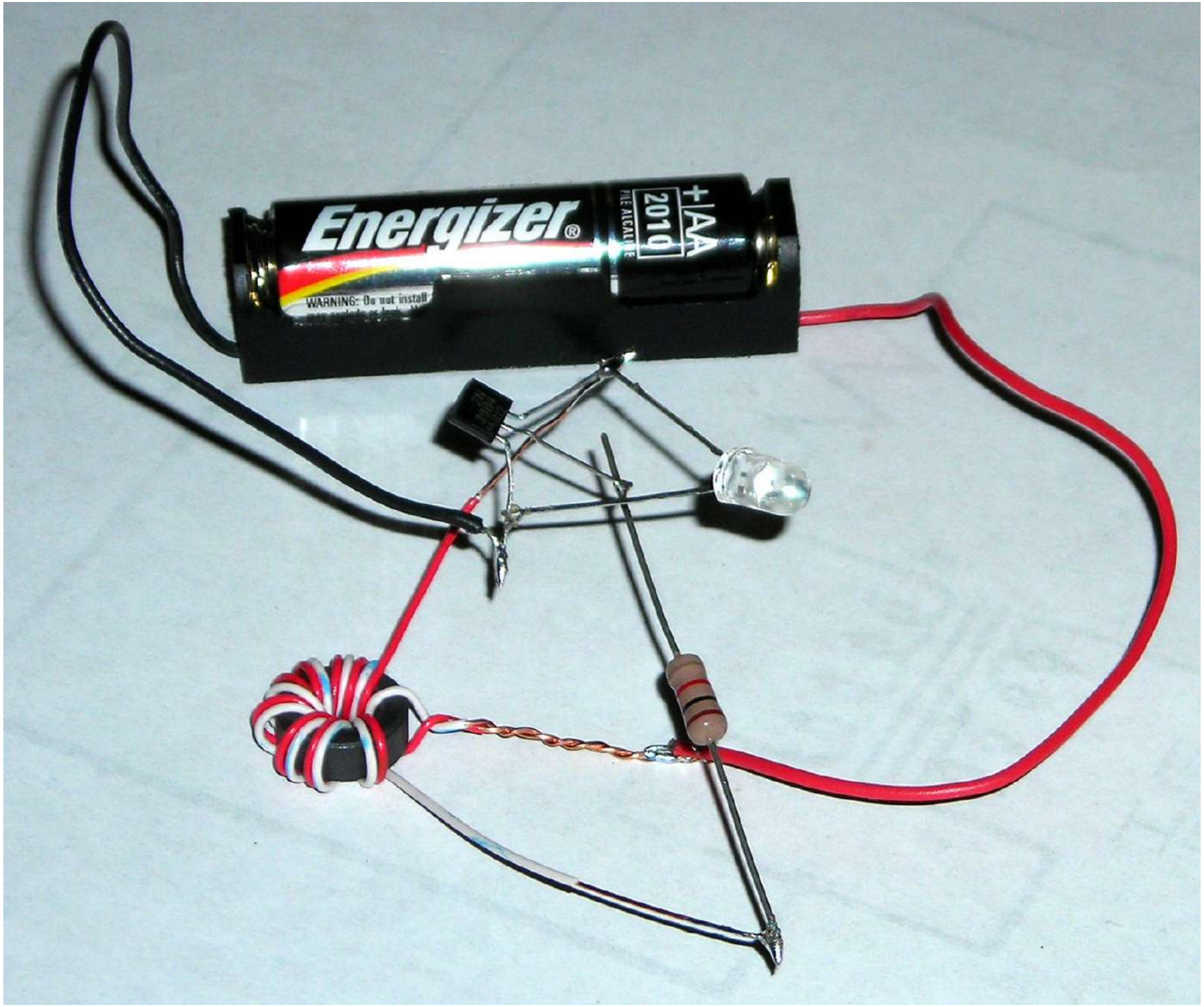
LED Terminals

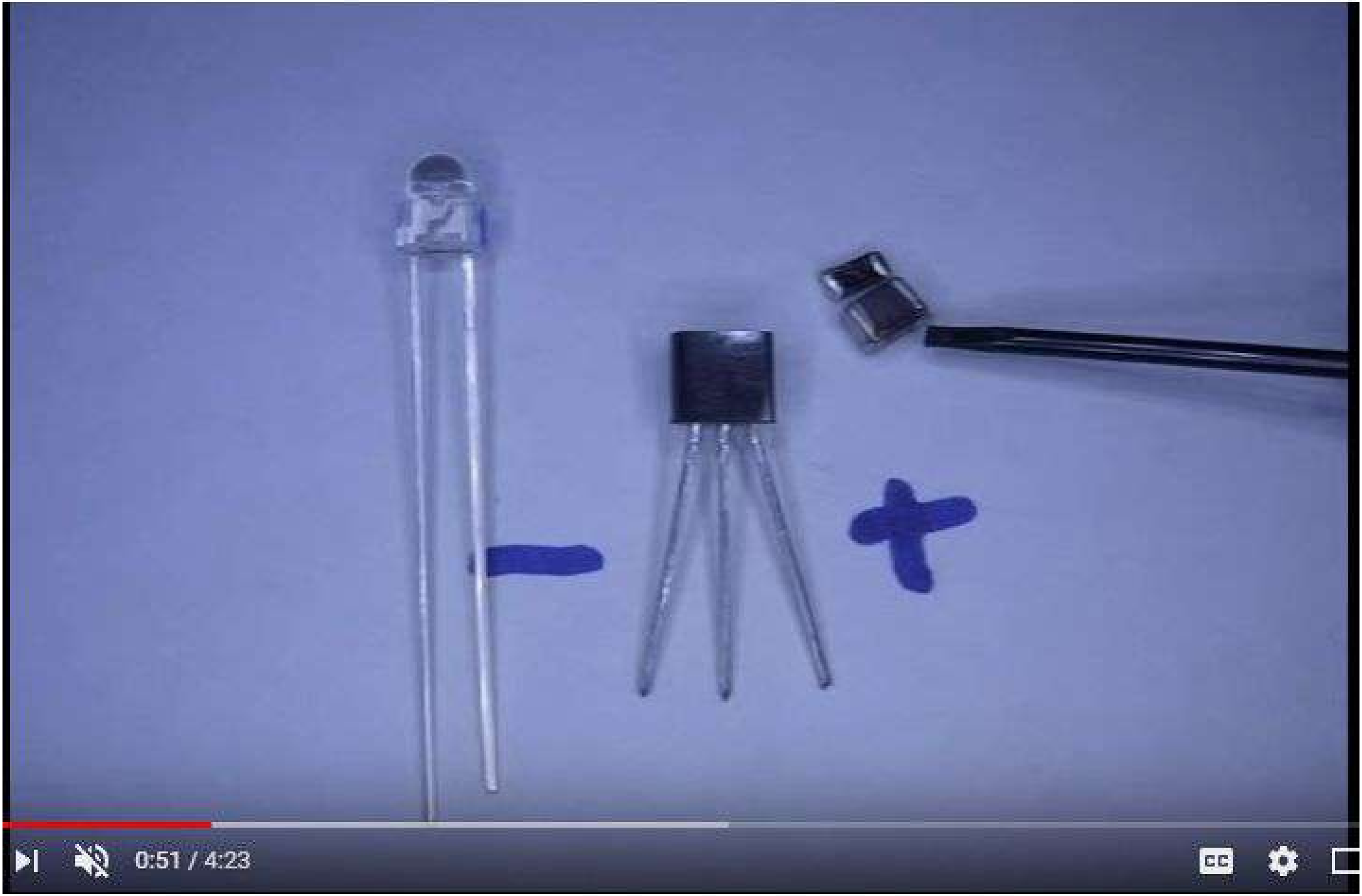



Round Ferrite Toroid
NPN Transistor (2N3904)
1K Resistor (BRN-BLK-RED)
LED (White)
Weak/Used Battery
Battery Tester
Soldering Lead
Coated Copper Wire
Energizer
Ulta-Lit

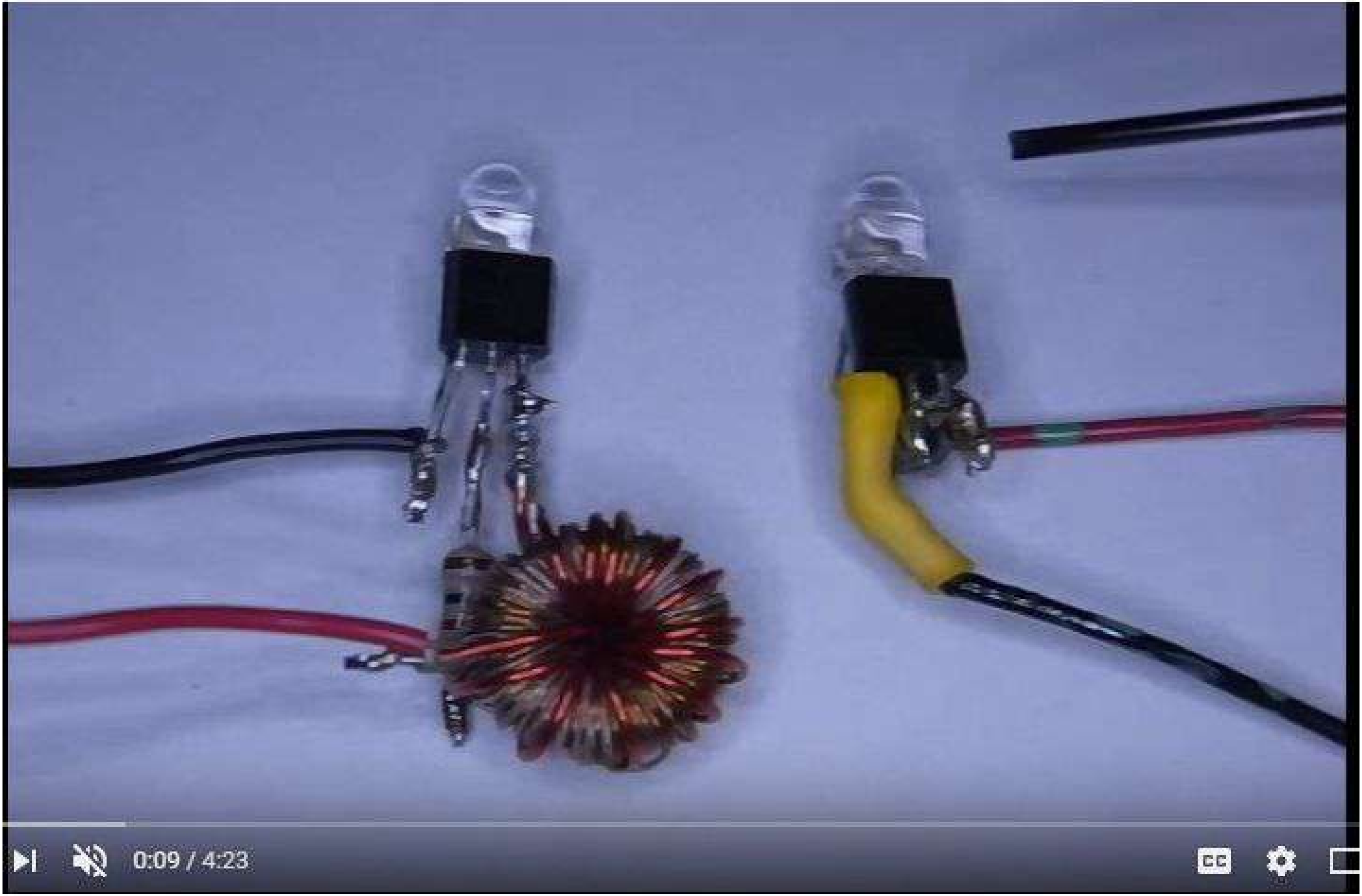

Ferrite toroid core
with two lengths of
small diameter wire
e.g. 26 gauge,
30 gauge, ...
resistor
1kΩ
AA battery
flat side is facing
out of the page
C
one leg is longer
than the other
transistor
2N4401
B
LED (Light Emitting Diode)
E
(C - Collector, B - Base, E - Emitter)

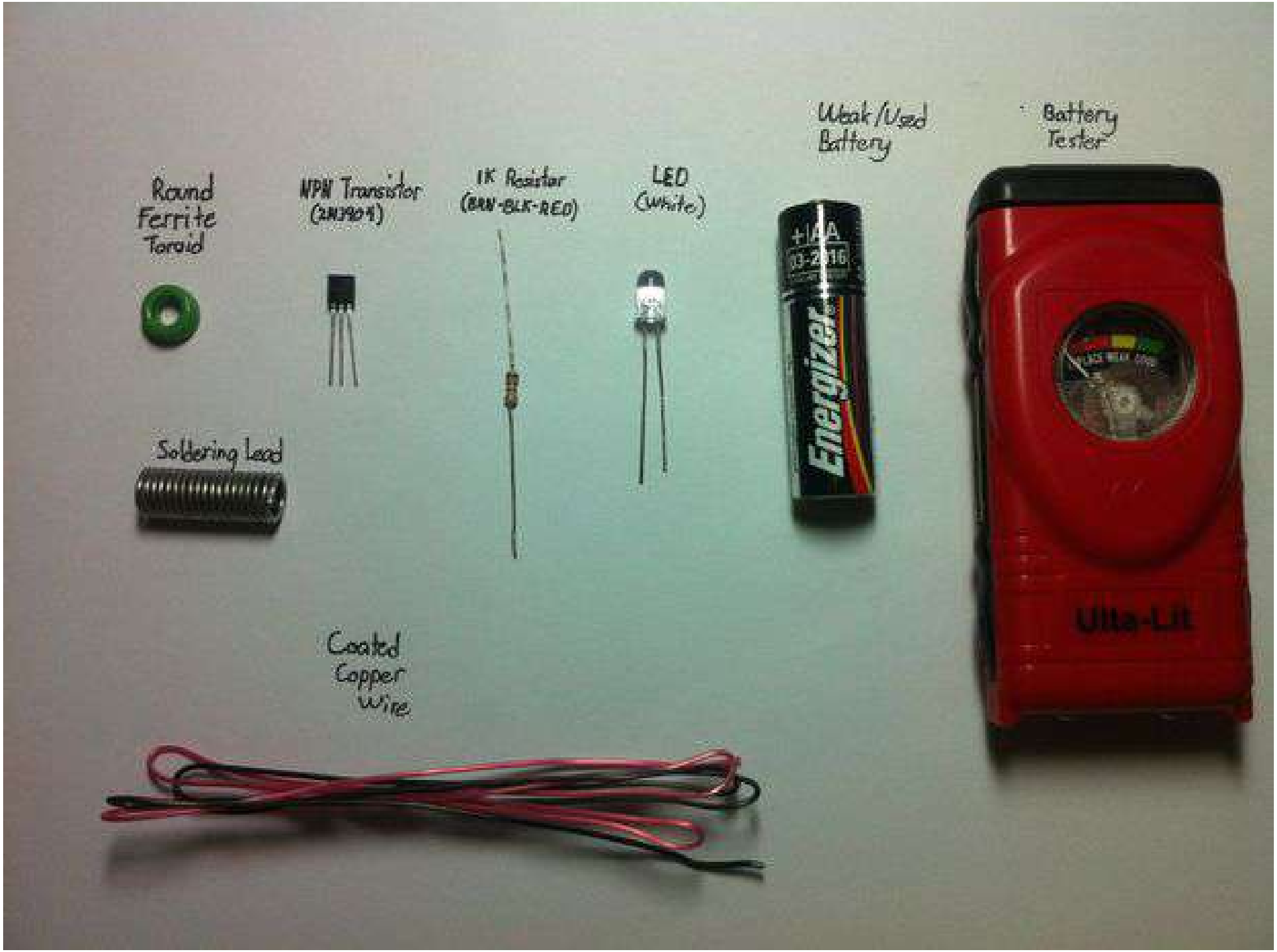

LED
-
+
2n3904
Transistor
1k Resistor
-
Power
+
Toroid bead
On/Off

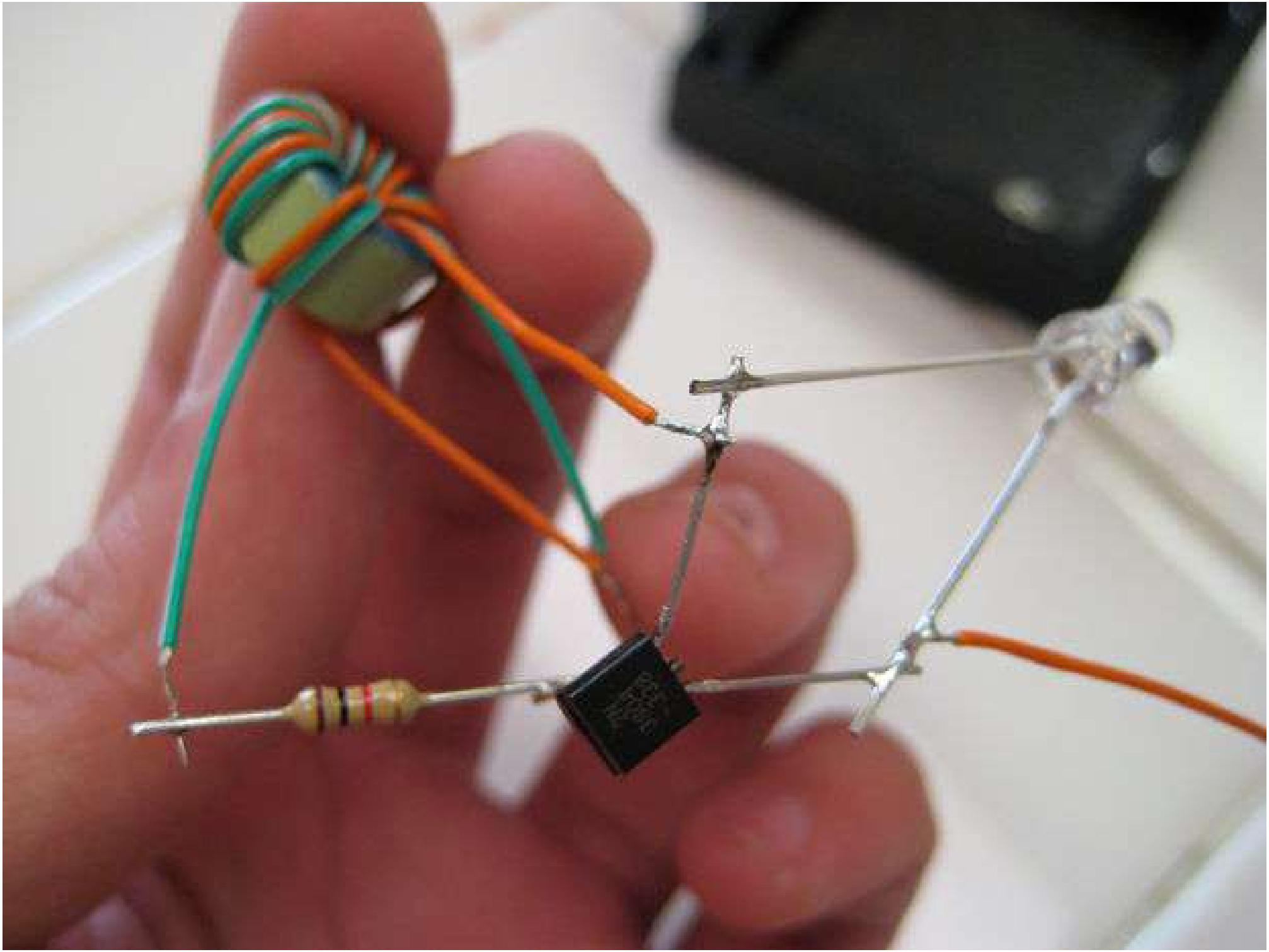

Energizer
+|AA
2010
WARNING: Do not install

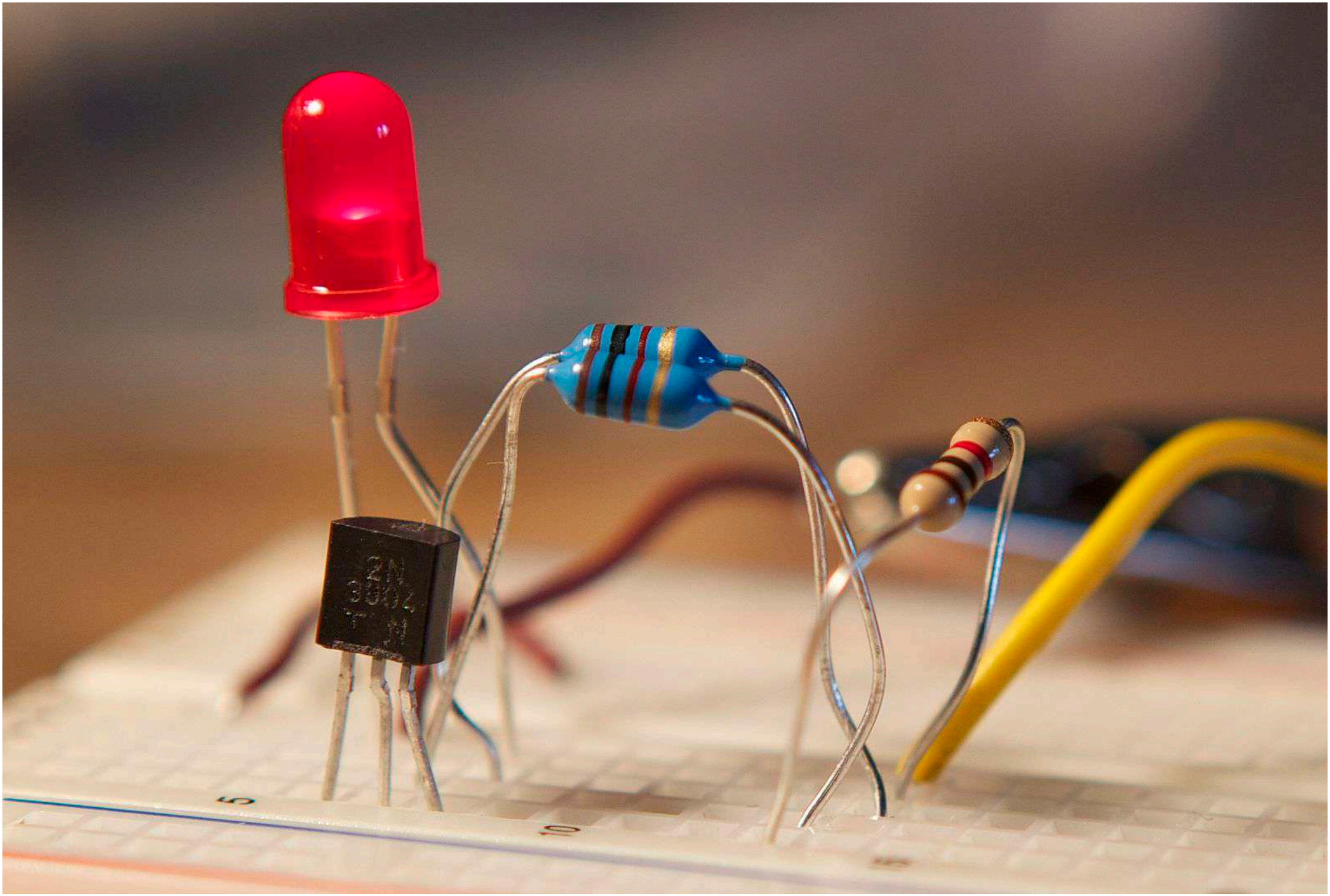

0:51 / 4:23

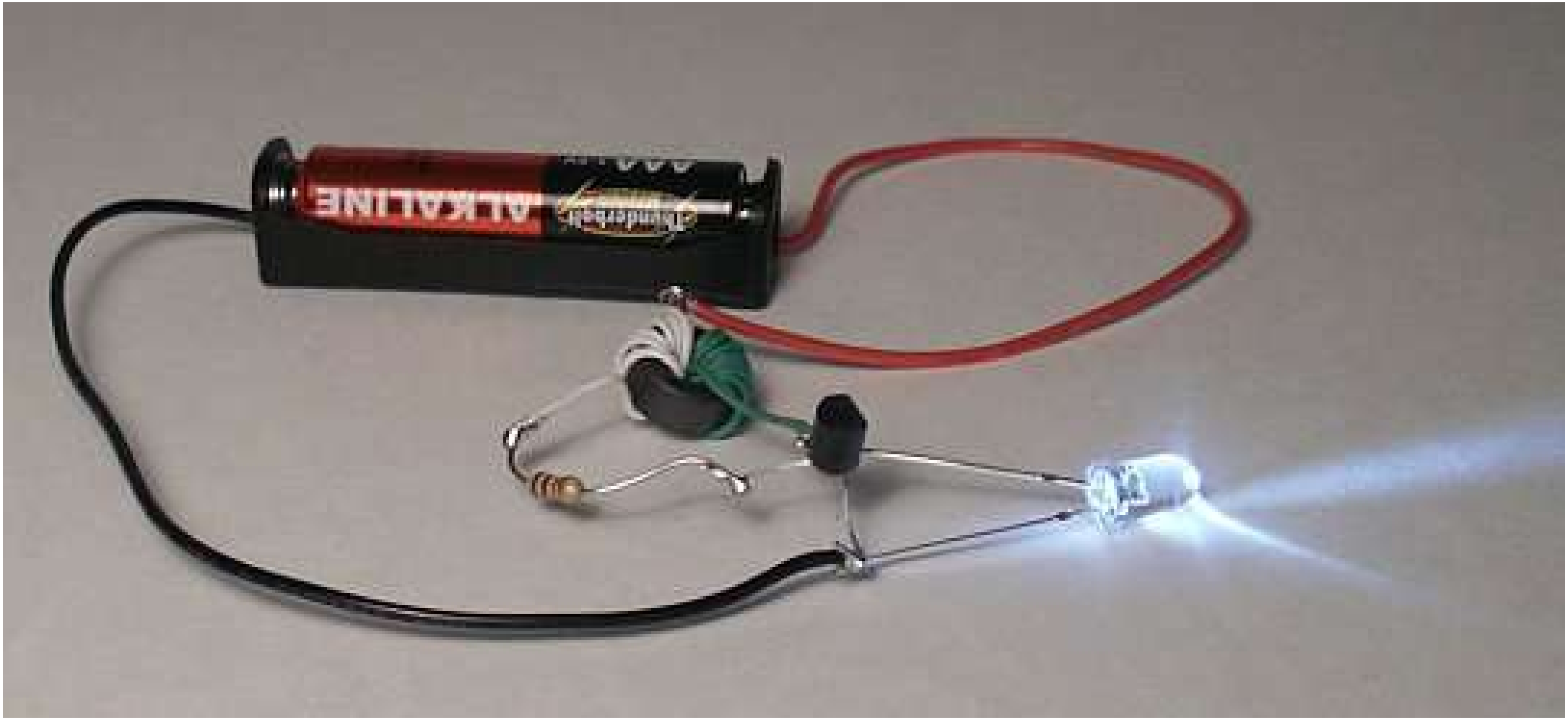

3:25 / 4:23
CC

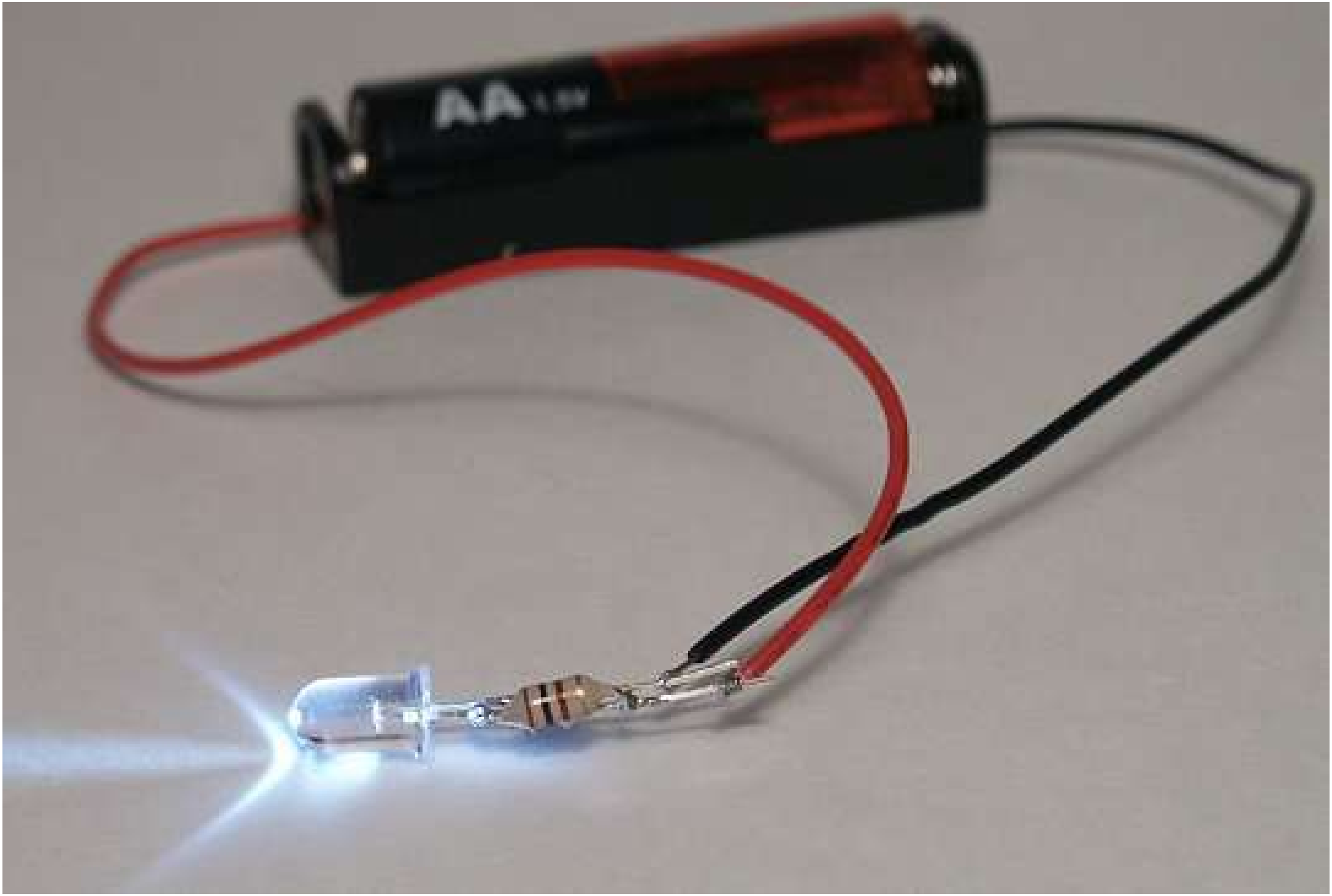

0:09 / 4:23
CC


Round Ferrite Toroid
NPN Transistor (2N3904)
1K Resistor (BRN-BLK-RED)
LED (White)
Weak/Used Battery
Battery Tester
Soldering Lead
Coated Copper Wire
Energizer
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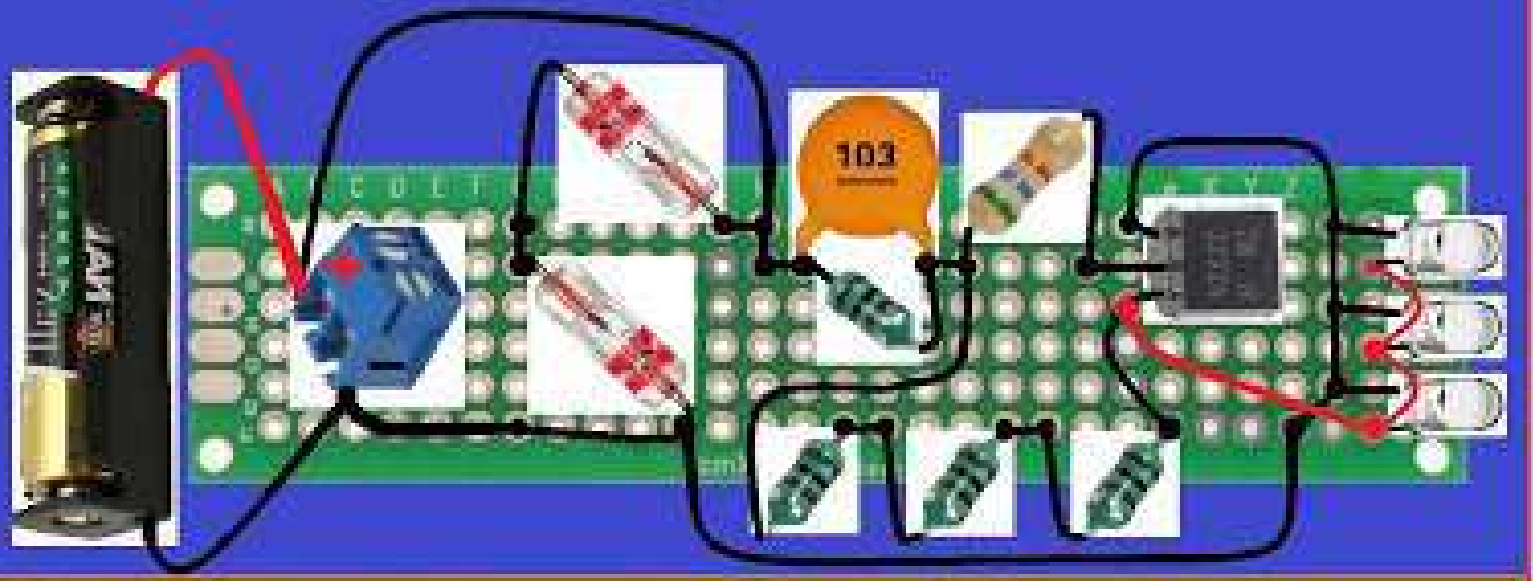


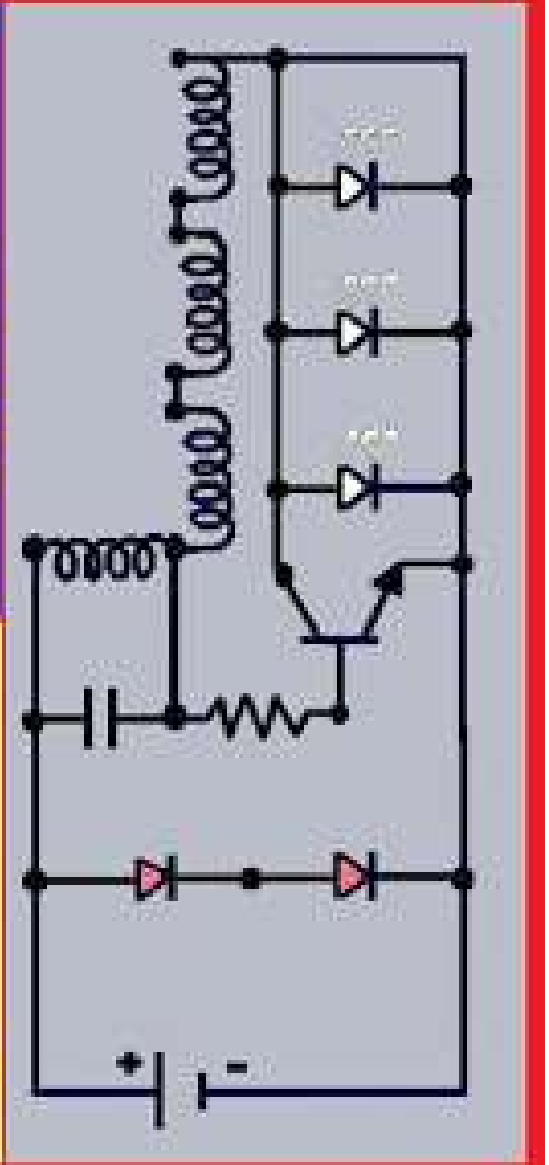

2N
3904
5
10


ALKALINE


AA







3* Axial lead inductor 82uH 1/4W

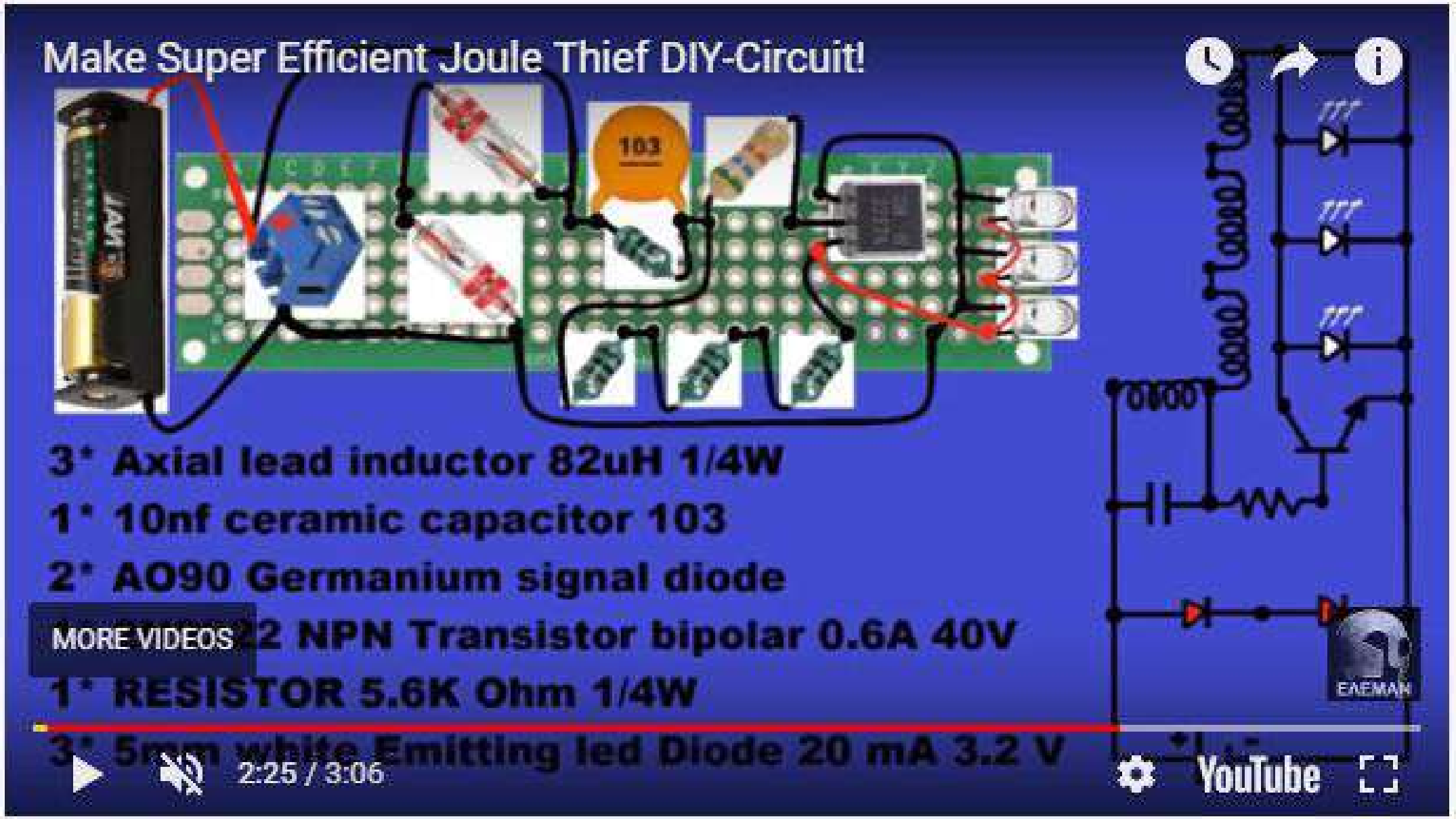
1* 10nf ceramic capacitor 103

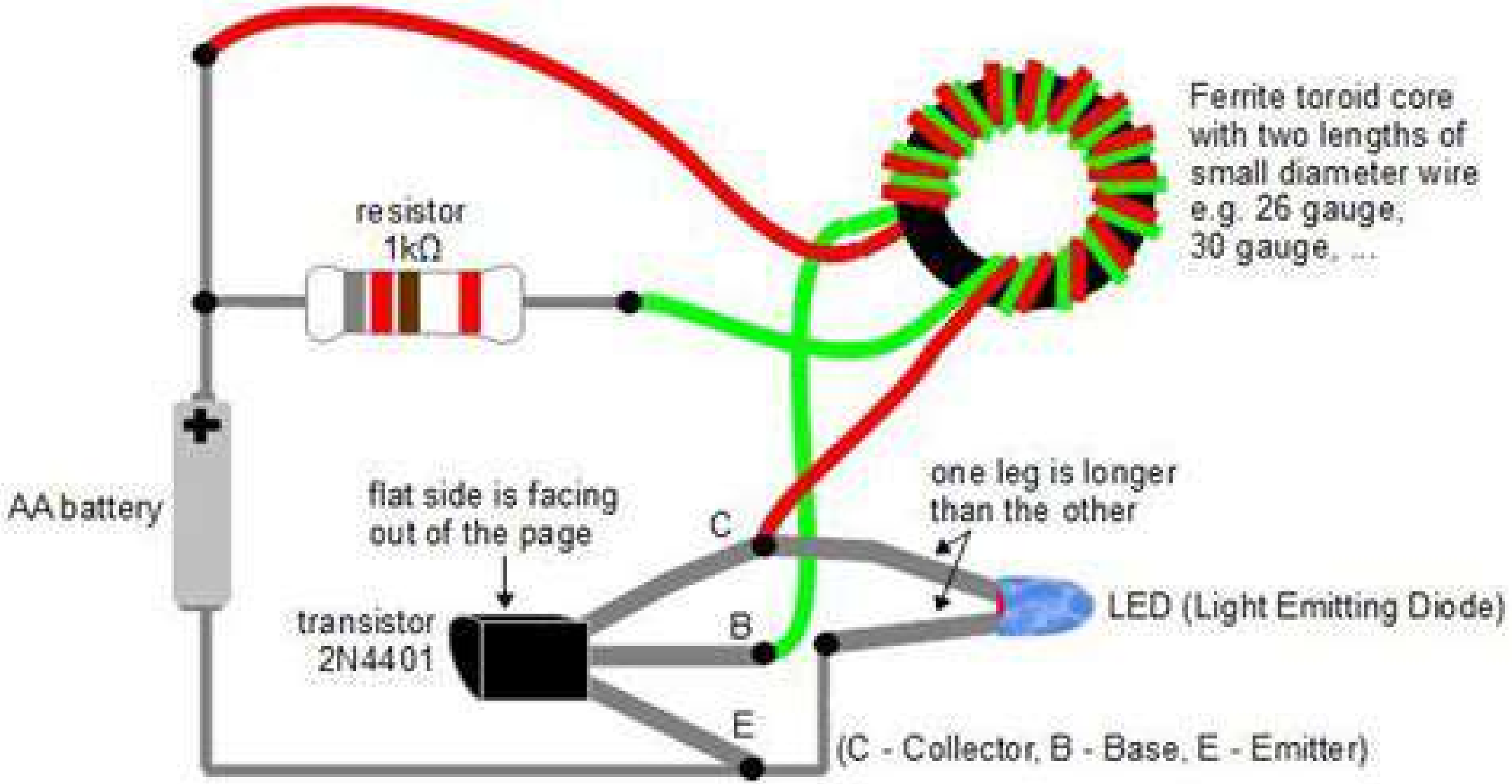
2* AO90 Germanium signal diode

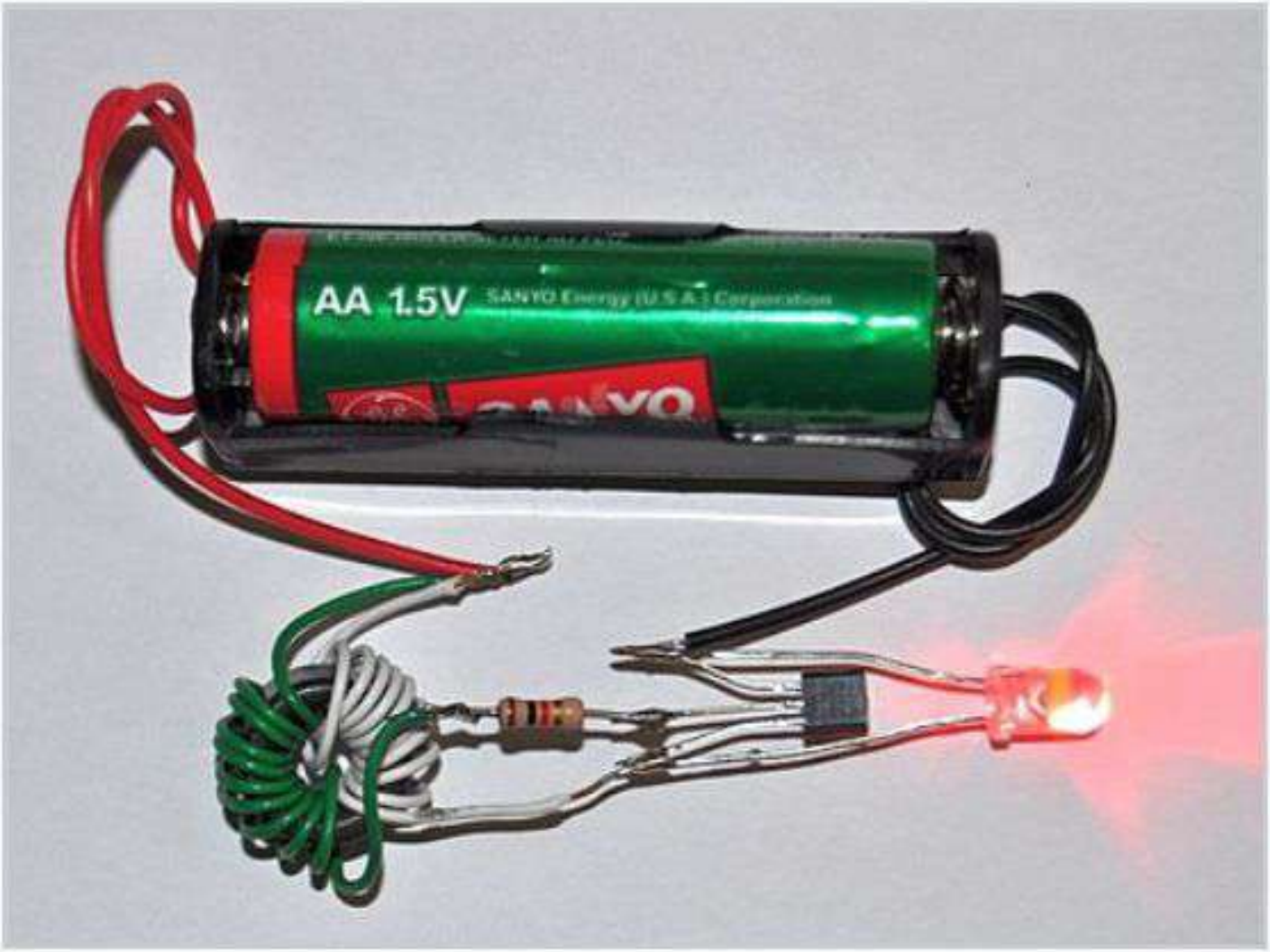
1* 2N2222 NPN Transistor bipolar 0.6A 40V

1* RESISTOR 5.6K Ohm 1/4W

3* 5mm white Emitting led Diode 20 mA 3.2 V

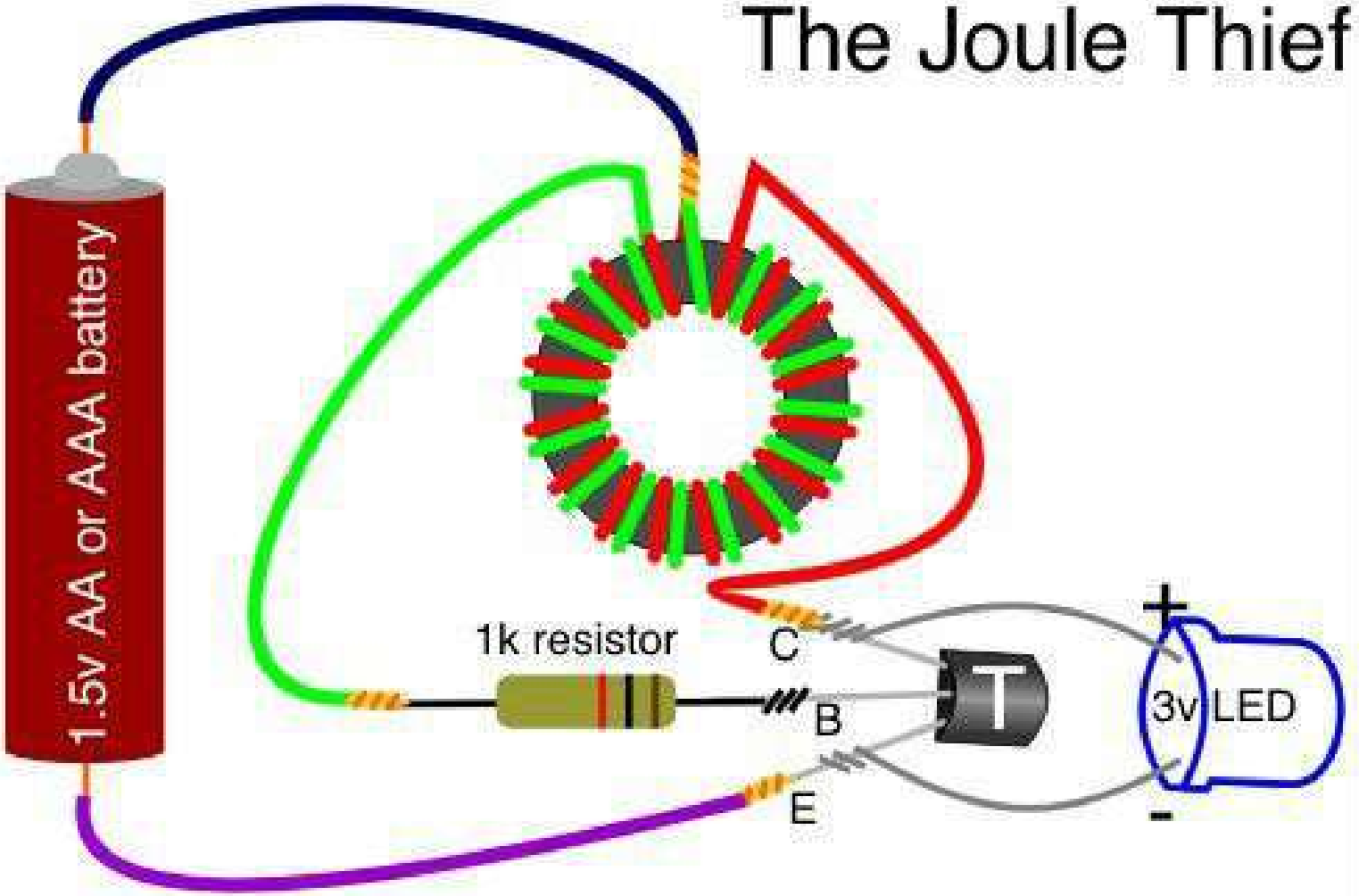

Make Super Efficient Joule Thief DIY-Circuit!
103
3* Axial lead inductor 82uH 1/4W
1* 10nf ceramic capacitor 103
2* AO90 Germanium signal diode
22 NPN Transistor bipolar 0.6A 40V
1* RESISTOR 5.6K Ohm 1/4W
3* 5mm white Emitting led Diode 20 mA 3.2 V
MORE VIDEOS
2:25 / 3:06
YouTube


Ferrite toroid core
with two lengths of
small diameter wire
e.g. 26 gauge,
30 gauge, ...
resistor
1kΩ
AA battery
flat side is facing
out of the page
one leg is longer
than the other
C
B
E
transistor
2N4401
LED (Light Emitting Diode)
(C - Collector, B - Base, E - Emitter)



A conventional joule thief, shows components and how they are connected. This example uses a red LED. A ferrite toroid is wound to form a coil with primary (white) and feedback (green) windings. A 2N2222A transistor and 1000 ohm resistor are used.

The Joule Thief

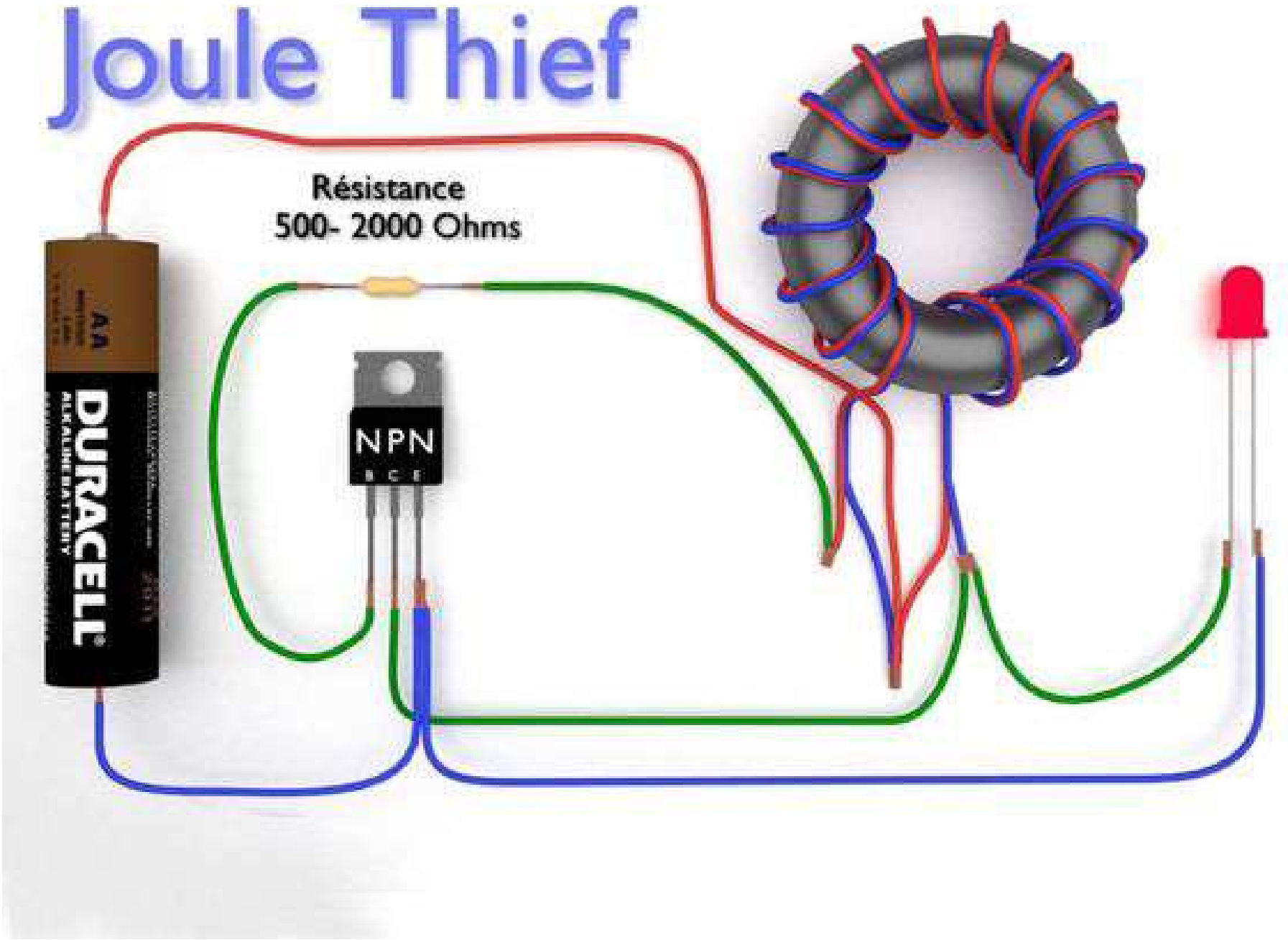


Transistor shown (T) is 2N3904 (can also use 2N2222).

Note LED pins - negative is shorter and has flat on bulb edge.

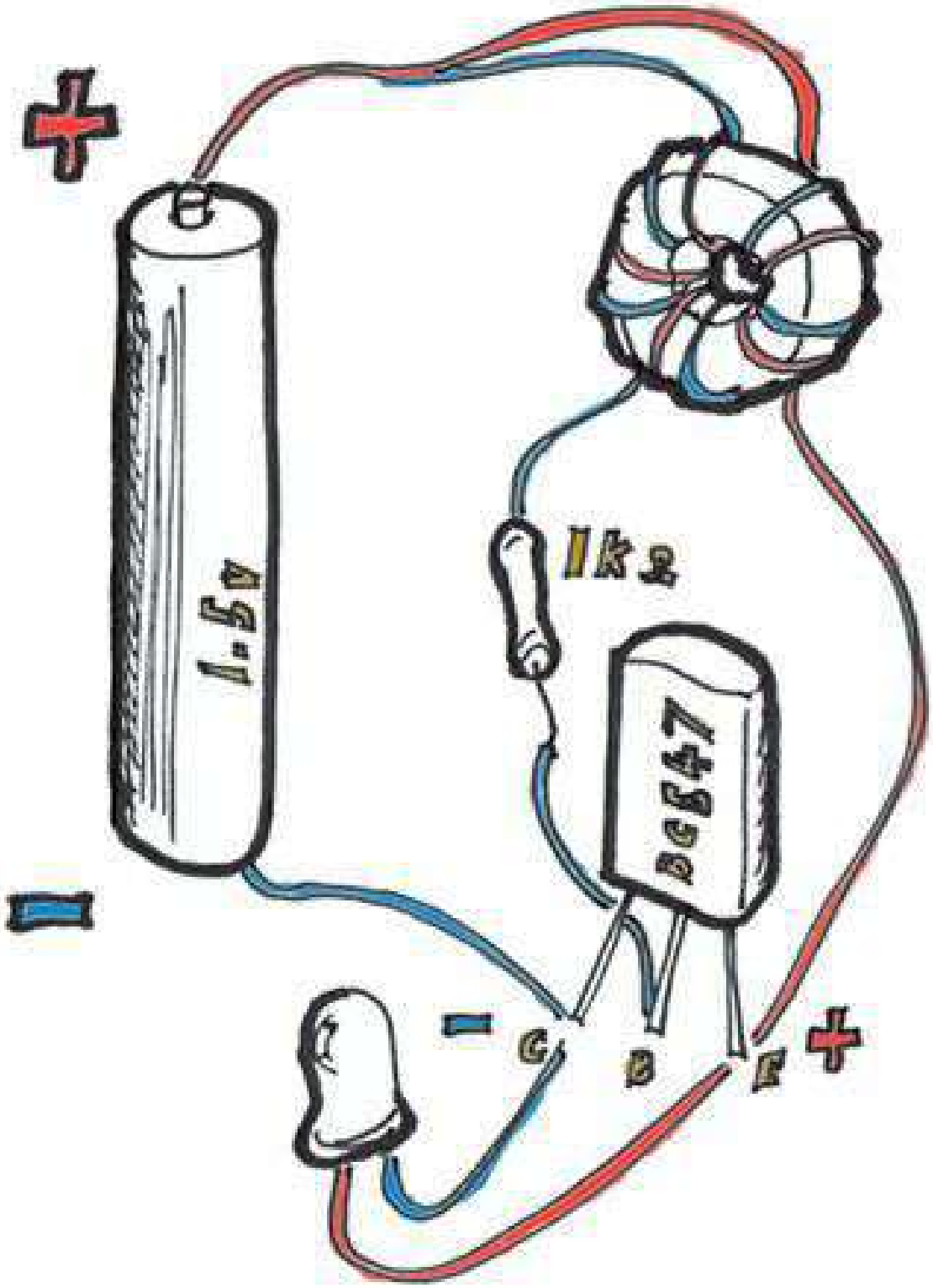
2 wires round ferrite ring are wound together, then start of one joined to end of other.

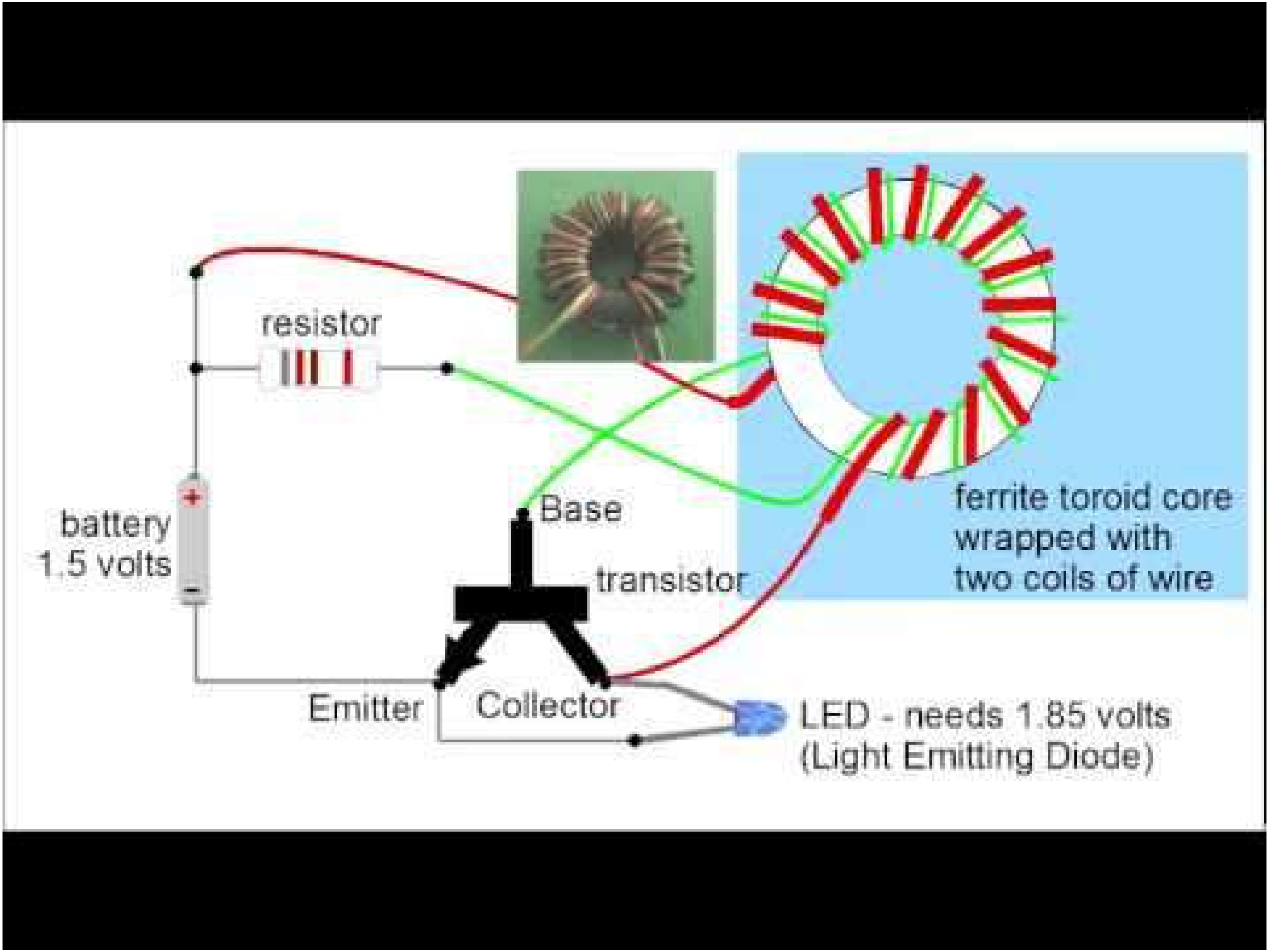
Try adding more and more LEDs...

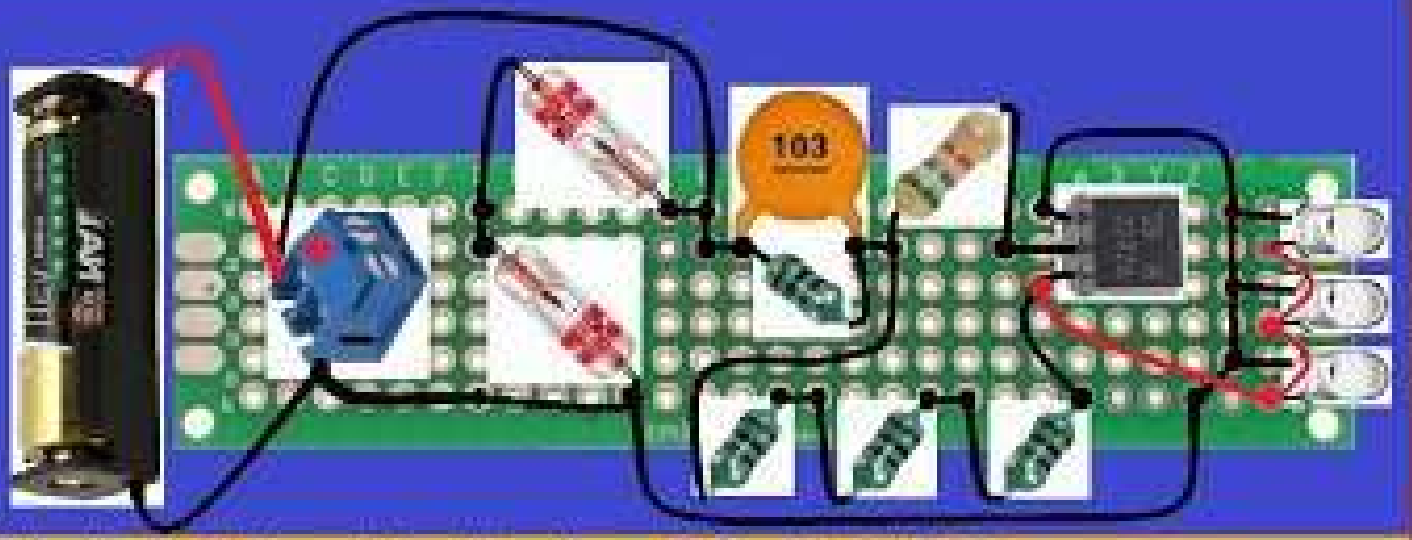

Joule Thief
Résistance
500- 2000 Ohms
AA
DURACELL
ALKALINE BATTERY
NPN
B C E

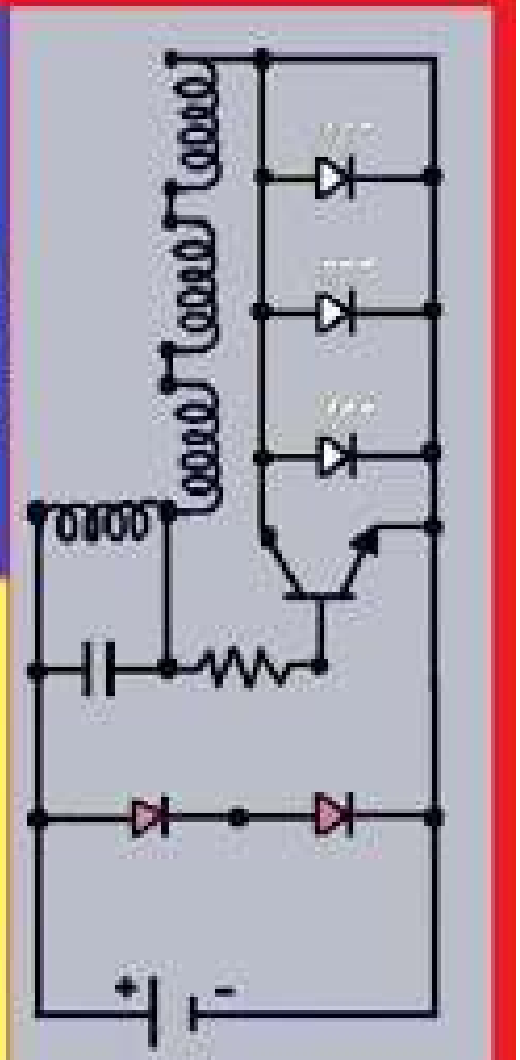
Its a Rubbish Challenge Dog Light

Joule Thief electronics circuit




resistor
battery
1.5 volts
+
-
Base
transistor
Emitter
Collector
LED - needs 1.85 volts
(Light Emitting Diode)
ferrite toroid core
wrapped with
two coils of wire





3* Axial lead inductor 82uH 1/4W

1* 10nf ceramic capacitor 103

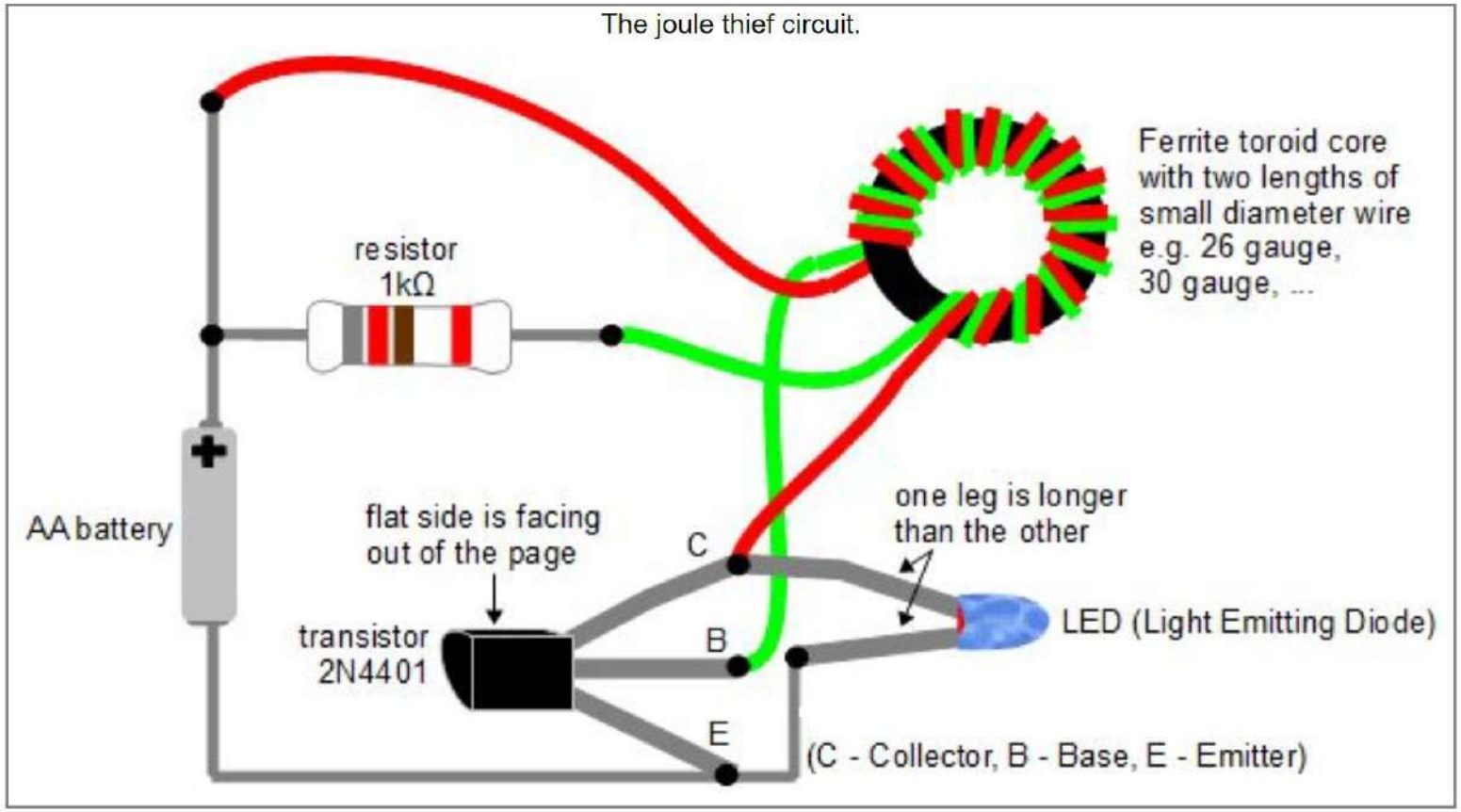
2* AO90 Germanium signal diode

1* 2N2222 NPN Transistor bipolar 0.6A 40V

1* RESISTOR 5.6K Ohm 1/4W

3* 5mm white Emitting led Diode 20 mA 3.2 V


AA 1.5V
SANYO Energy (U.S.A.) Corporation
SANYO

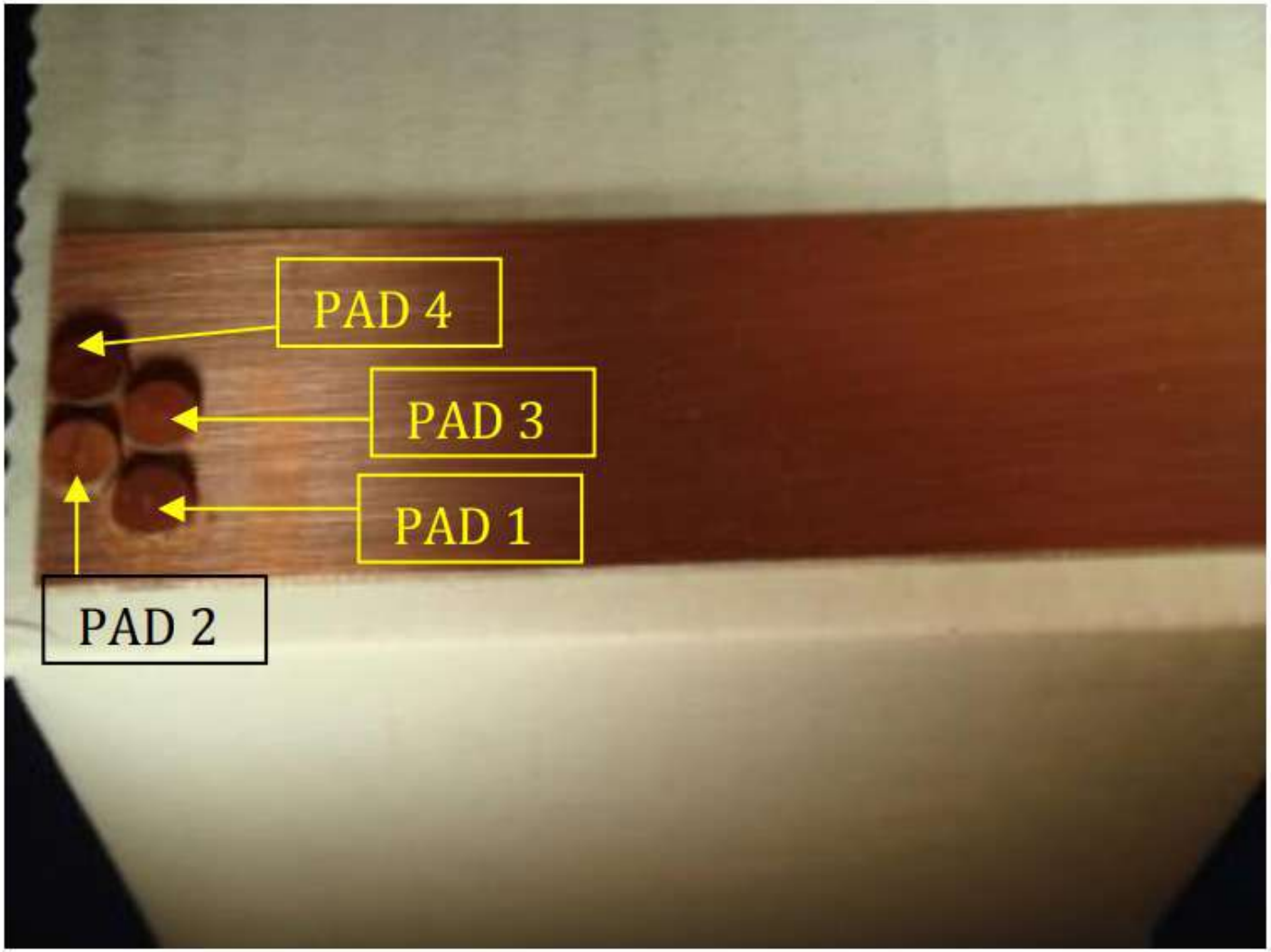


Transistor - The legs of the transistor can be determined by noticing that there's a flat side to the transistor case. See the diagram above. A large number of transistors have been reported to work: 2N4401, NET123AP, BC547B, 2SC2500, BC337, PN2222, to name just a few.

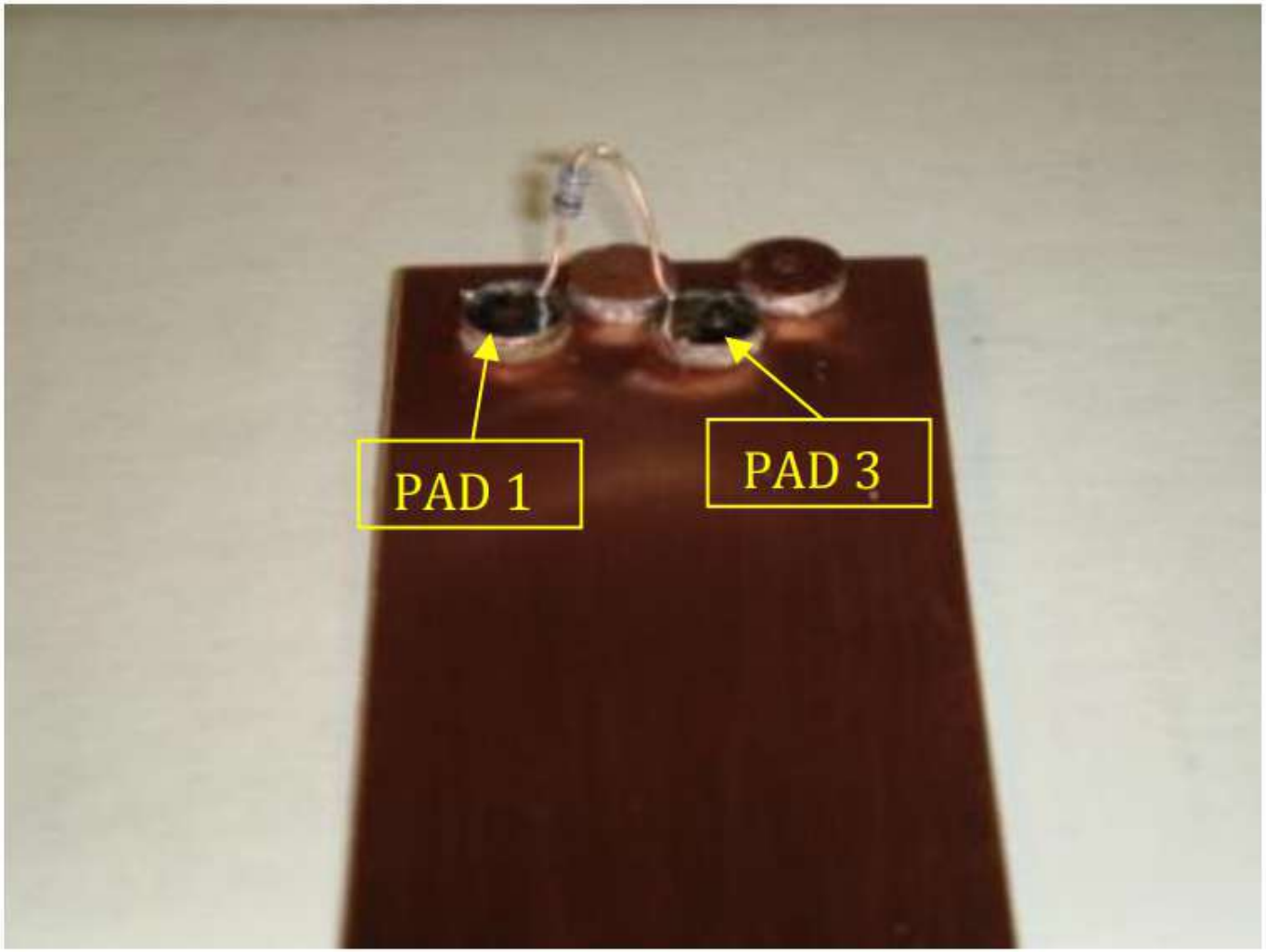
LED - One leg of the LED is longer than the other leg. Use this to determine which one goes where. See the diagram above.

Resistor - The diagram says use a 1 kilo ohm resistor but I've used an 820 ohm one just fine. I've also seen a 2 kilo ohm one in use. Use whatever works for you. You can also use a potentiometer (a variable resistor) so that you can easily adjust it to select the resistance that gives the best light.

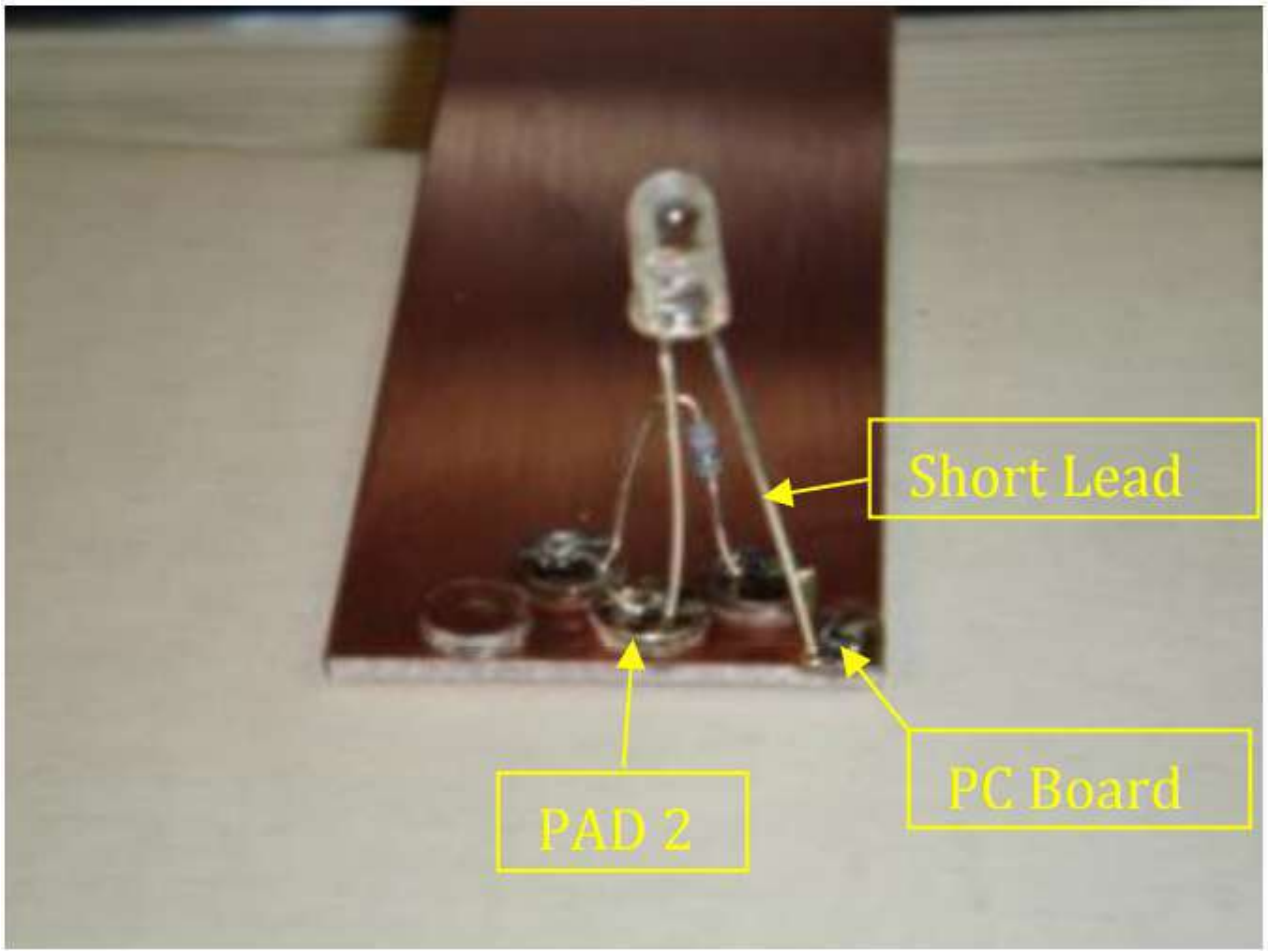
Toroid ferrite core - Some people have gotten these by opening up compact fluorescent lightbulbs (CFLs). I took mine out of some device whose original function I don't know. To get it working, my first one had just 13 turns for each wire and I used a 30 gauge wire and a 26 gauge wire. The wire must be insulated. A variety of number of turns will work. This is something you can play with. Look at the diagram carefully to determine where the wires connect to.



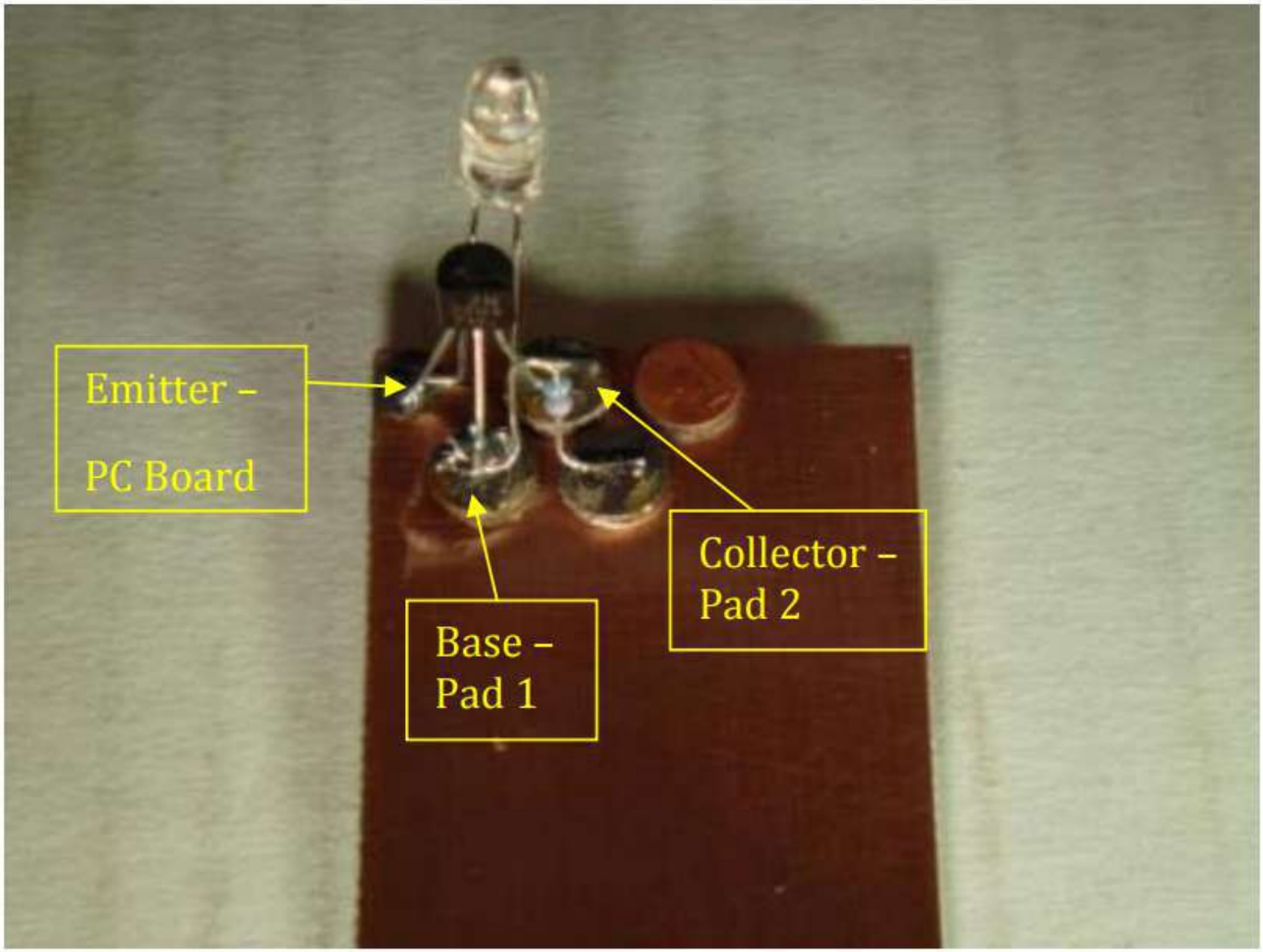
Superglue four pads to the PC board. Make sure they are not touching each other. You should have roughly 1/8 inch between the pads. Apply a small drop of superglue on the board and press the pad onto the board with the small dimple up. Use a small screwdriver to hold pressure on the pad until the glue dries (about 10 seconds).



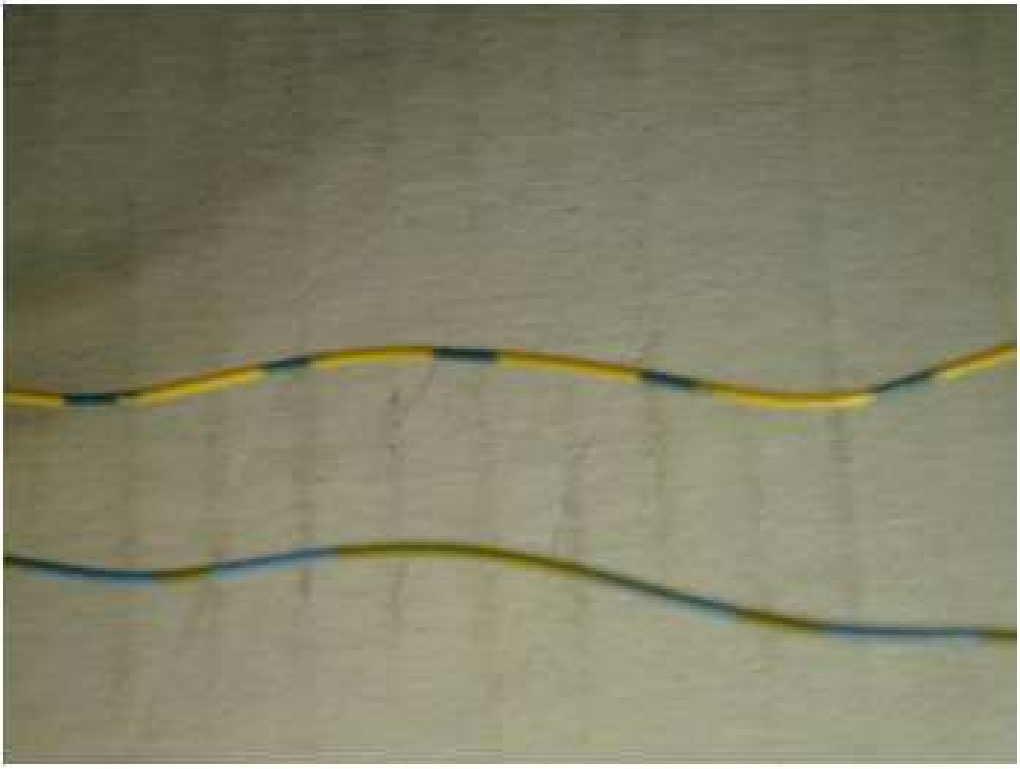
Solder the 1,000 ohm resistor onto pads 1 and 3. When soldering all components, place a 90-degree bend on the ends of the component where they touch the pad to allow better soldering. There is no polarity on a resistor.



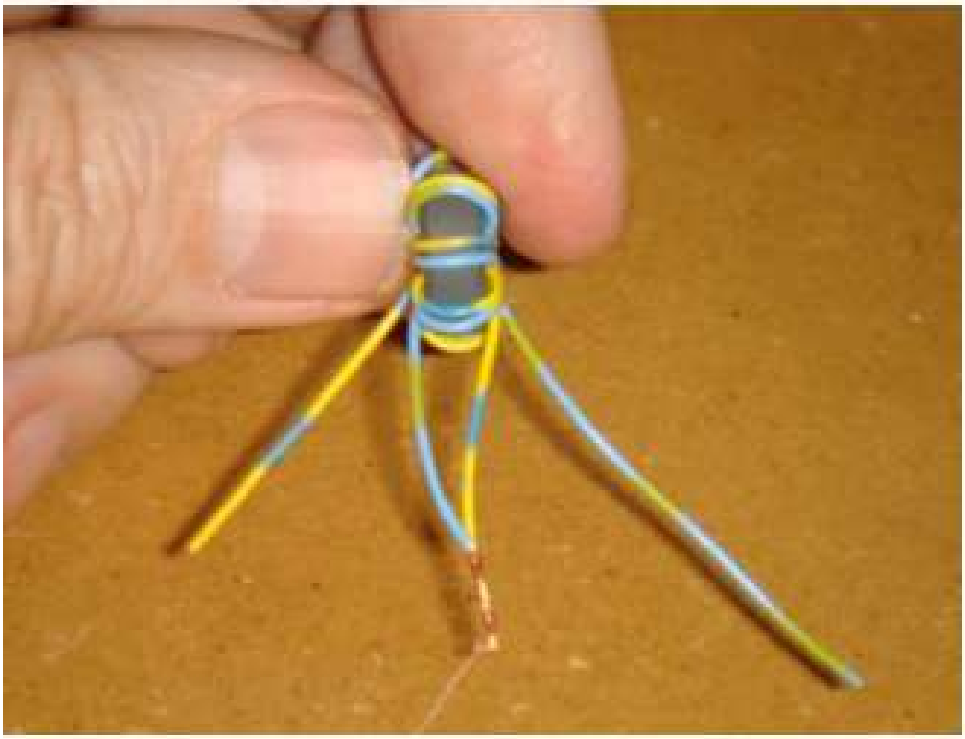
Solder the LED to the board. **VERY IMPORTANT**: Solder the **long lead** to pad 2 and the **short lead** directly to the PC board. The LED will not illuminate of you put it in backwards. If you look into the LED, the anvil shaped part is the lead that gets soldered to the PC board.



Solder the transistor to the board. With the flat part facing you the left lead (emitter) is soldered directly to the PC board. The center lead (base) is soldered to pad 1. The right lead (collector) is soldered to pad 2. Failure to install this part correctly will prevent the Joule Thief from working.



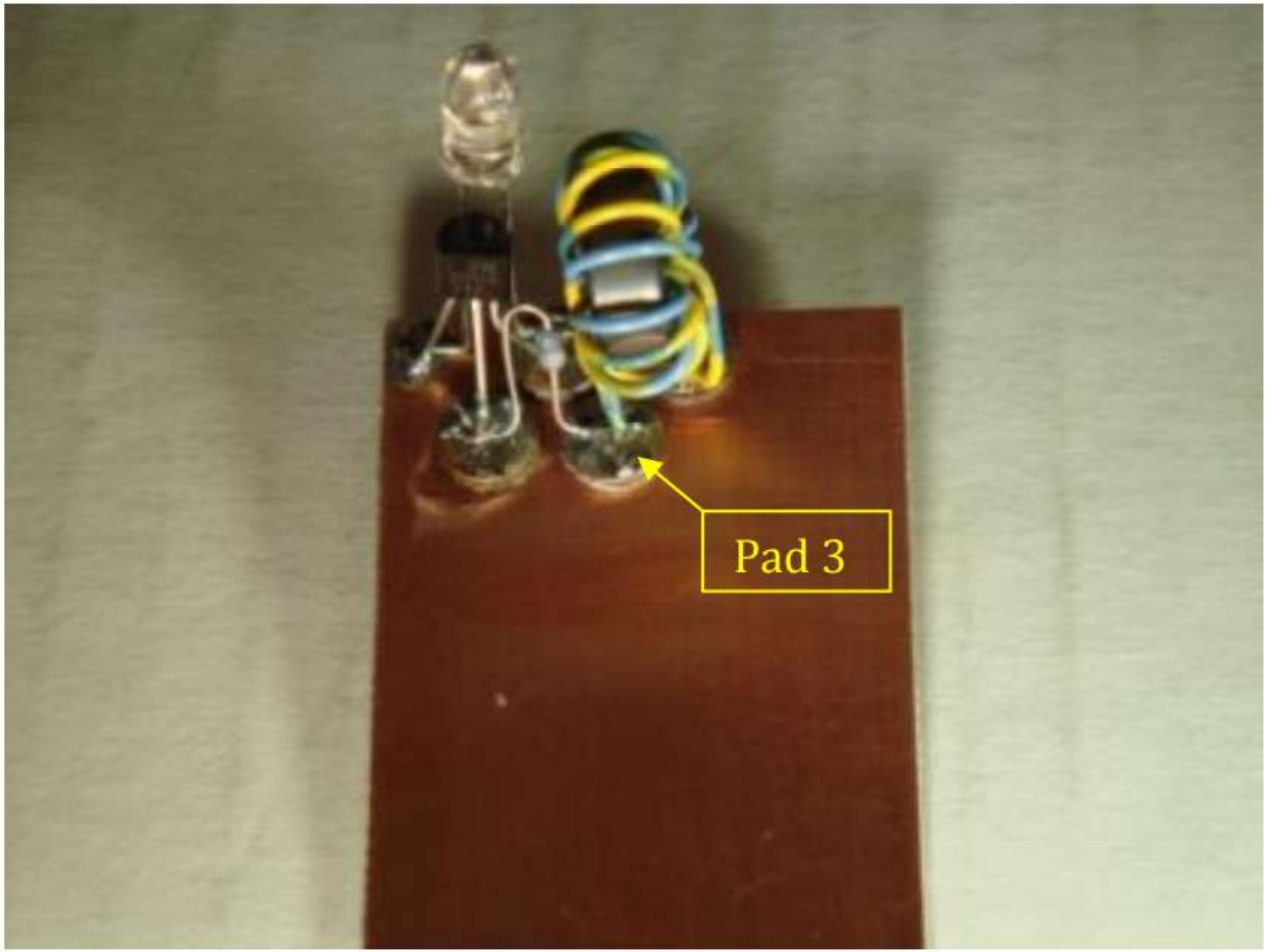
Take the two pieces of wire and **untwist** them if they are twisted. The toroid requires 12 inches of wire. You will wind the toroid with this pair of wires side by side.



Wind the toroid with **9 turns** of the wire. Each turn through the hole in the center counts as one turn. **VERY IMPORTANT:** You must take one wire **from each side of the winding** and twist them together. This makes the transformer windings out of phase. This is critical to operation. Connect one wire of each color.



Solder the twisted wires on the toroid to pad 4. Solder one of the other toroid wires (doesn't matter which one) to pad 2.



Solder the other wire on the toroid to pad 3.



Solder the battery holder. Connect a short piece of wire from the positive terminal (the one without the spring) to pad 4. Solder the negative terminal (the one with the spring) directly to the PC board using a short piece of wire. Use hot glue or some other glue to secure the battery holder to the PC

Step 1 – Wound the Toroid





Take the two strands of plastic insulated wire and hold them together. Start off by sticking then through the middle of the toroid until you have 2 cm of wire left to make a connection with later. Keep the two wires together and wrap them around the toroid until you have covered the whole toroid. If you have wire left you can continue until you have about 2 cm of wire free on either side. Remove about a 0.5 cm of the plastic insulation on all four of the wires as in the photo. You have now wound your toroid and we are ready to continue.

Step 2 – Join the two coils of Toroid

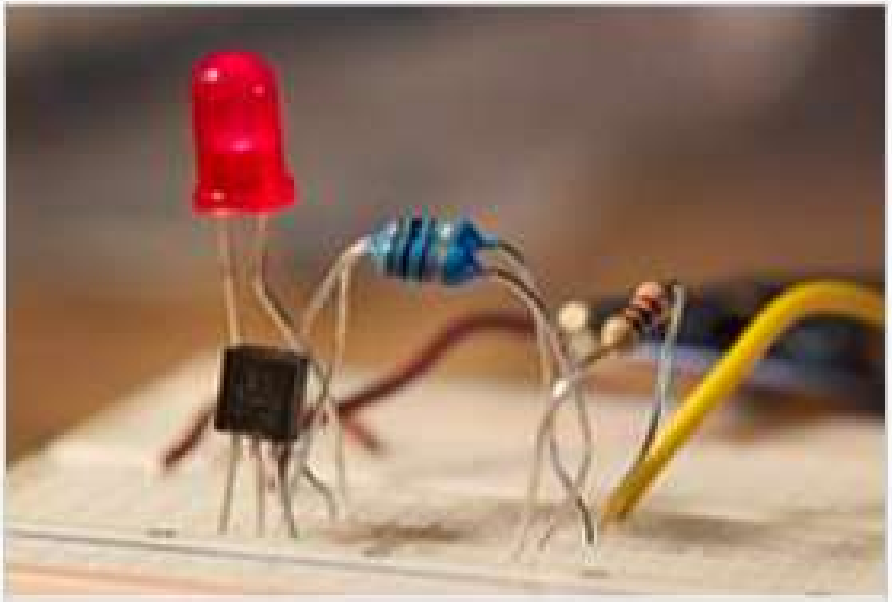


The next step is to join the two coils or windings of the toroid. You may have noticed the two dots next to the toroid windings in the circuit diagram. These two dots indicate the polarity of the transformer and as you can see the two windings are opposite to each other. To make sure that the polarity of our toroid windings are correct we must do the following:

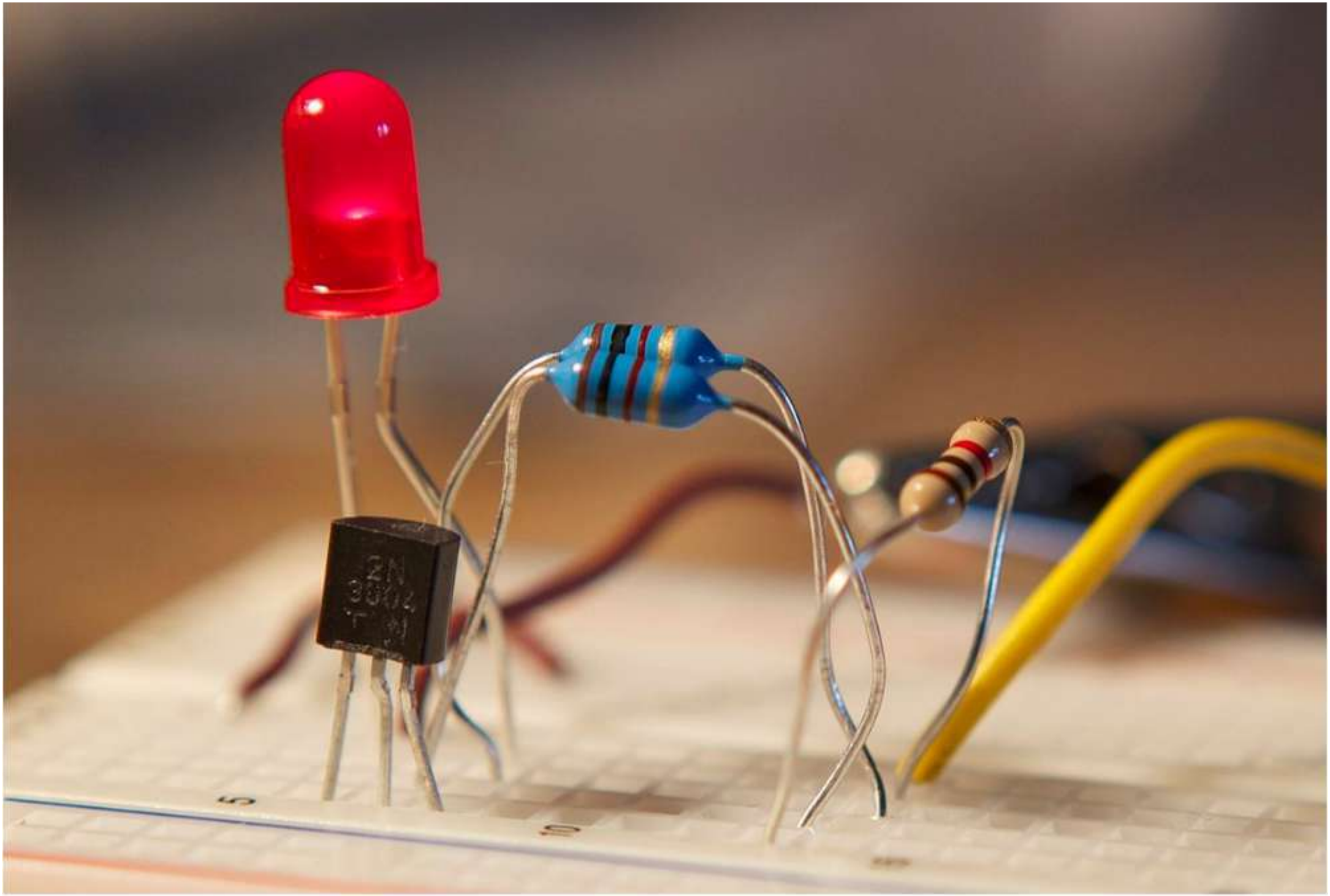
- If we look at the toroid we noticed that we have two wires of different colours sticking out at both ends of the toroid.
- Take one wire of a specific colour (green in the example) on the one side of the toroid and one wire of the other colour (white in the example) on the other side of the toroid and connect (or solder) them together. These two wires forms the top pole of the toroid as in the circuit diagram and is connected to the positive terminal of the battery.

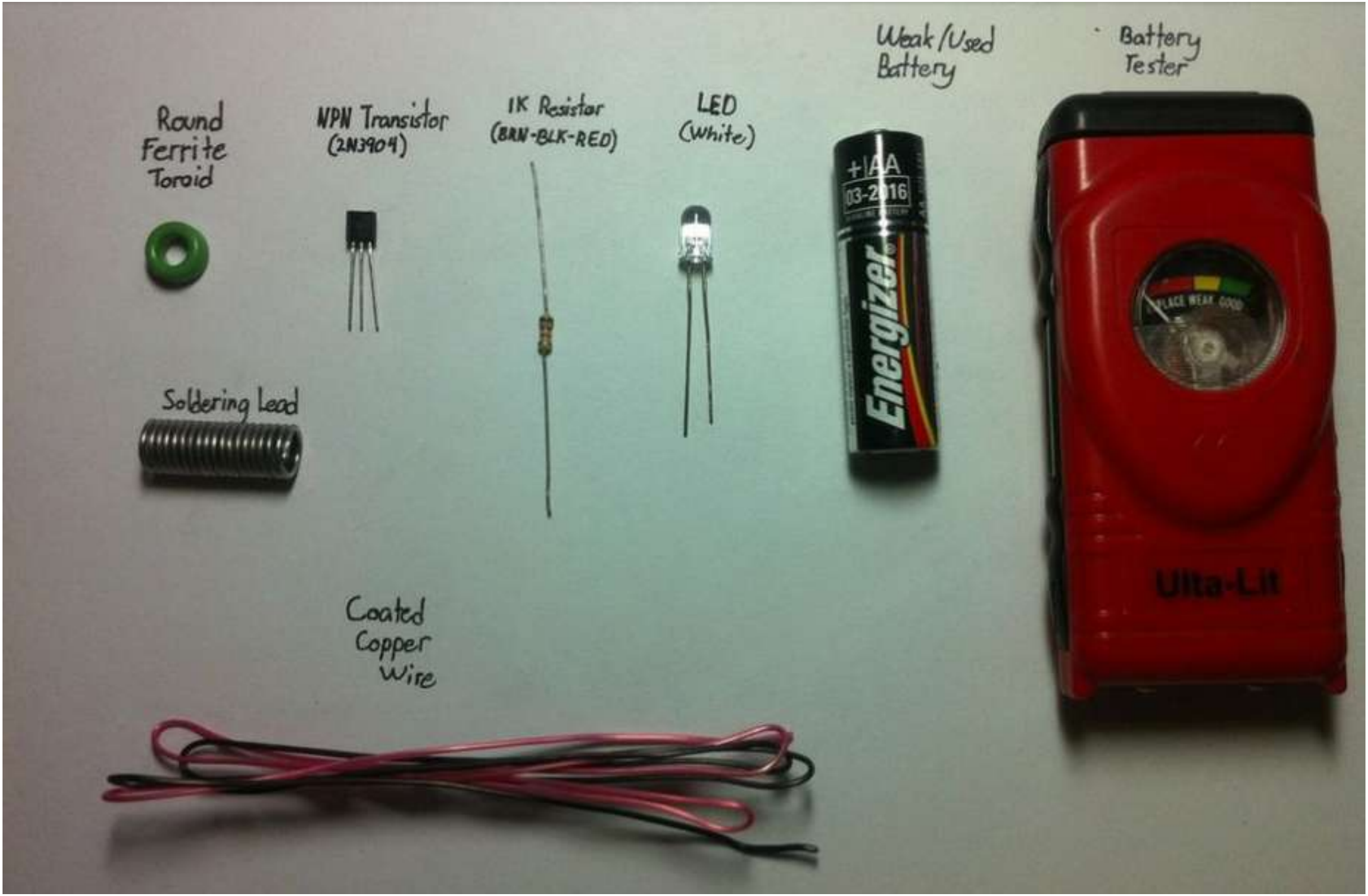


A conventional joule thief, shows components and how they are connected. This example uses a red LED. A ferrite toroid is wound to form a coil with primary (white) and feedback (green) windings. A 2N2222A transistor and 1000 ohm resistor are used.

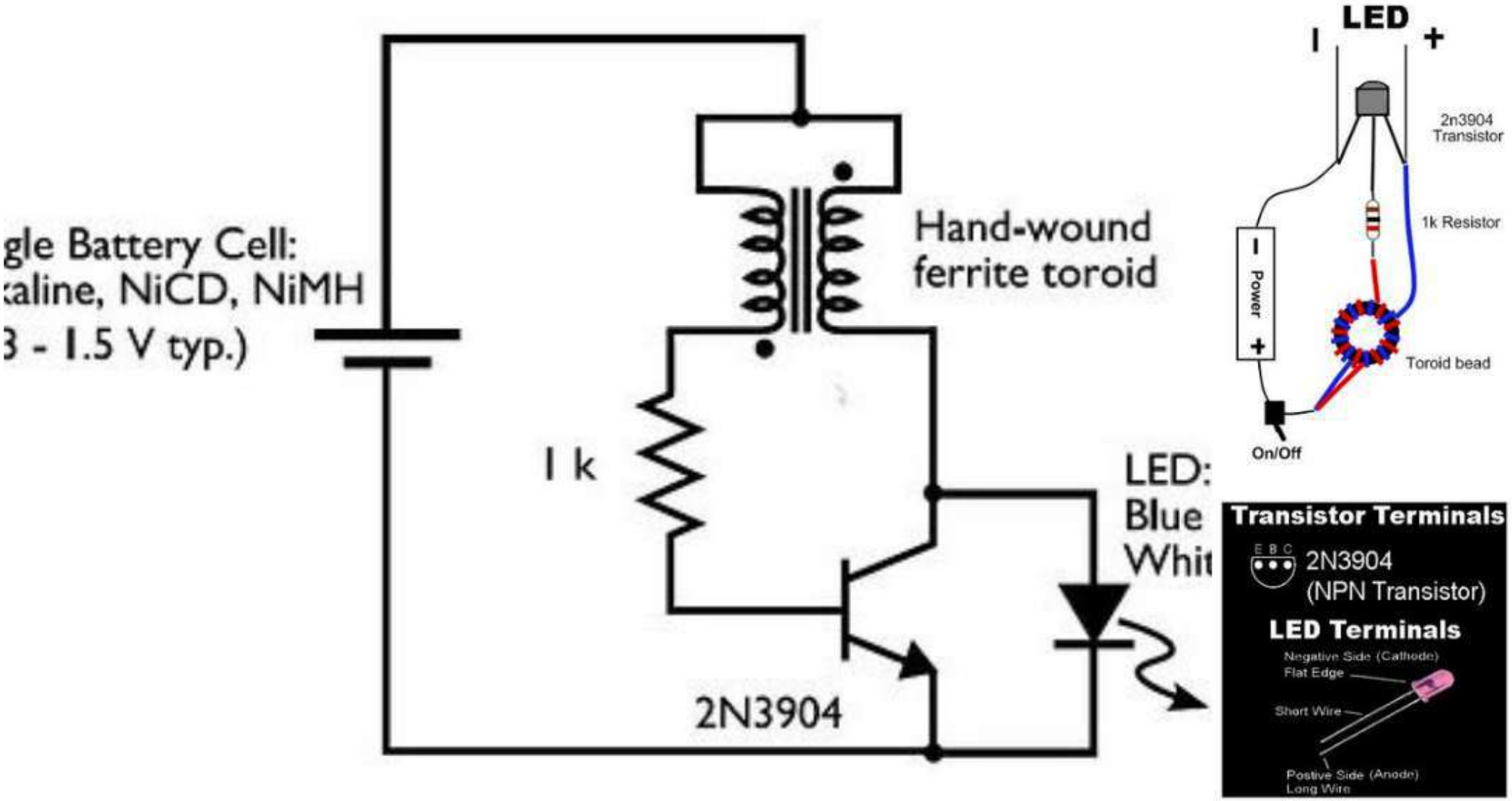


A joule thief with two axial inductors replacing the ferrite toroid, shown on a solderless breadboard

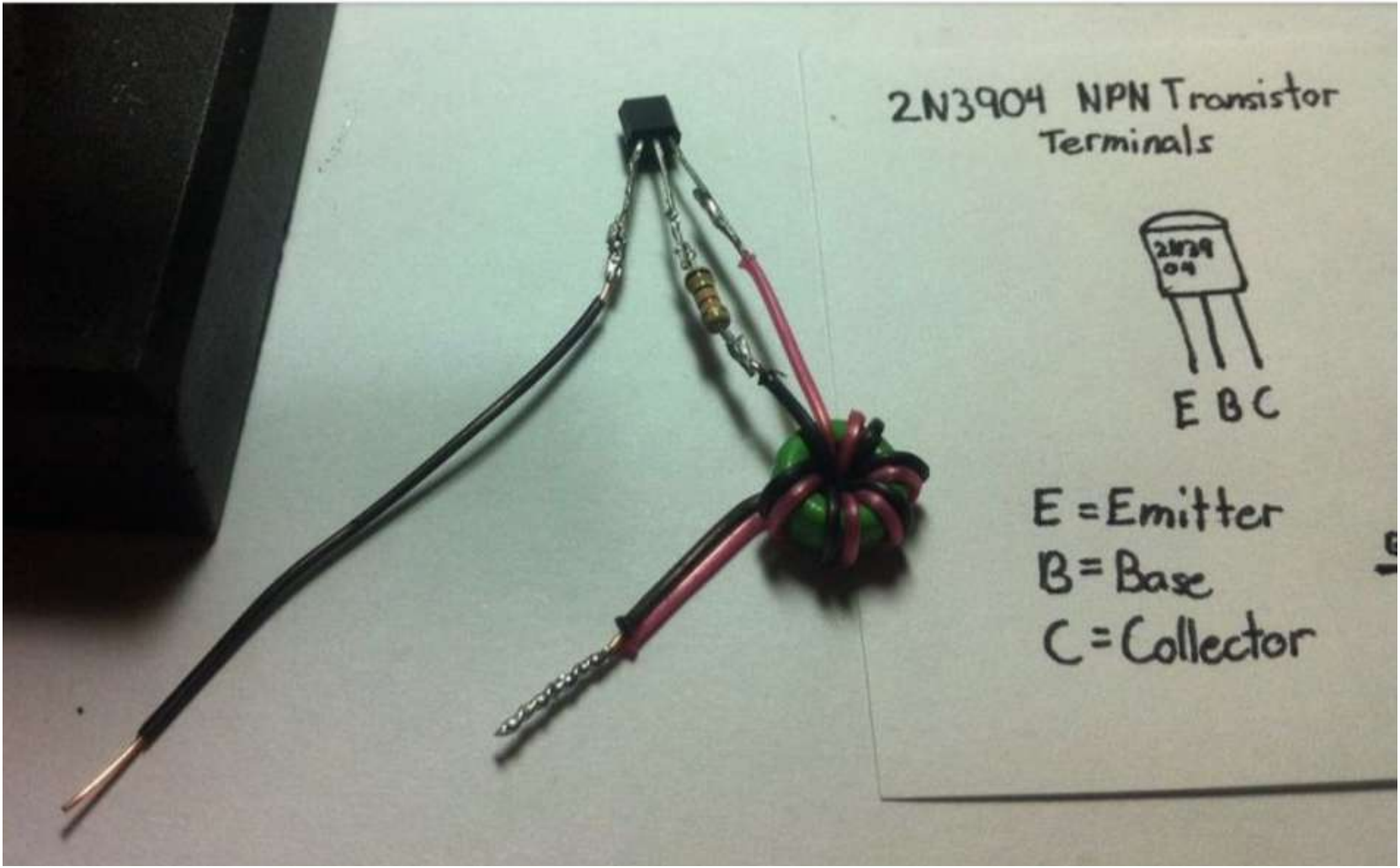

ZN
3904

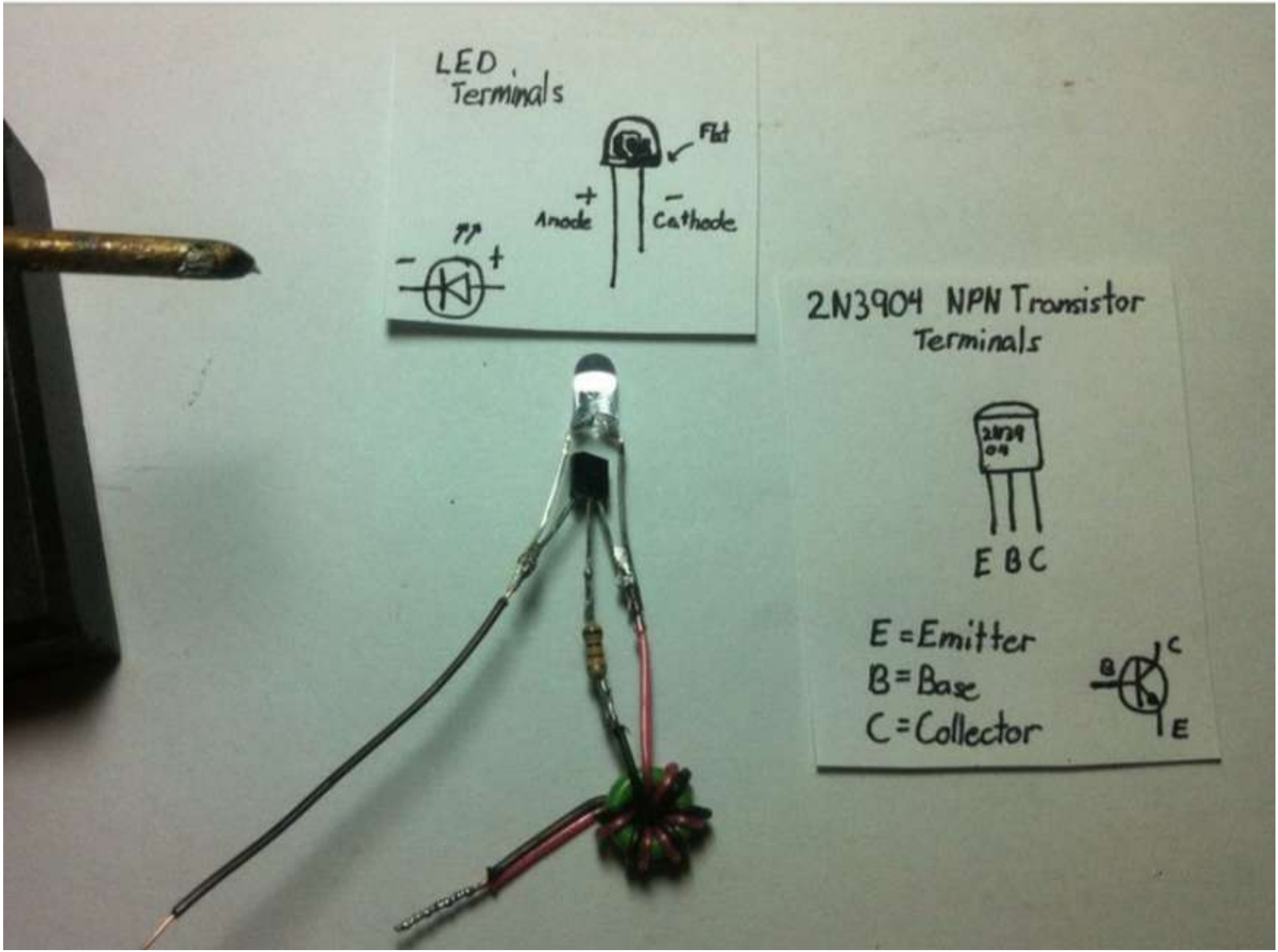

Round Ferrite Toroid
NPN Transistor (2N3904)
1K Resistor (BRN-BLK-RED)
LED (White)
Weak/Used Battery
Battery Tester
Soldering Lead
Coated Copper Wire
Energizer
Ulta-Lit

Step 2: Schematic Diagrams

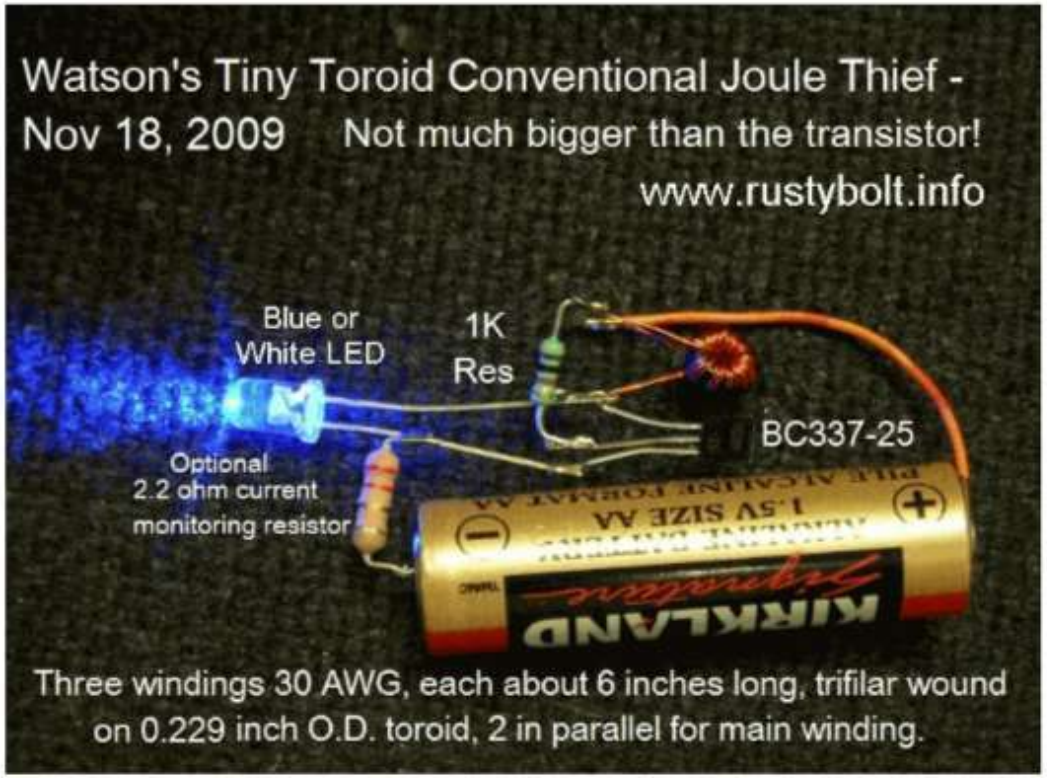




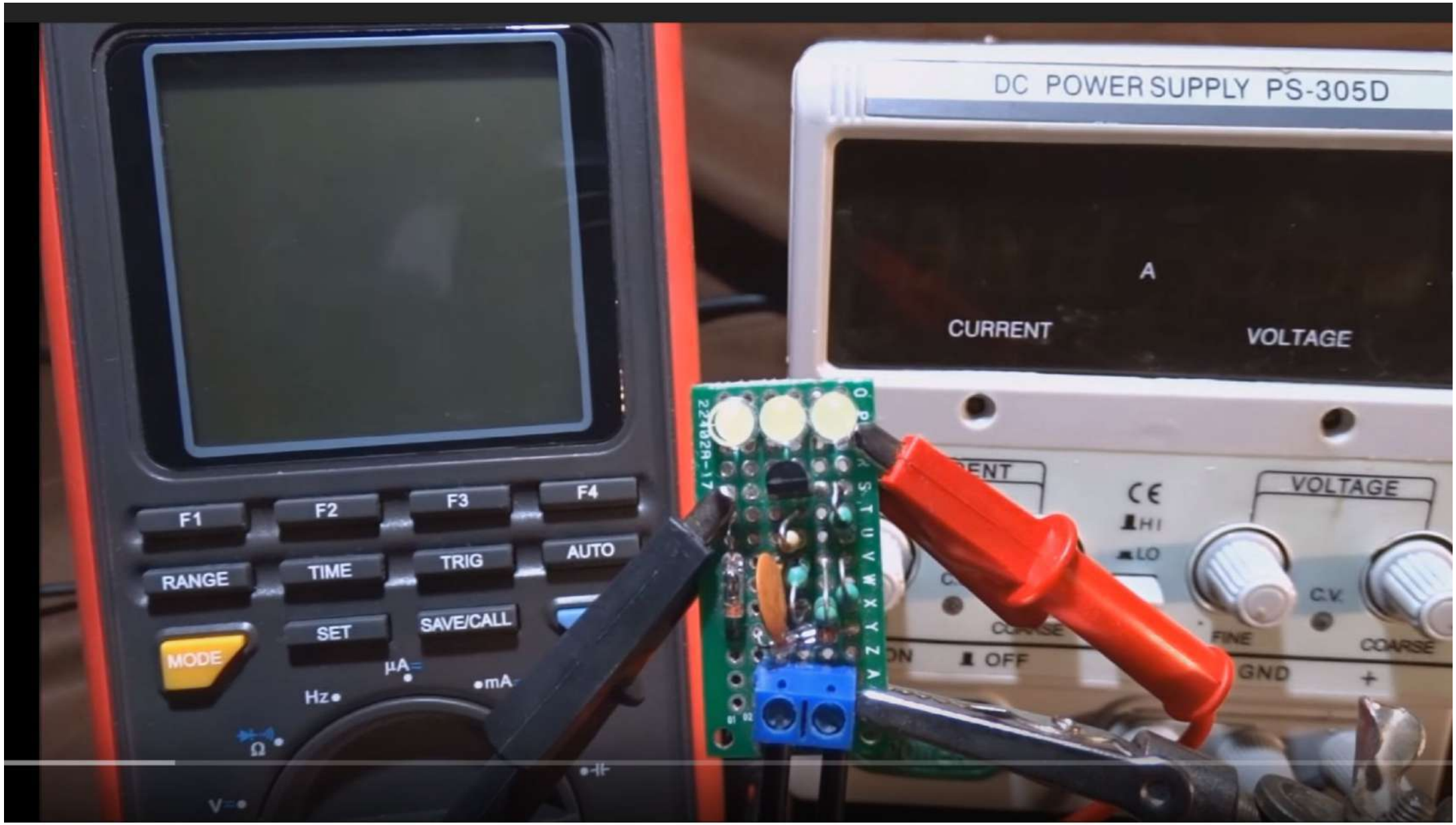

2N3904 NPN Transistor
Terminals
2N39
04
E B C
E = Emitter
B = Base
C = Collector


LED
Terminals
Flat
+
Anode
−
Cathode
−
+
2N3904 NPN Transistor
Terminals
2N39
04
E B C
E = Emitter
B = Base
C = Collector
C
B
E

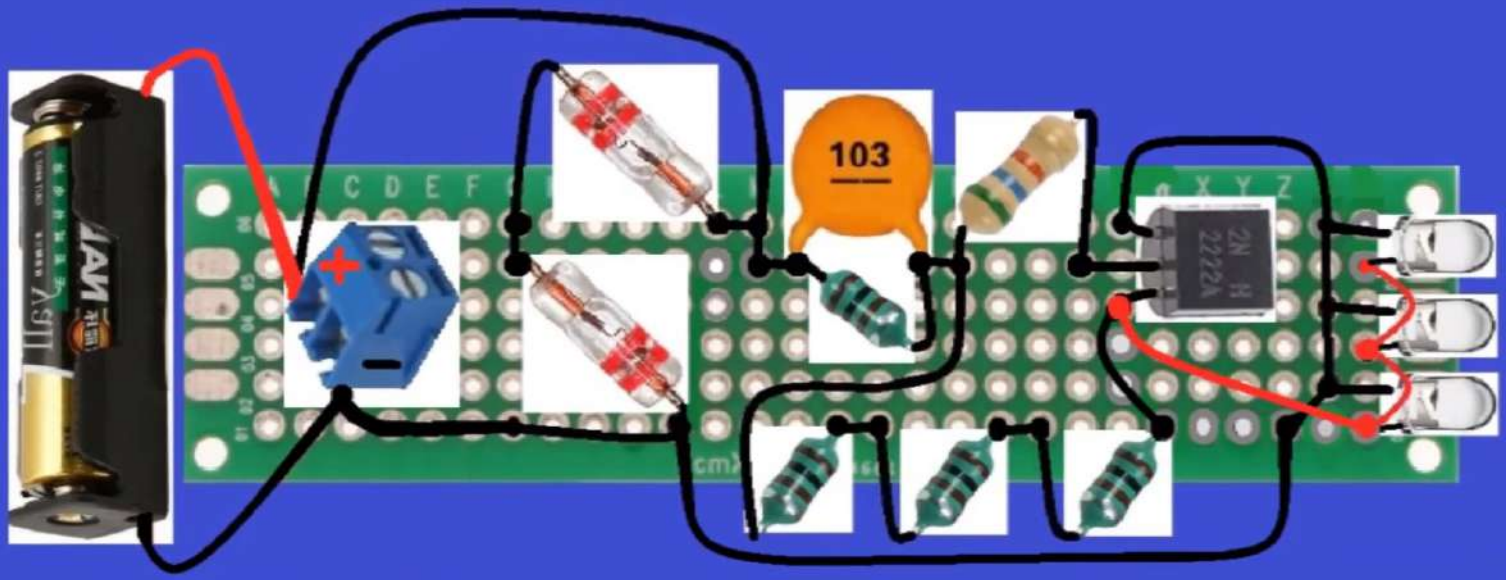
These tiny T231212T toroids from Surplussales.com are high permeability so it doesn't take much wire to make a good Joule Thief coil. The core is less than a quarter inch diameter (here is a data sheet in .PDF.). Six inches of 30 AWG magnet wire trifilar wound, with two of the windings connected in parallel for the primary winding.



The transistor is a BC337-25. I put a 2.2 ohm resistor in series with the circuit to measure the battery current. It can be put there temporarily and removed when the LED current is what you want. How do you change the LED current? Change the 1k resistor to a different value. Higher values will reduce the LED current. With the BC337-25 and 1k resistor, the LED current should be close to 20 milliamps so it's probably not wise to go much below 1k. If you use another transistor, especially the pipsqueak 2N3904, you may have a hard time getting it to put out 20 milliamps.


DC POWER SUPPLY PS-305D
A
CURRENT
VOLTAGE
F1
F2
F3
F4
RANGE
TIME
TRIG
AUTO
MODE
SET
SAVE/CALL
μA
mA
Hz
VOLTAGE
HI
LO
OFF
FINE
COARSE
GND
+


B
103M



3* Axial lead inductor 82uH 1/4W

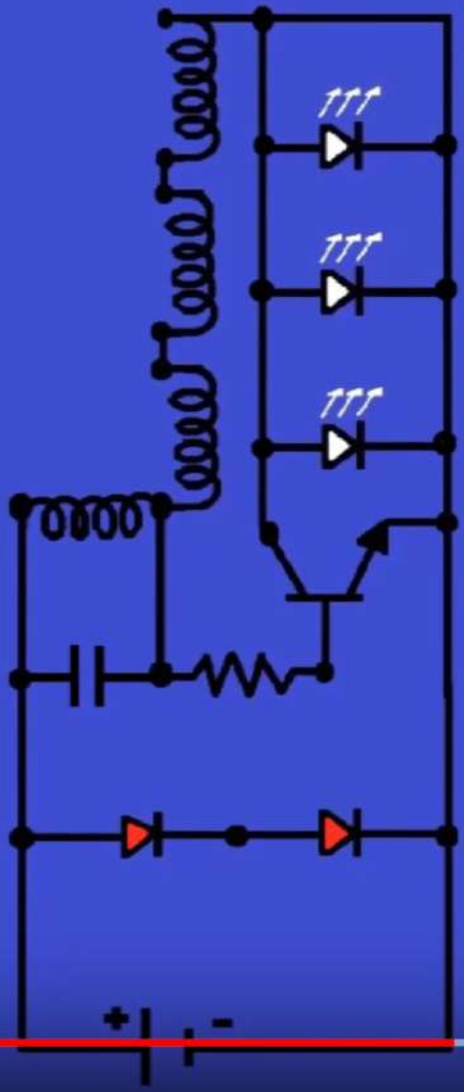
1* 10nf ceramic capacitor 103

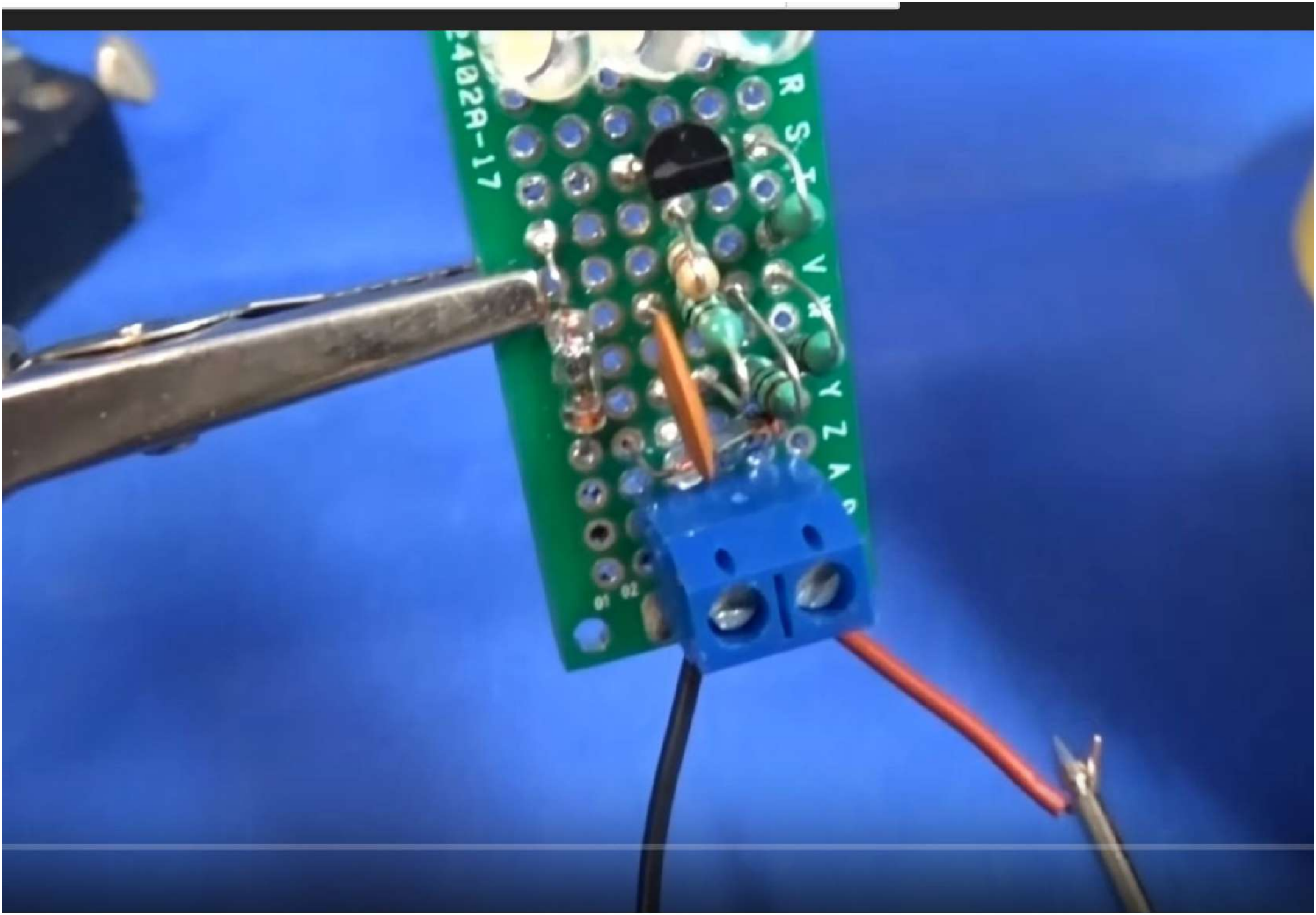
2* AO90 Germanium signal diode

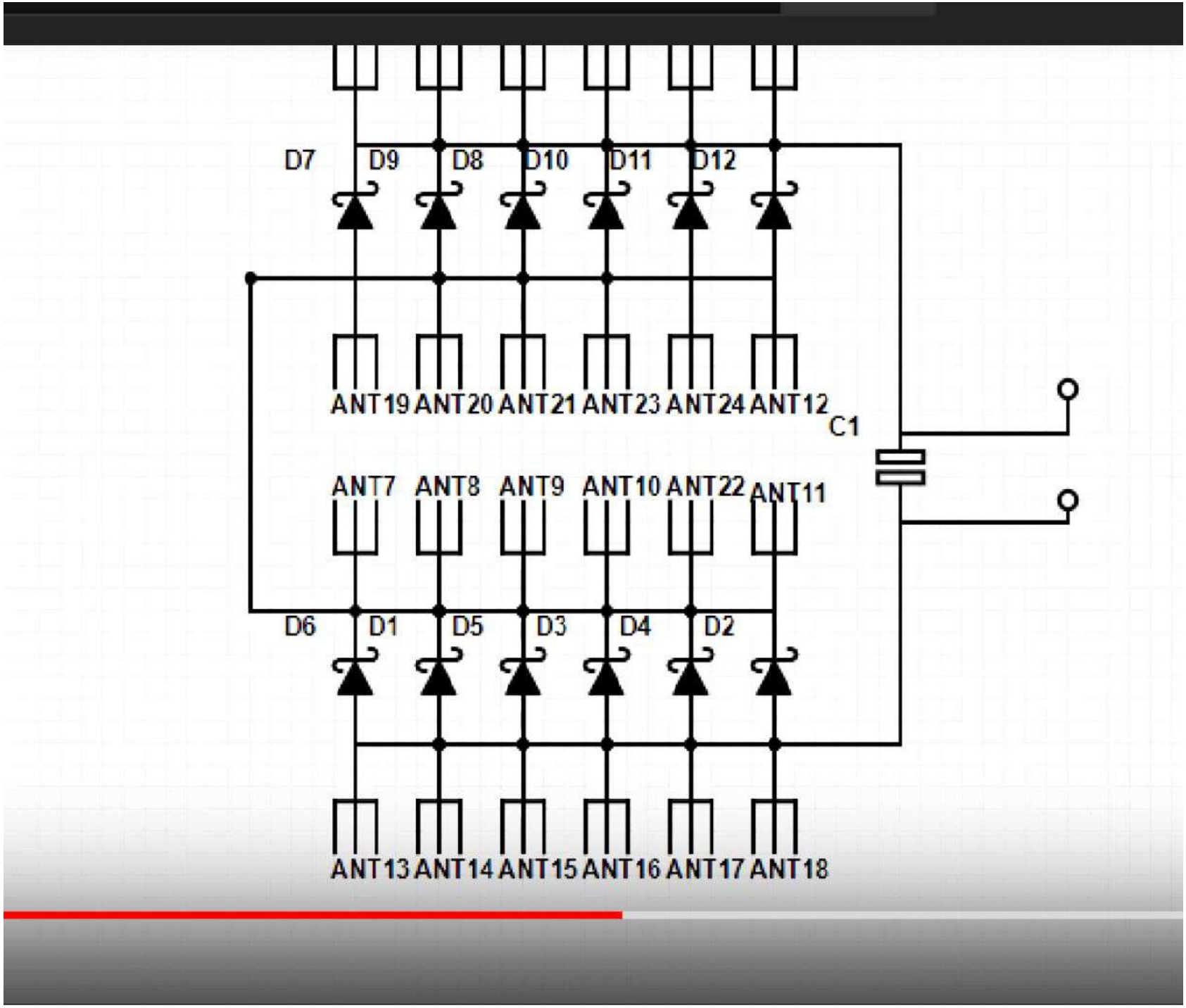
1* 2N2222 NPN Transistor bipolar 0.6A 40V

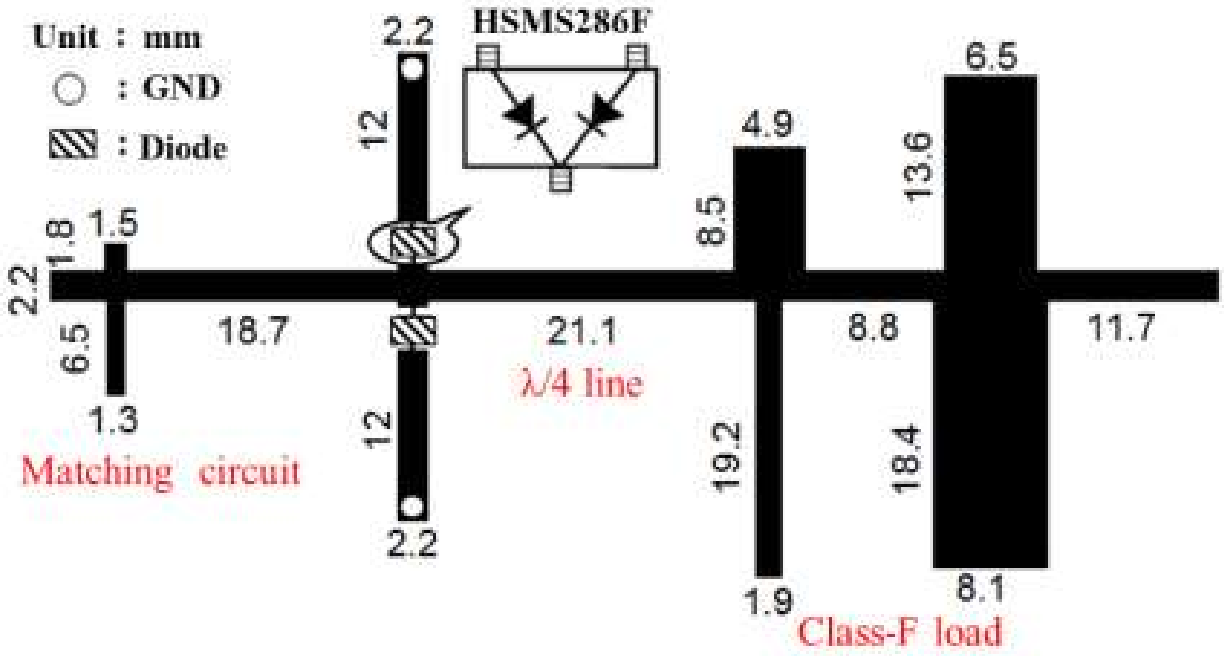
1* RESISTOR 5.6K Ohm 1/4W

3* 5mm white Emitting led Diode 20 mA 3.2 V

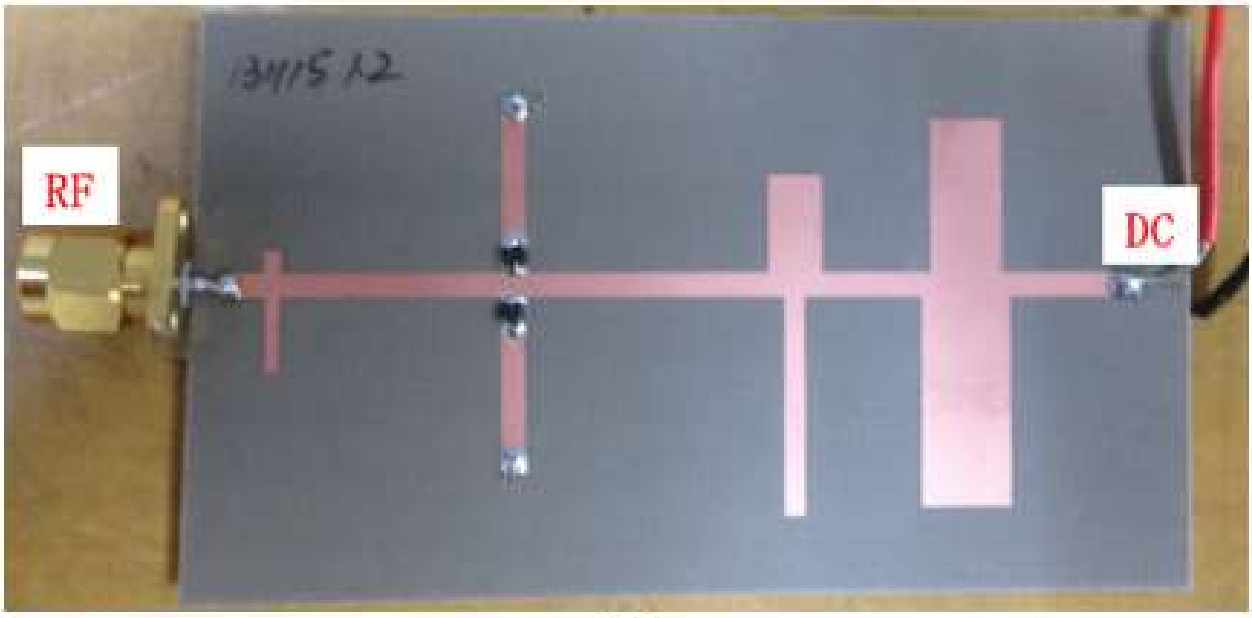



402A-17
R S T
V W X Y Z A
01
02


D7
D9
D8
D10
D11
D12
ANT19
ANT20
ANT21
ANT23
ANT24
ANT12
C1
ANT7
ANT8
ANT9
ANT10
ANT22
ANT11
D6
D1
D5
D3
D4
D2
ANT13
ANT14
ANT15
ANT16
ANT17
ANT18



(a)



(b)

Figure 4.1: Proposed positive output voltage rectifier. (a) Structure and size. (b) Photograph.

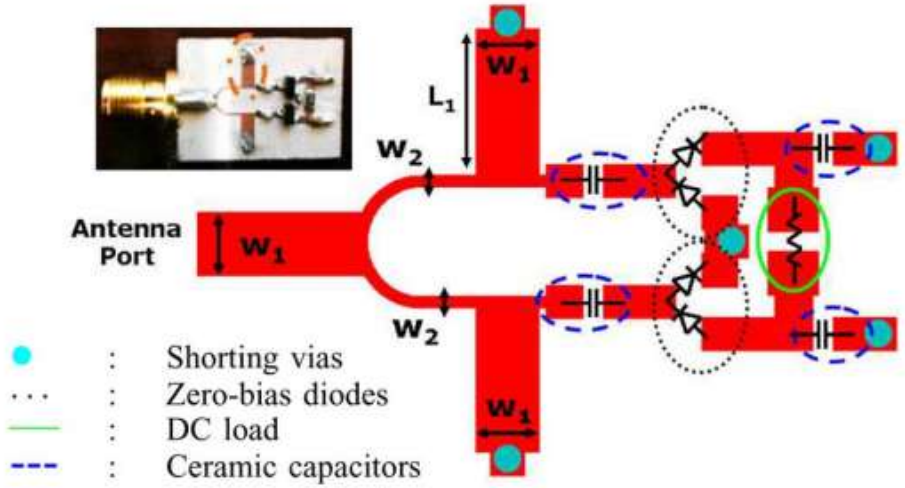
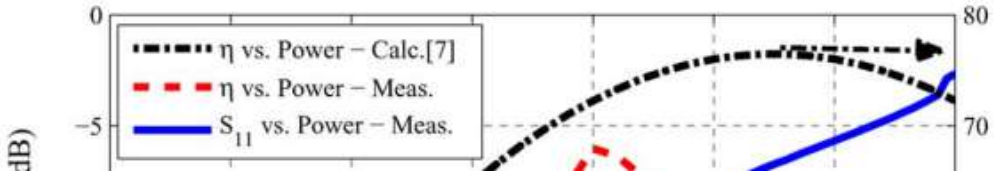


Fig. 3. Layout of the rectifier prototype, printed on RO3206. $w_1 = 72$ mil, $w_2 = 15$ mil, and $L_1 = 171$ mil. Fabricated sample is shown in top left, and the impedance matching stub is encircled.



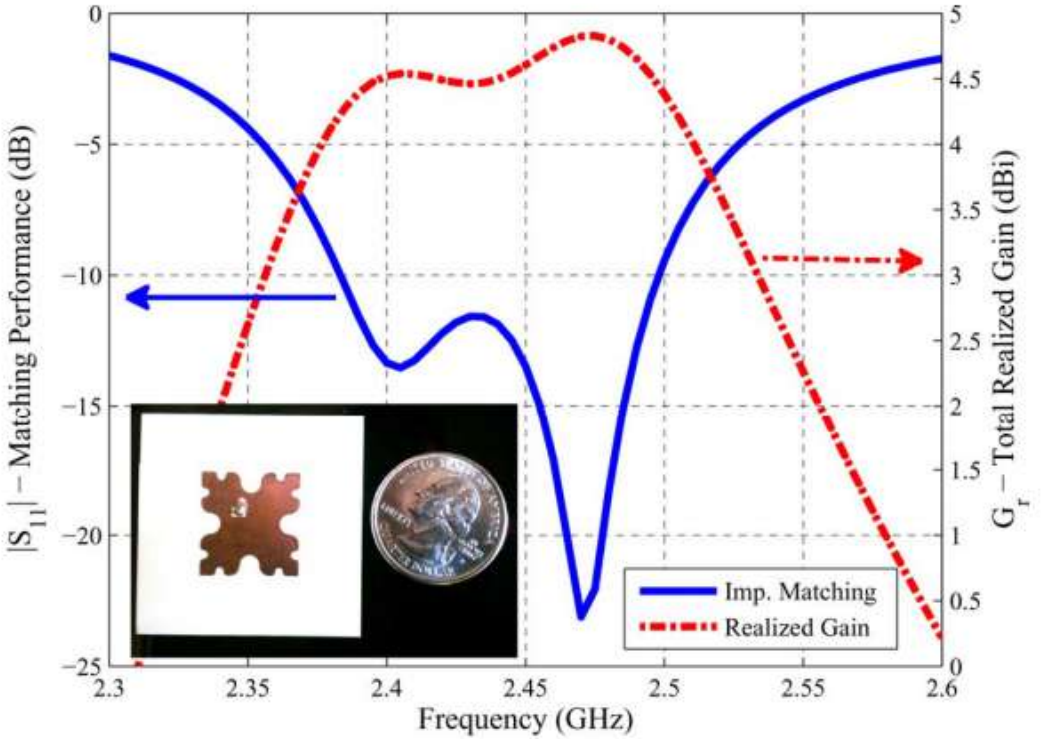
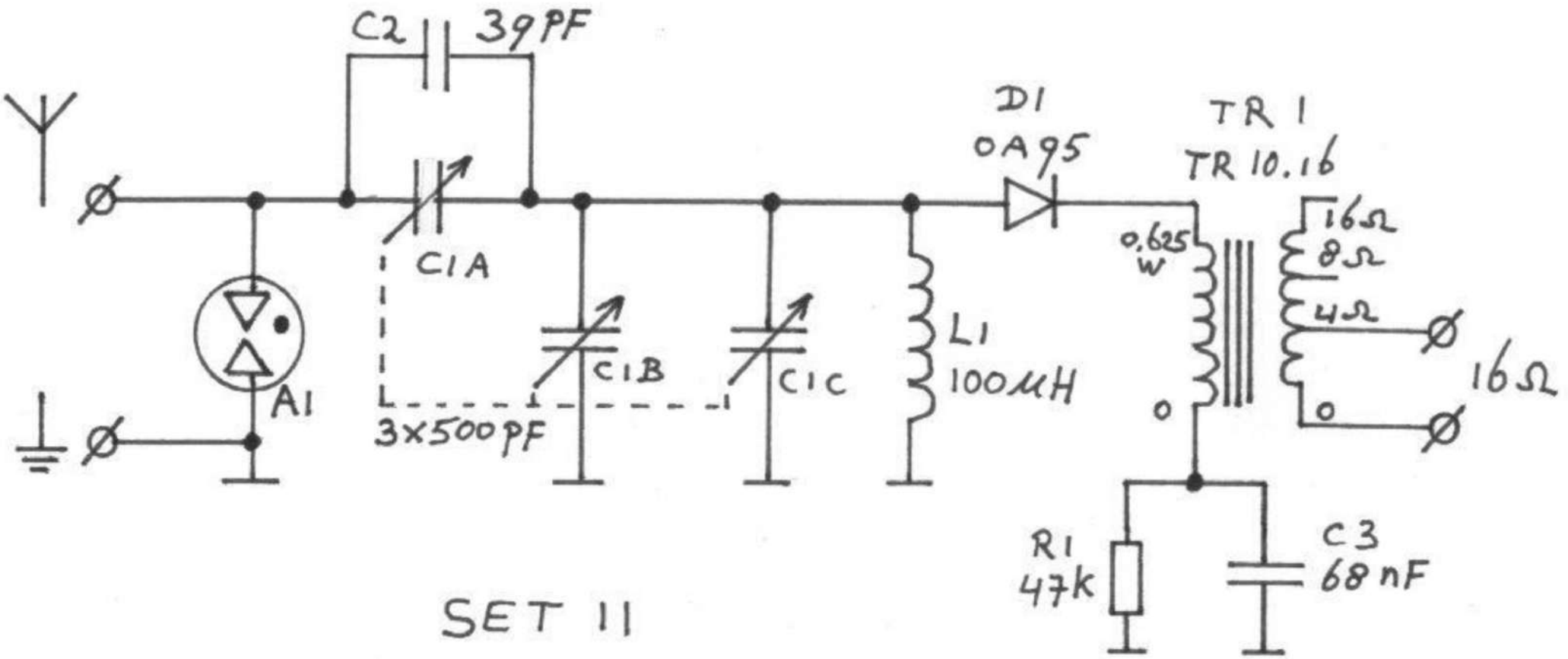
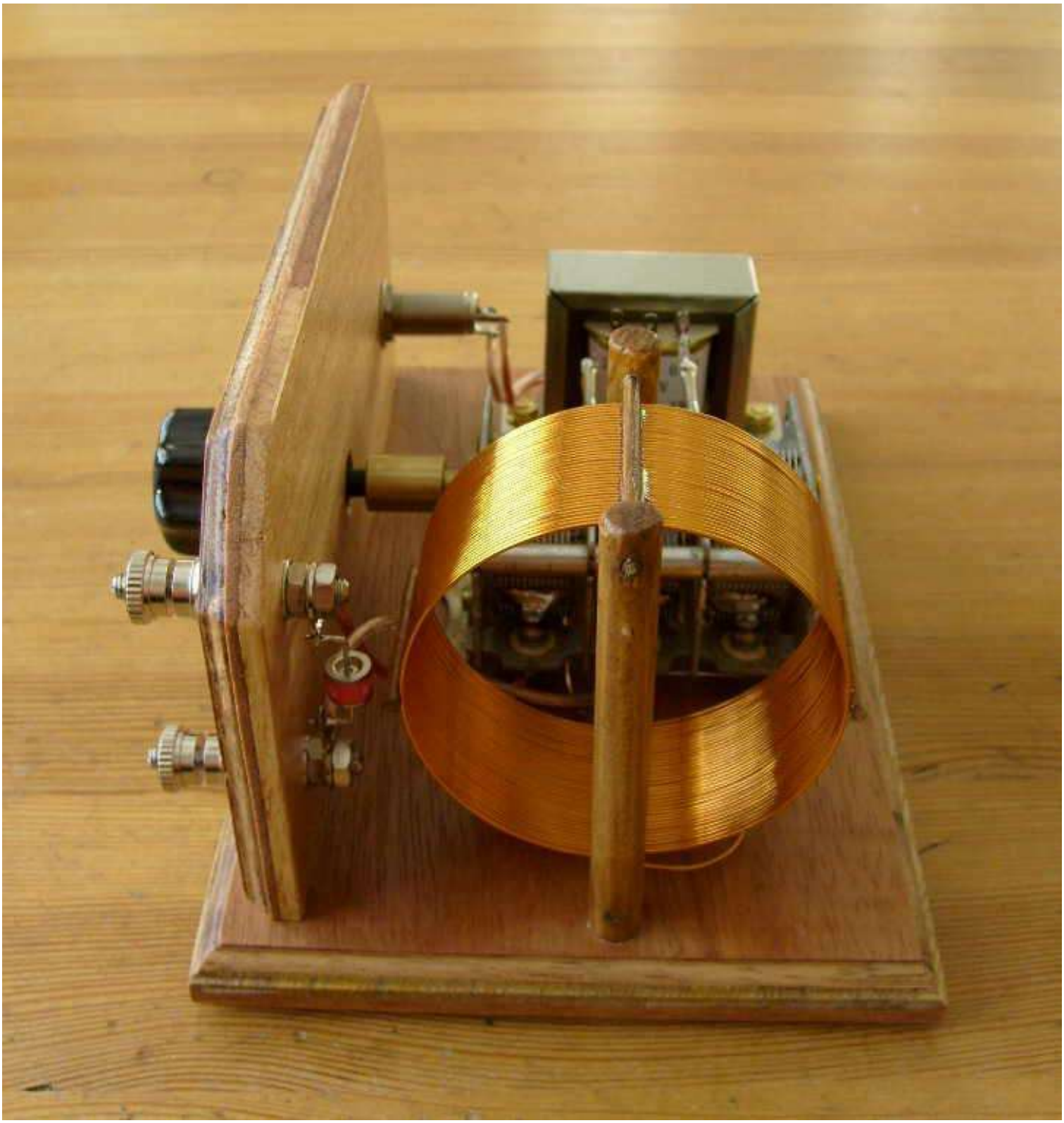
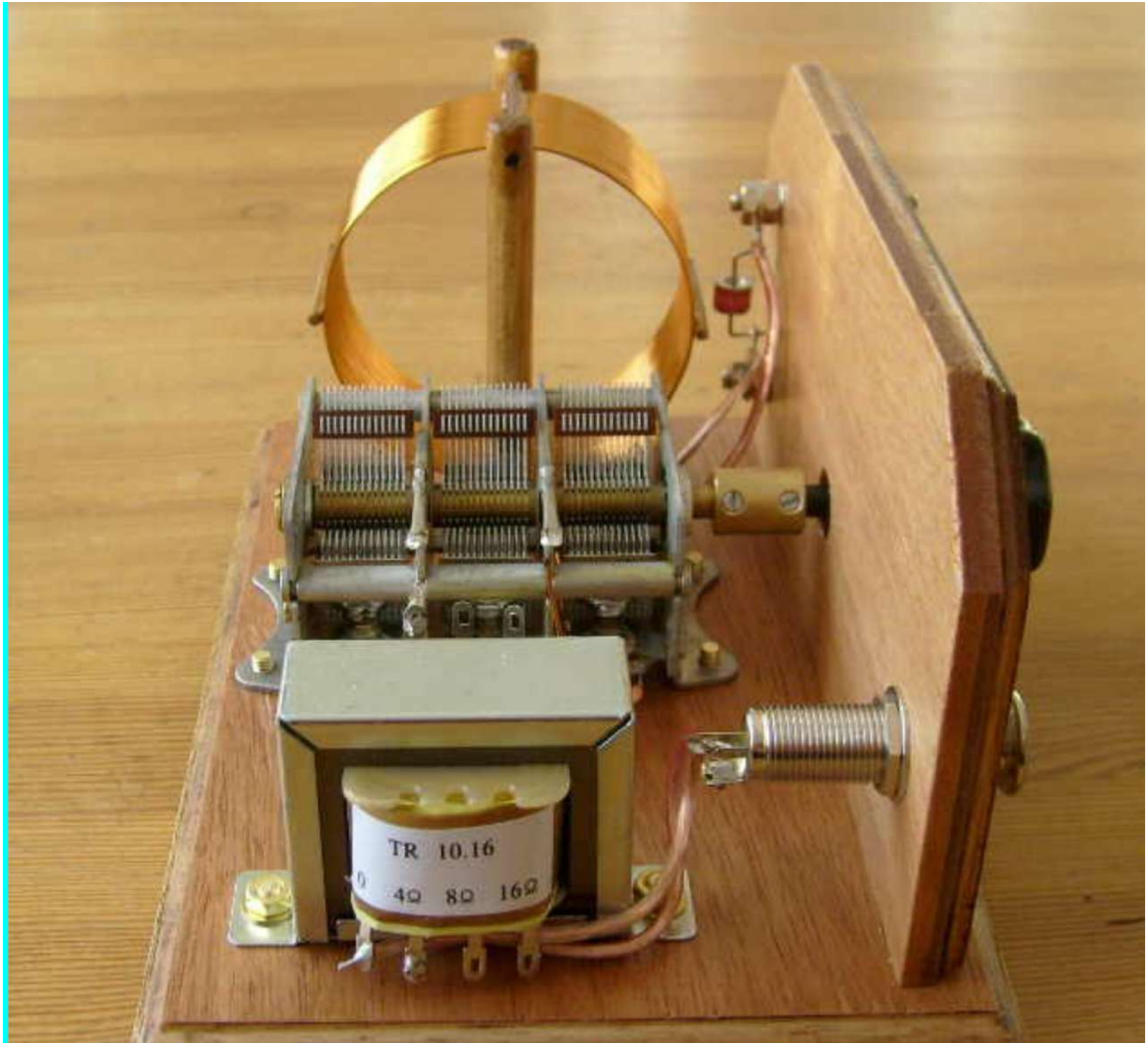


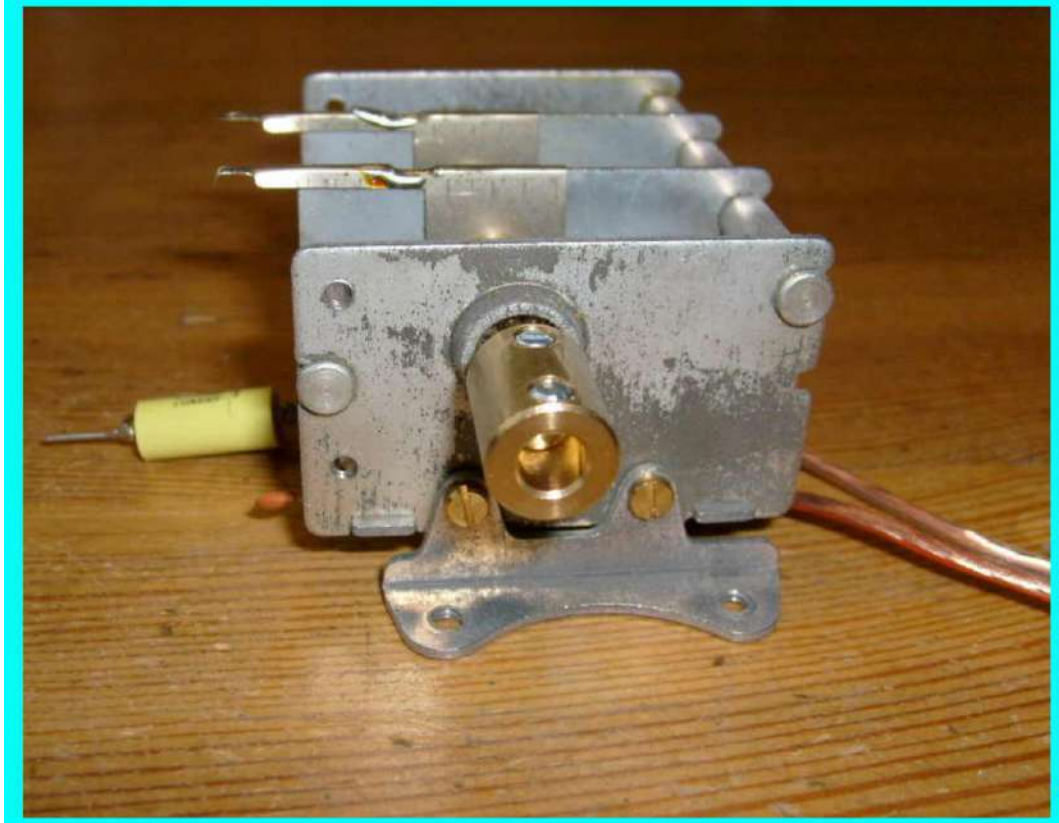
Fig. 5. Measured $|S_{11}|$ performance and total realized gain (at boresight) of the proposed antenna. Fabricated sample is shown in bottom left.

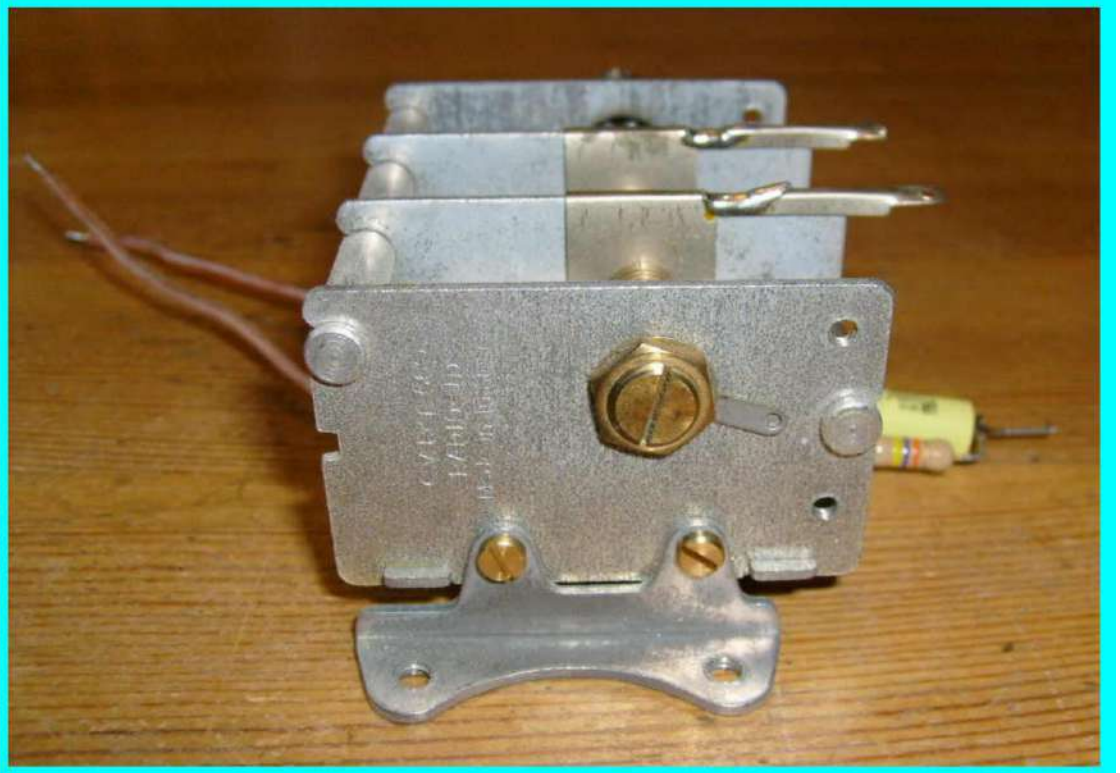

C2
39PF
D1
OA95
TR 1
TR 10.16
C1A
C1B
C1C
L1
100μH
0.625
W
16Ω
8Ω
4Ω
16Ω
A1
3x500pF
R1
47k
C3
68nF
SET 11



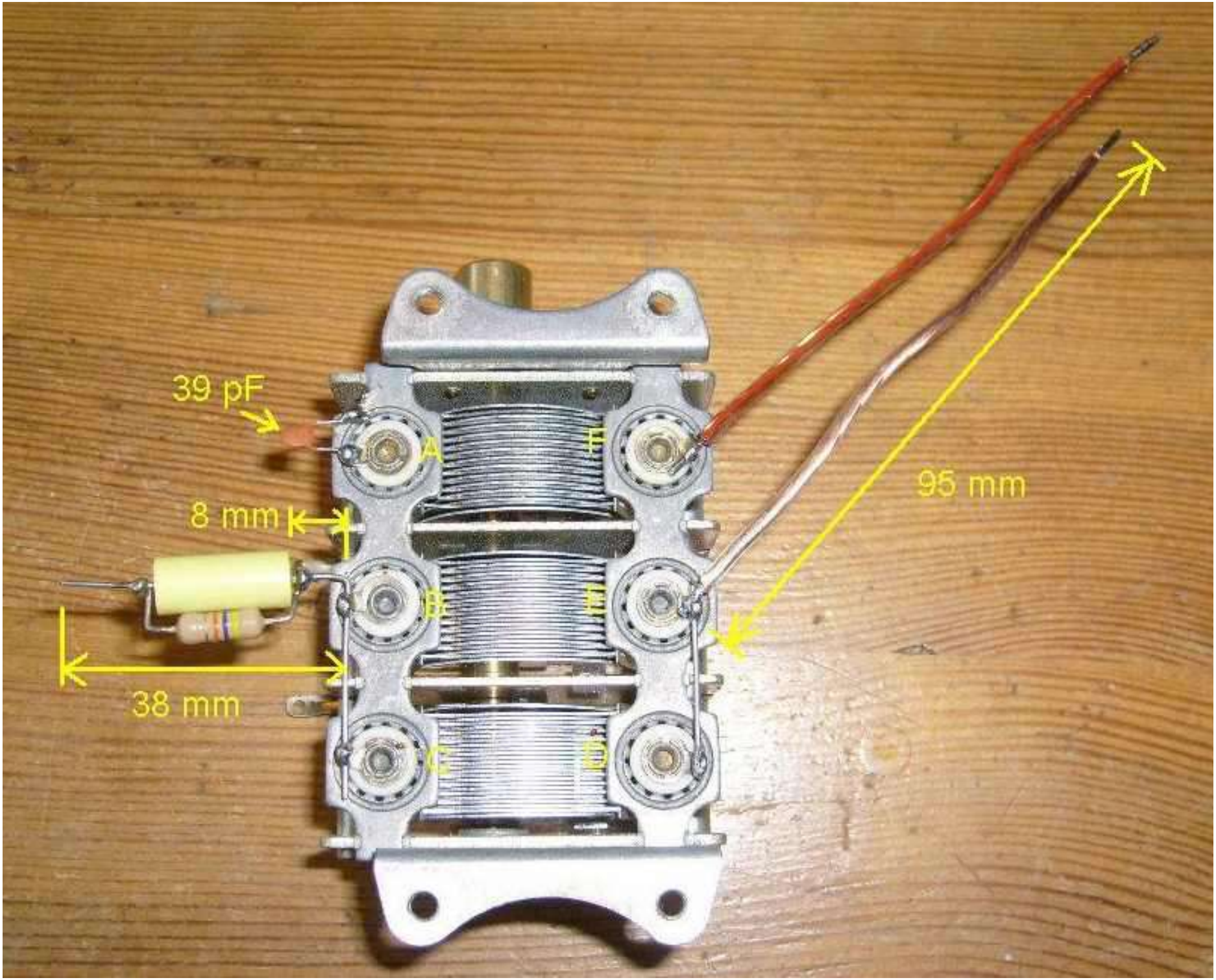

TR 10.16
4Ω 8Ω 16Ω

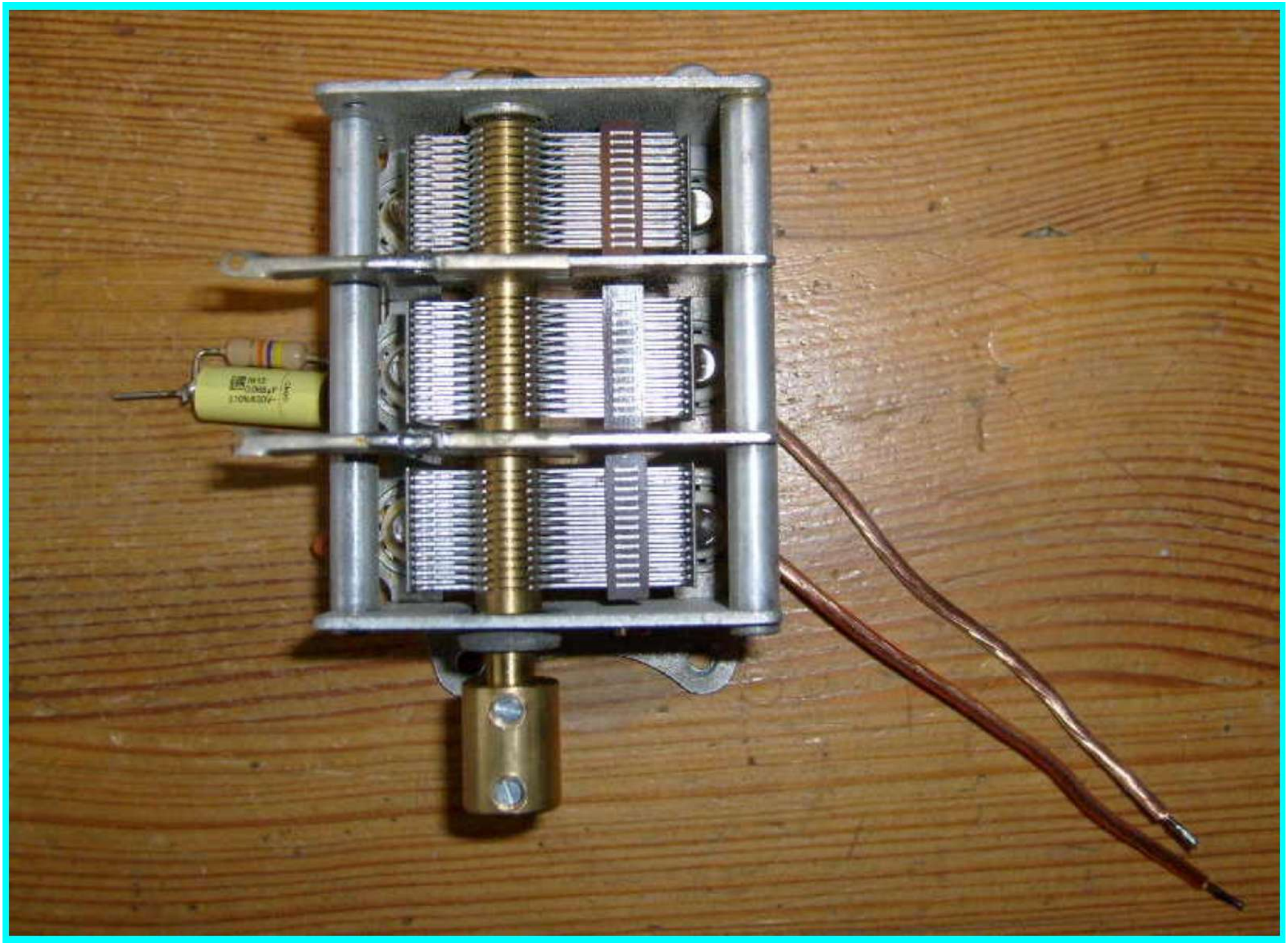
Preparation of the tuning capacitor

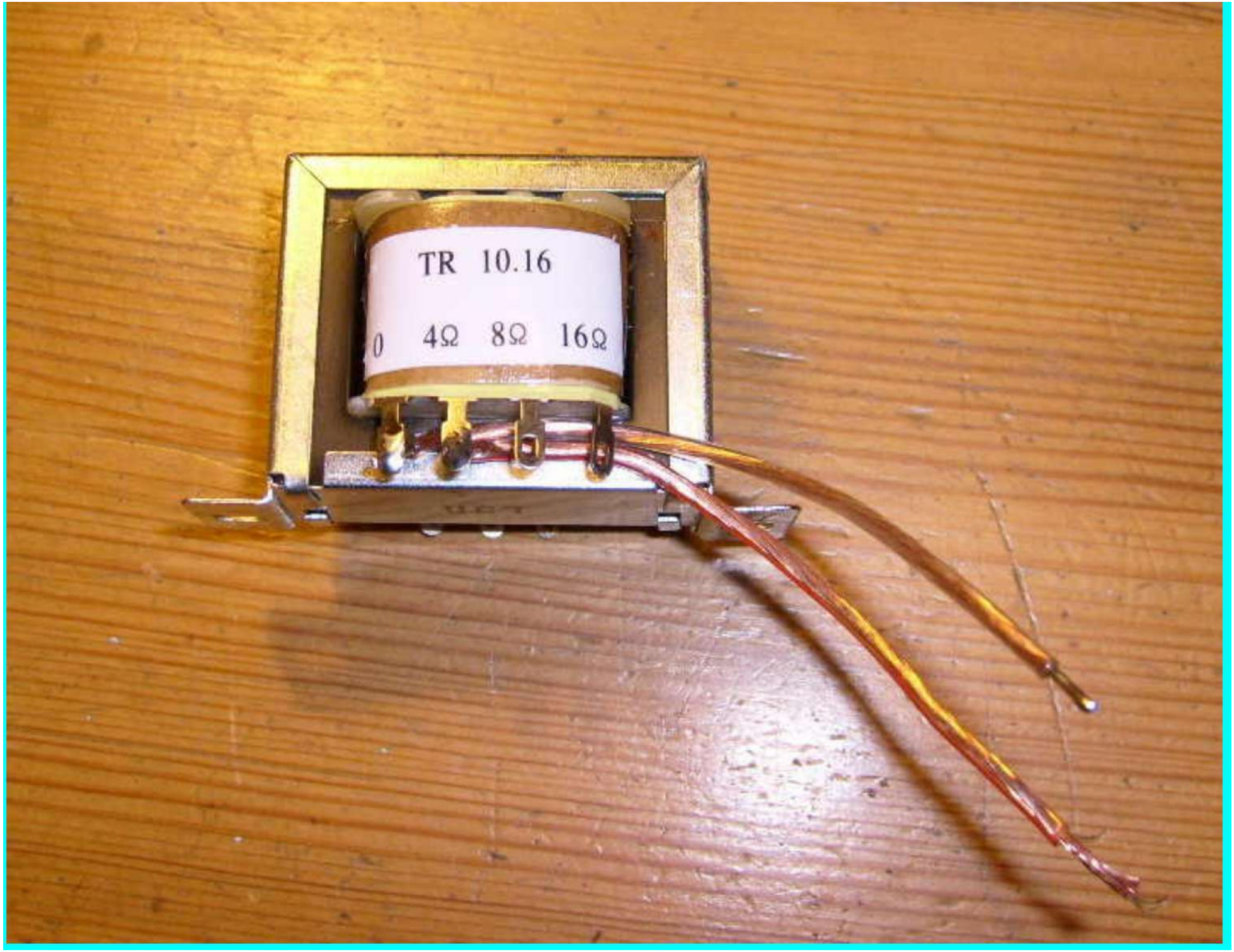




Mount the mounting supports on the tuning capacitor (they are delivered with the tuning capacitor).
Place the shaft coupler on the shaft of the tuning capacitor.


39 pF
8 mm
38 mm
95 mm
A
B
C
D




TR 10.16
0 4Ω 8Ω 16Ω

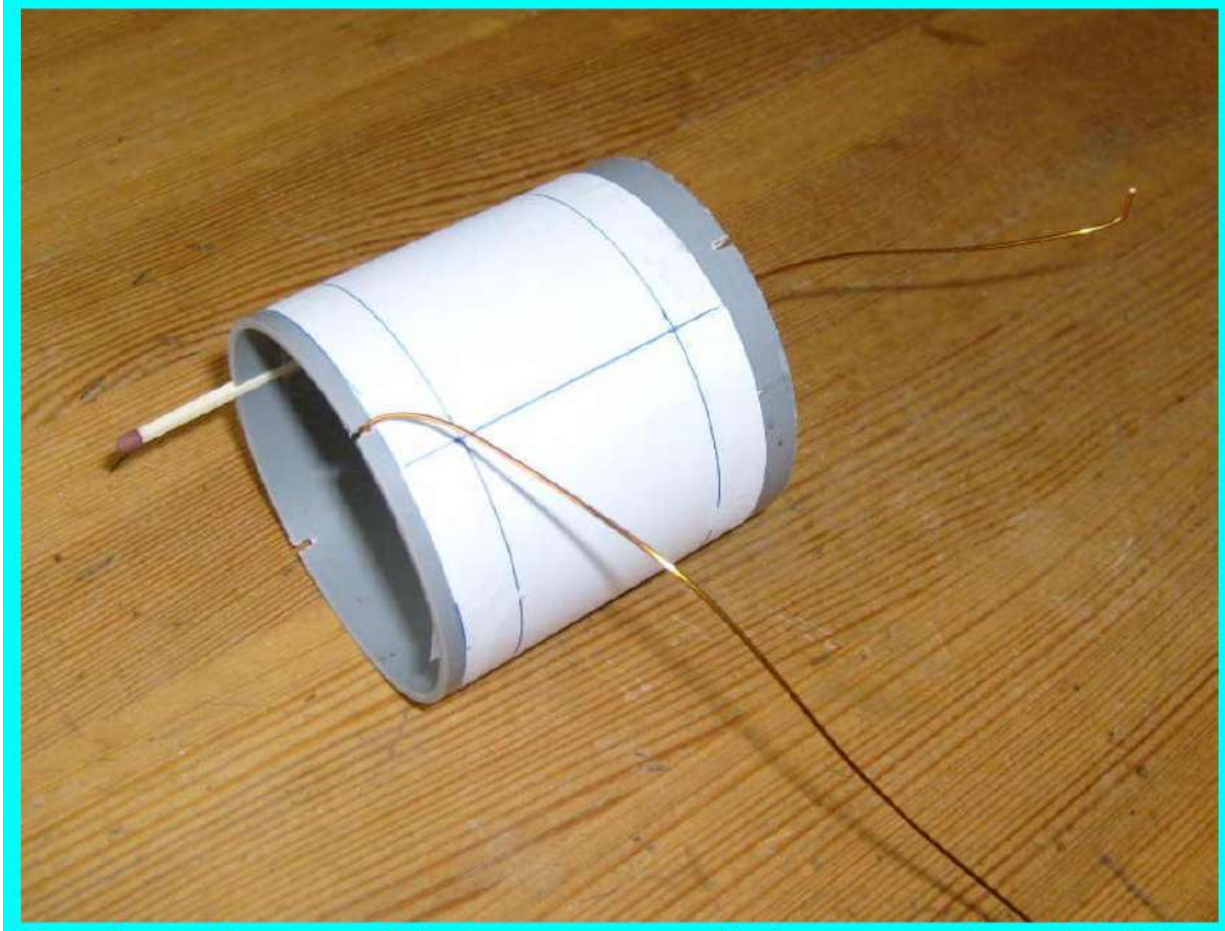




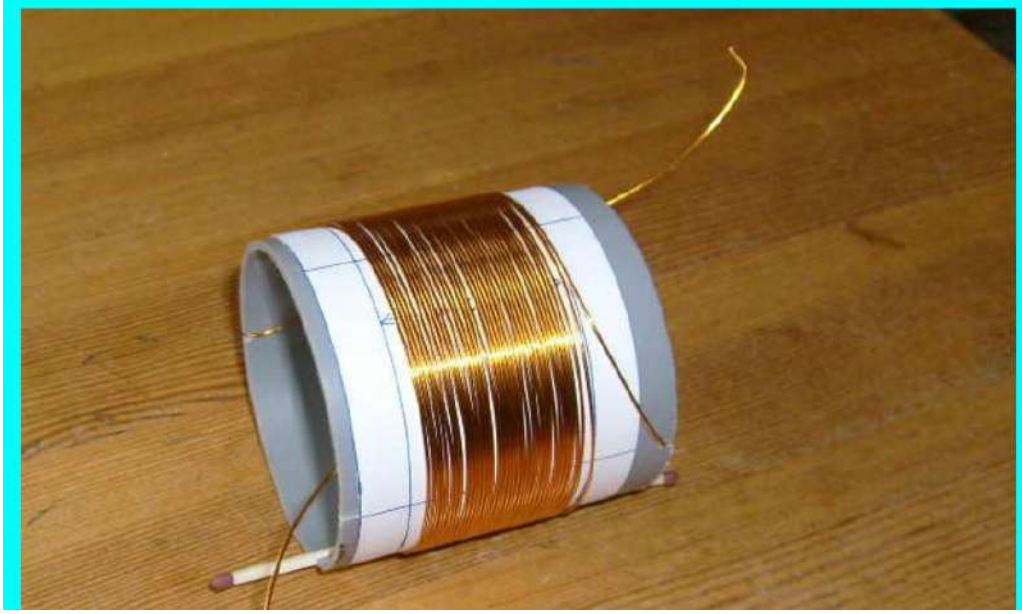


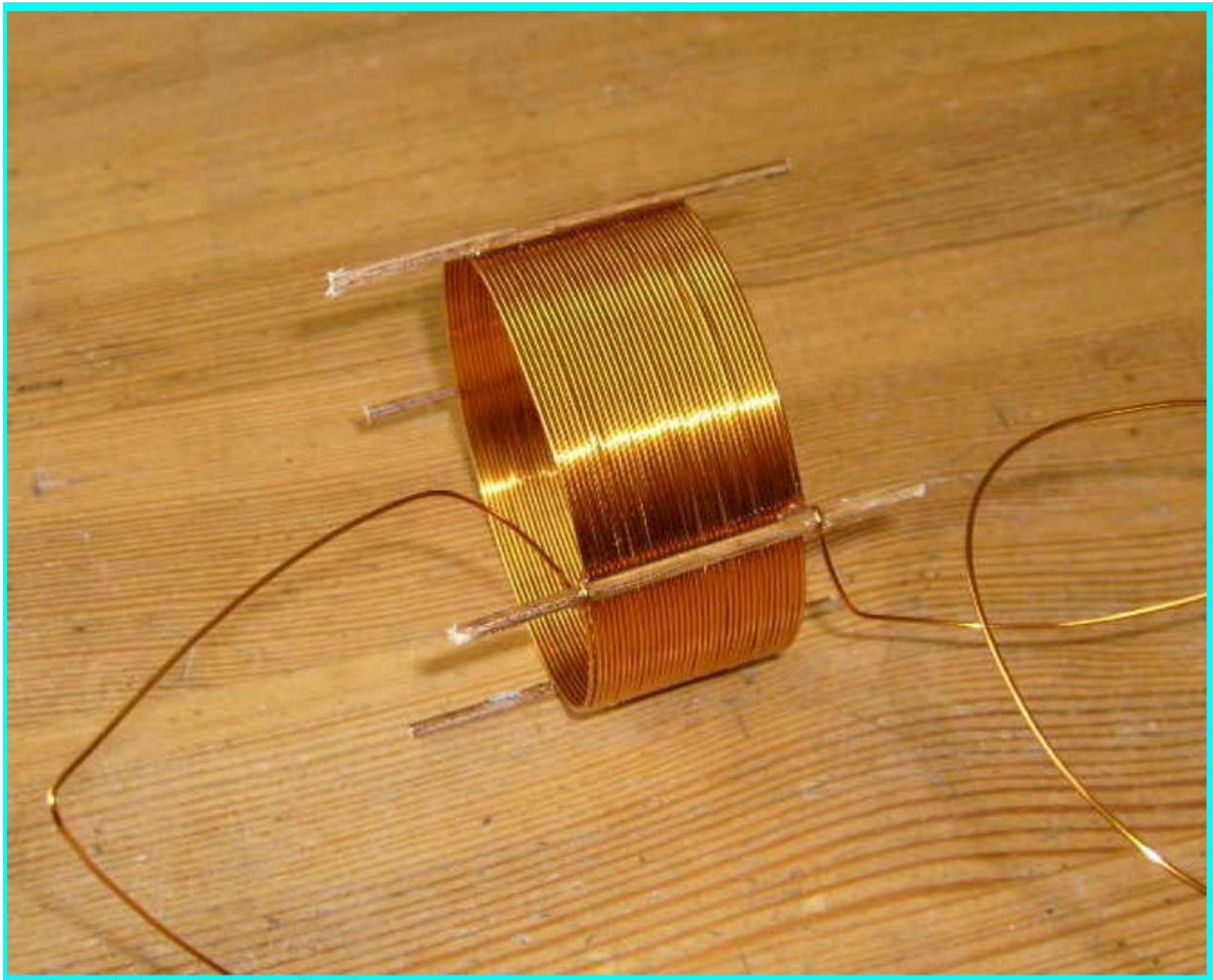
Screw the front on the bottom plate with four screws 3x45 mm.
Place the headphone socket.
Place the two terminal posts and the gas discharge tube.

Make a paper strip with 4 sections of 40x55 mm on it.
Do the strip around the tube, and fix it with a piece of tape.
Don't tape the strip onto the tube on places where later the coil is wound.

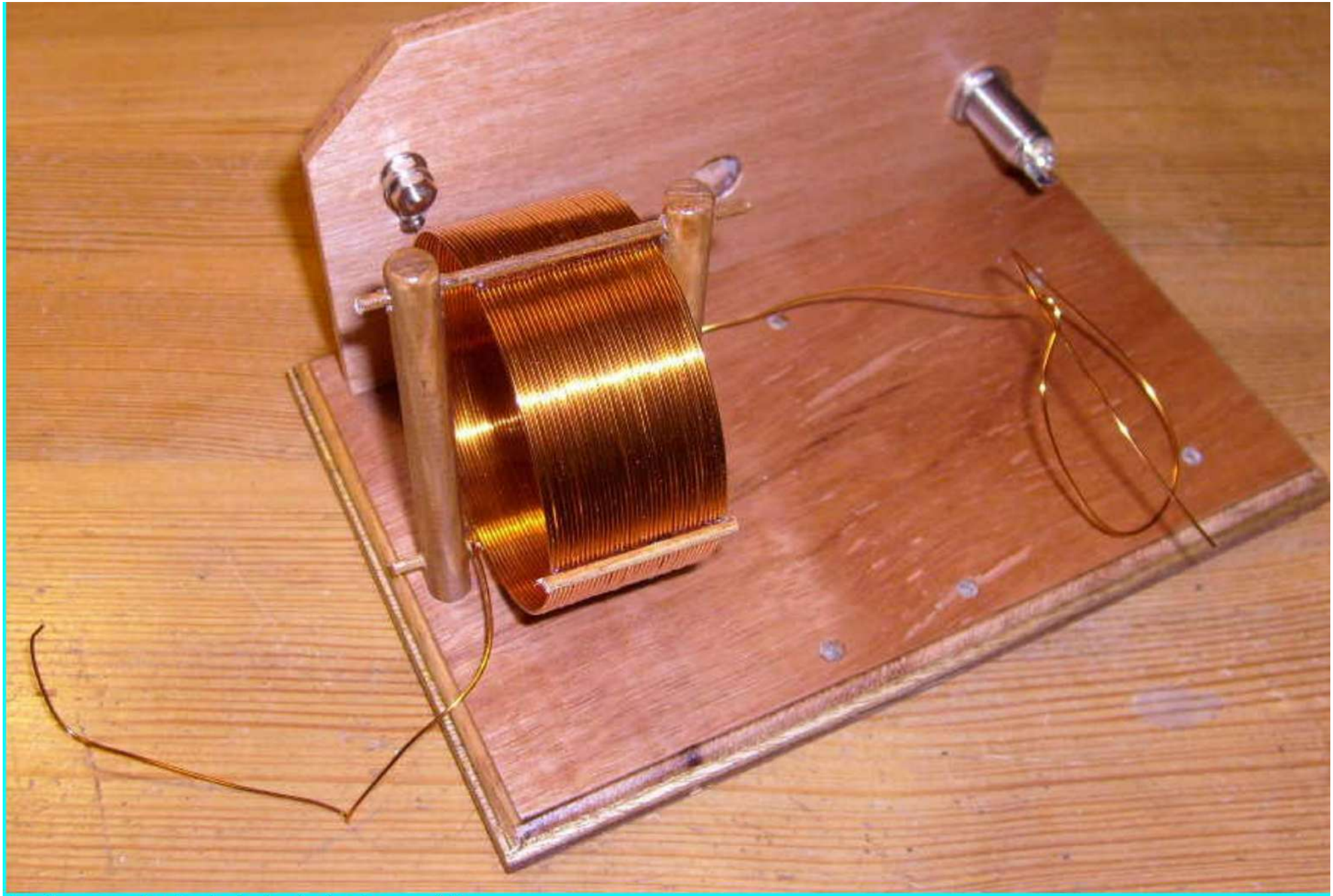


For the coil we need 8.6 meter enamelled copper wire with 0.8 mm thickness.
Hook the begin of the coilwire onto the slot in the tube.
Also fix the begin of the wire on the inside of the tube with some tape.

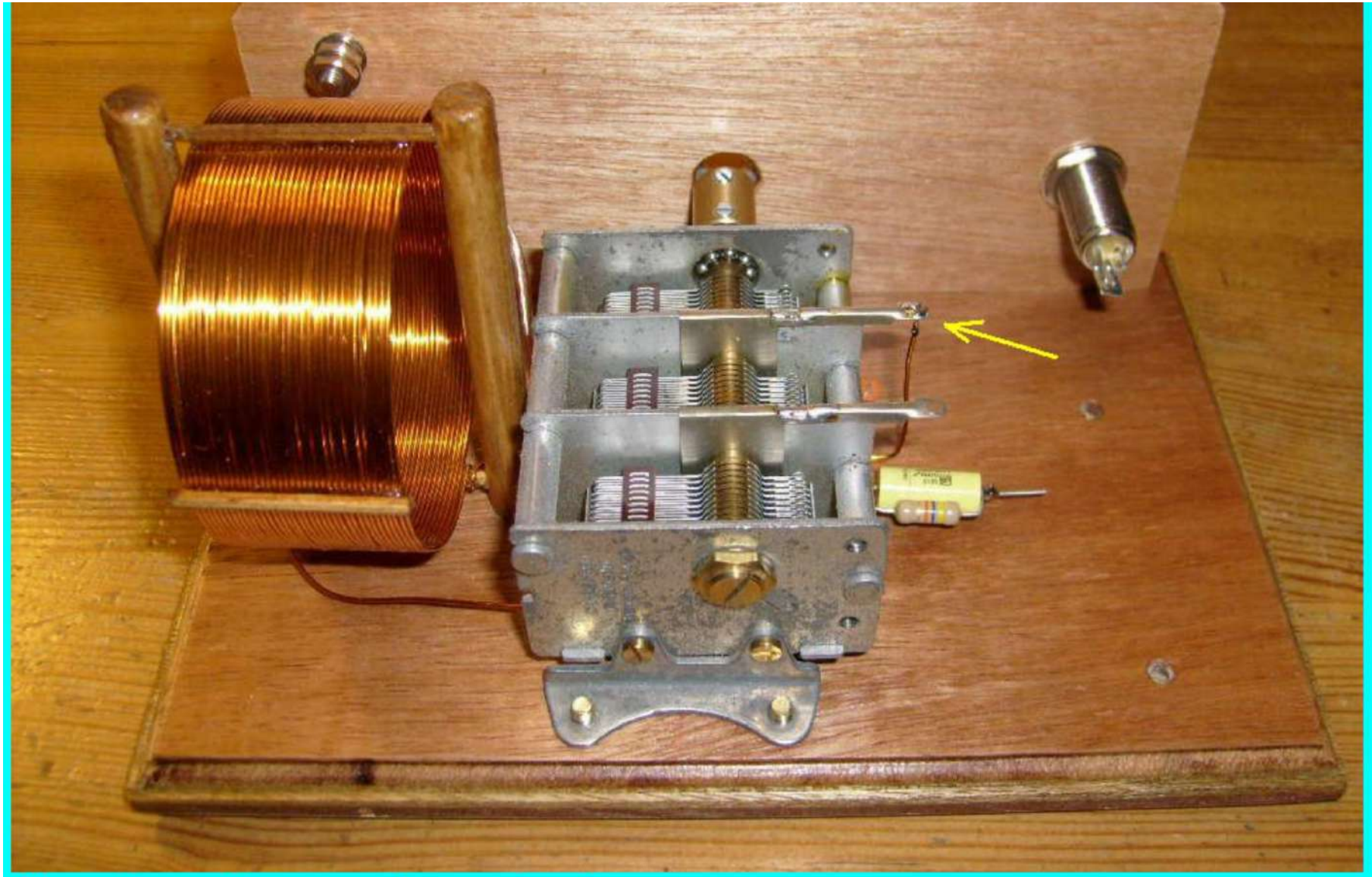




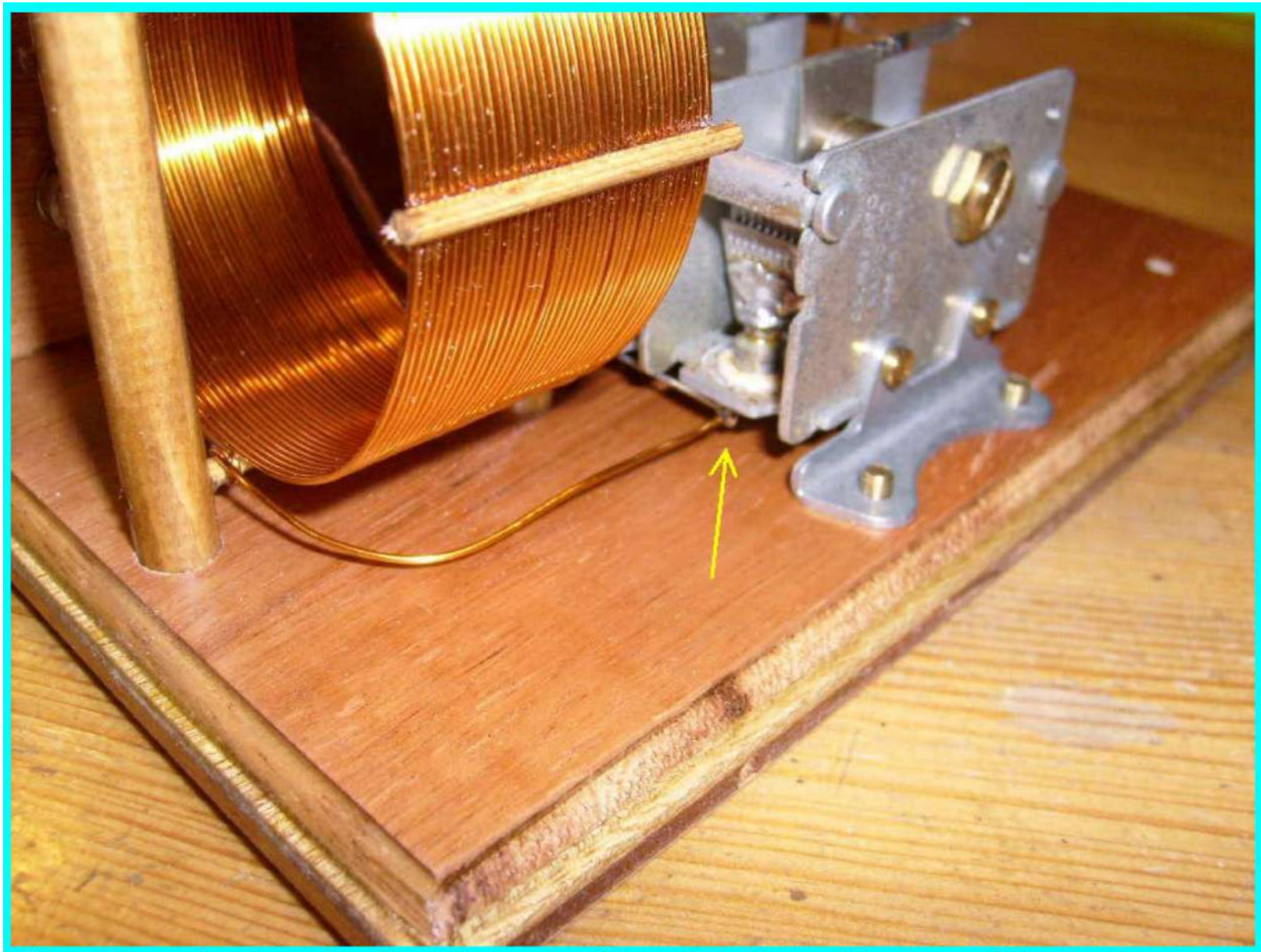
Wait until the glue is hardened.
Remove the rubber bands, the tape and the matches.
Shift the tube out of the coil, and remove the paper out of the coil.
Turn the both ends of the wire one time around the stick at the bottom side of the coil, and apply some extra glue here.



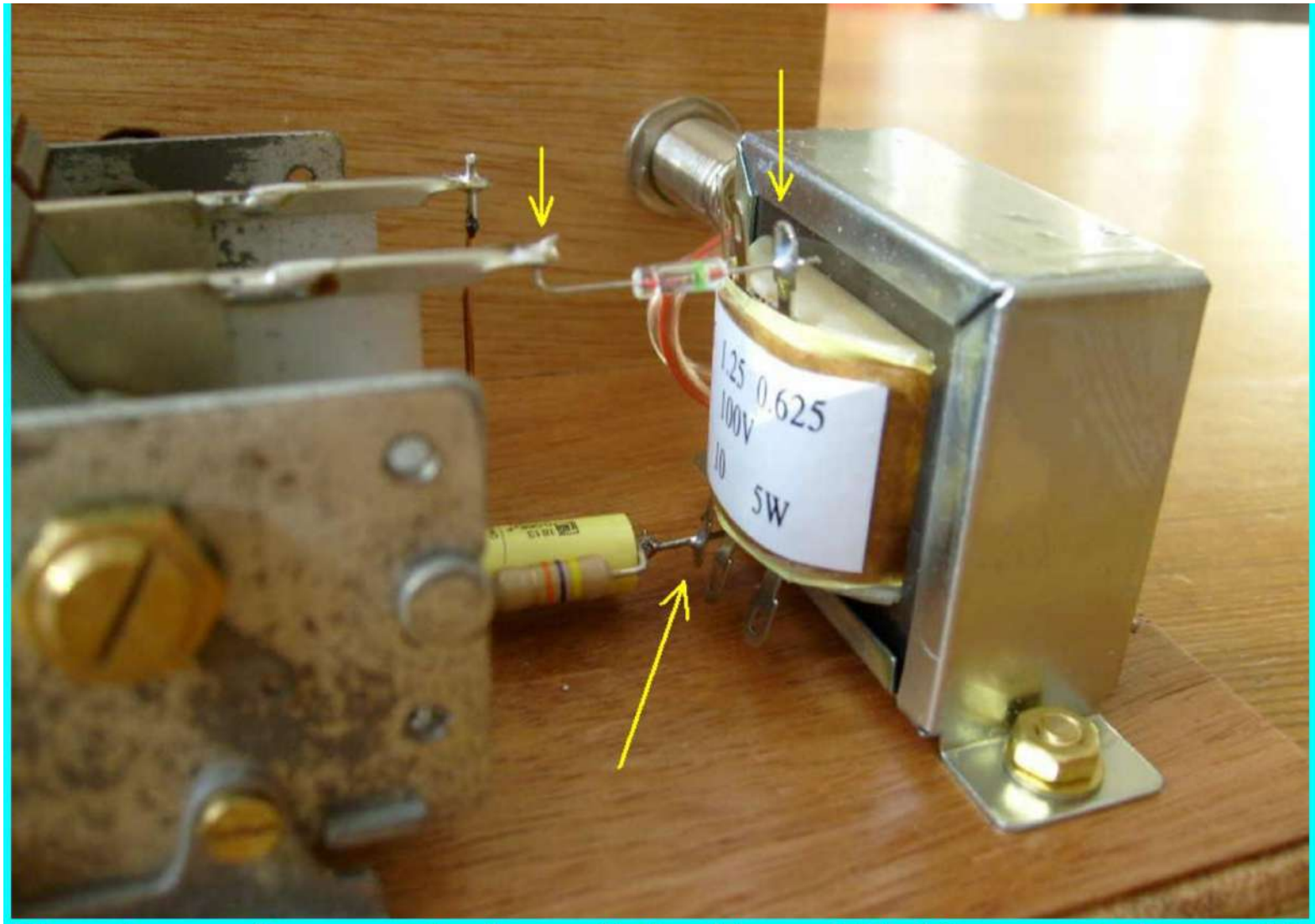
Apply some glue in the holes in the 9 mm sticks
Also apply some glue in the 9 mm holes in the bottom plate.
Place the coil as shown in this picture.
Wait until the glue is dry.



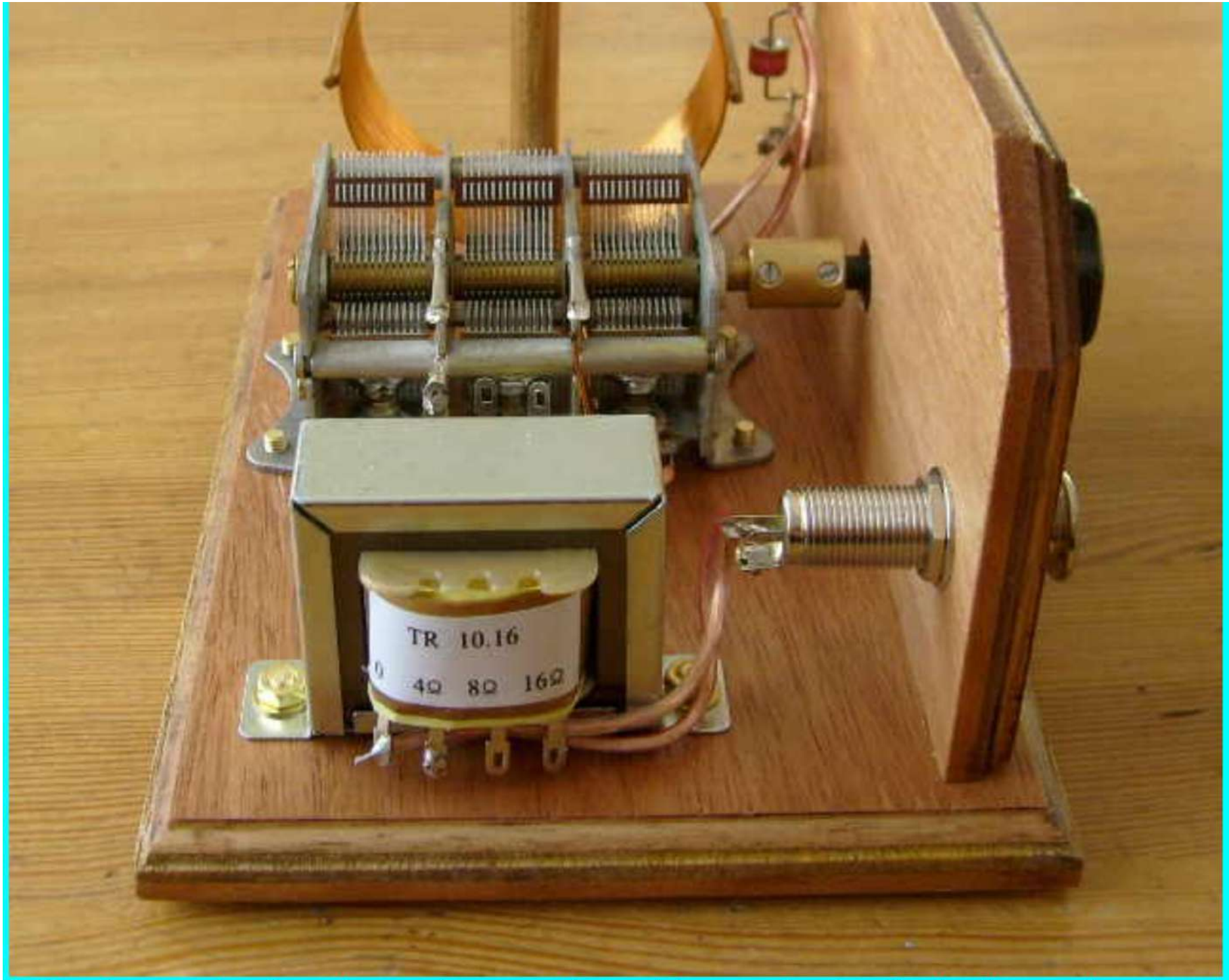
Place the tuning capacitor on the frame.
Fix it with four screws M4x16
One coilwire runs underneath the tuning capacitor, is then bend upwards and cut to length.
Solder this wire to the tuning capacitor (indicated with the arrow in the above picture).
Scrap of the lacquer from the wire, before soldering.



The other wire is cut to length, and soldered to the solder tag of the tuning capacitor (indicated with arrow).

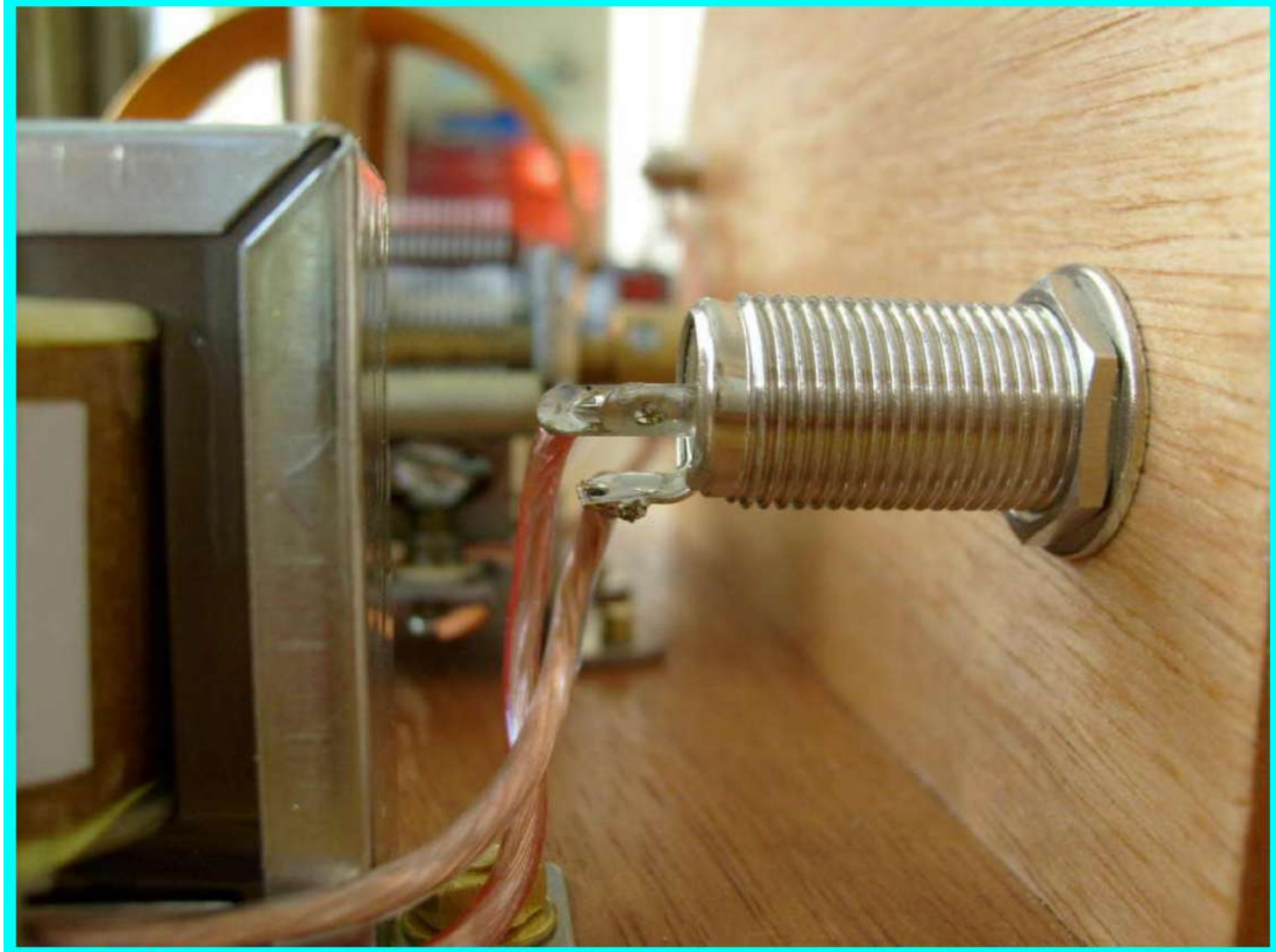


Place the transformer on the frame, fix it with two M4x16 screws, 2 rings and 2 nuts
The wire of the 68 nF capacitor must stick through the "0" connection of the transformer, and is then soldered.
Solder the OA95 diode between tuning capacitor and the "0.625W" connection of the transformer.
The green band on the diode must point towards the transformer.

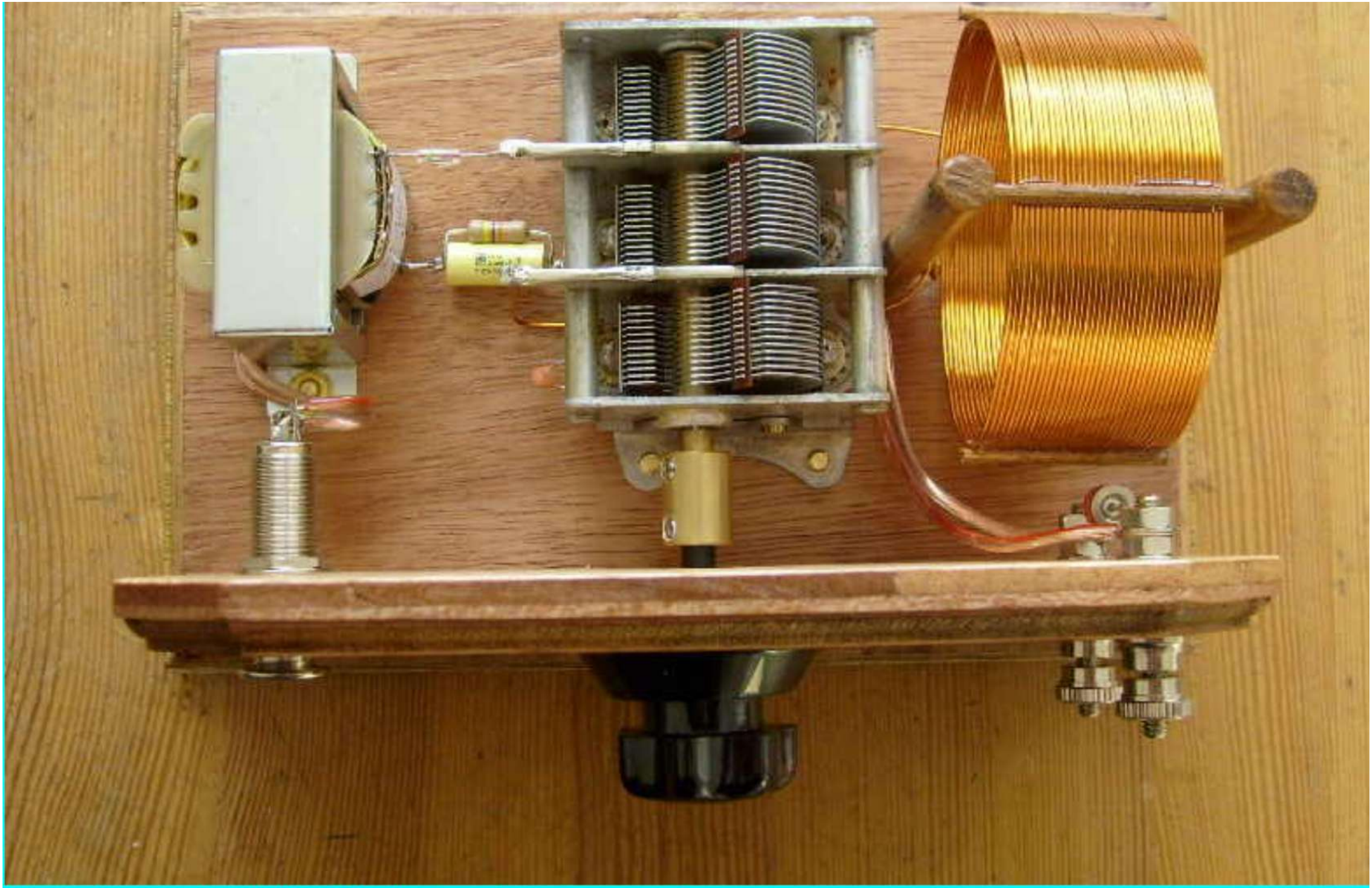


Solder the two wires from the transformer to the headphone socket (see for detail: next picture).

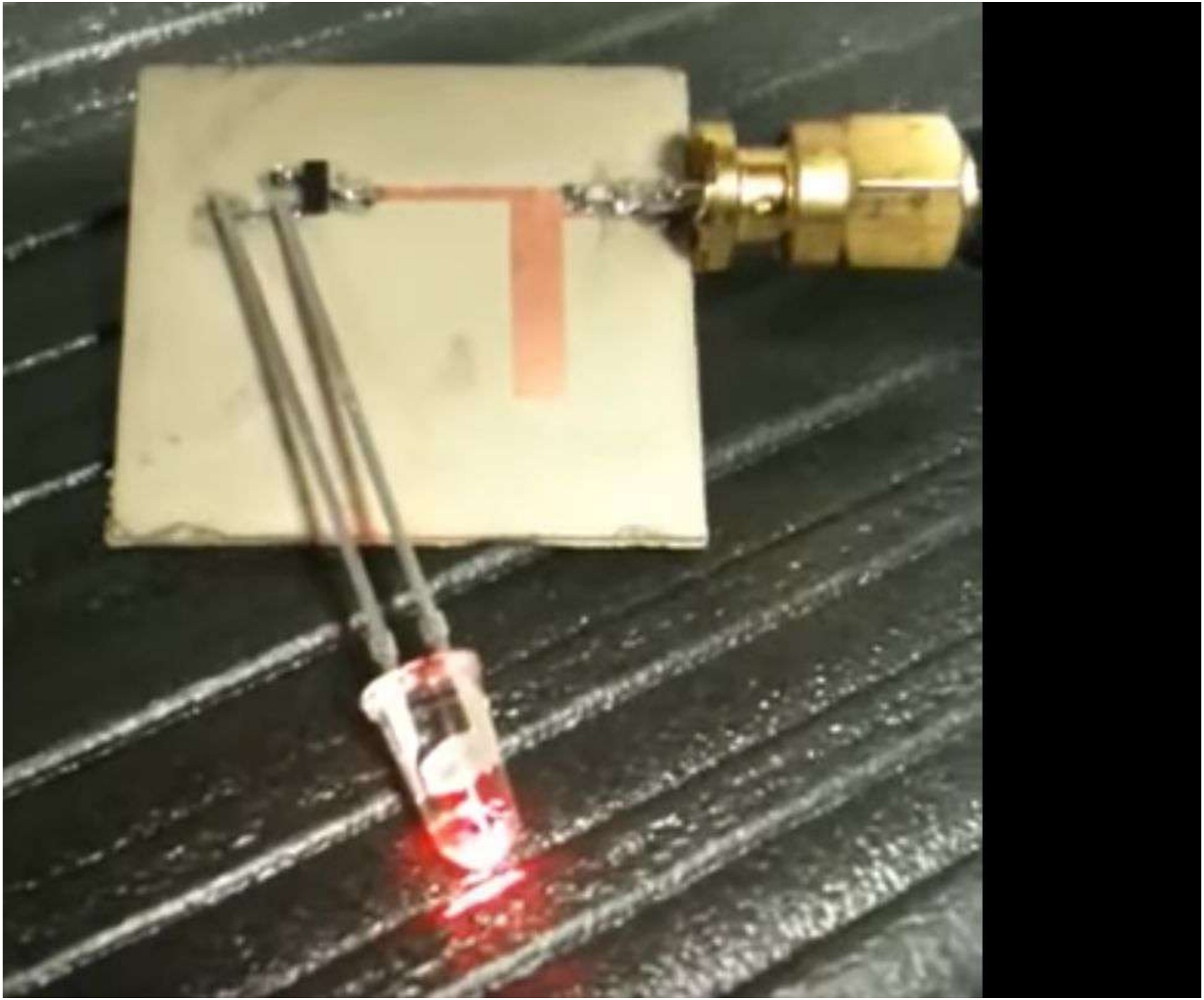
Solder the two wires from the tuning capacitor to the terminal posts.
The wire with the red line on it, comes on the upper (antenna) connection.
The wire without red line, comes on the lower (ground) connection.



Detail of the wires on the headphone socket.
The wire without red line comes on the ground connection.
The wire with the red line comes on the two signal pins, so these two signal pins are connected together.



Mount the extension shaft and the knob on the tuning capacitor.
In the middle position, the pointer on the knob must point upwards.





$10,000
in $100 bills



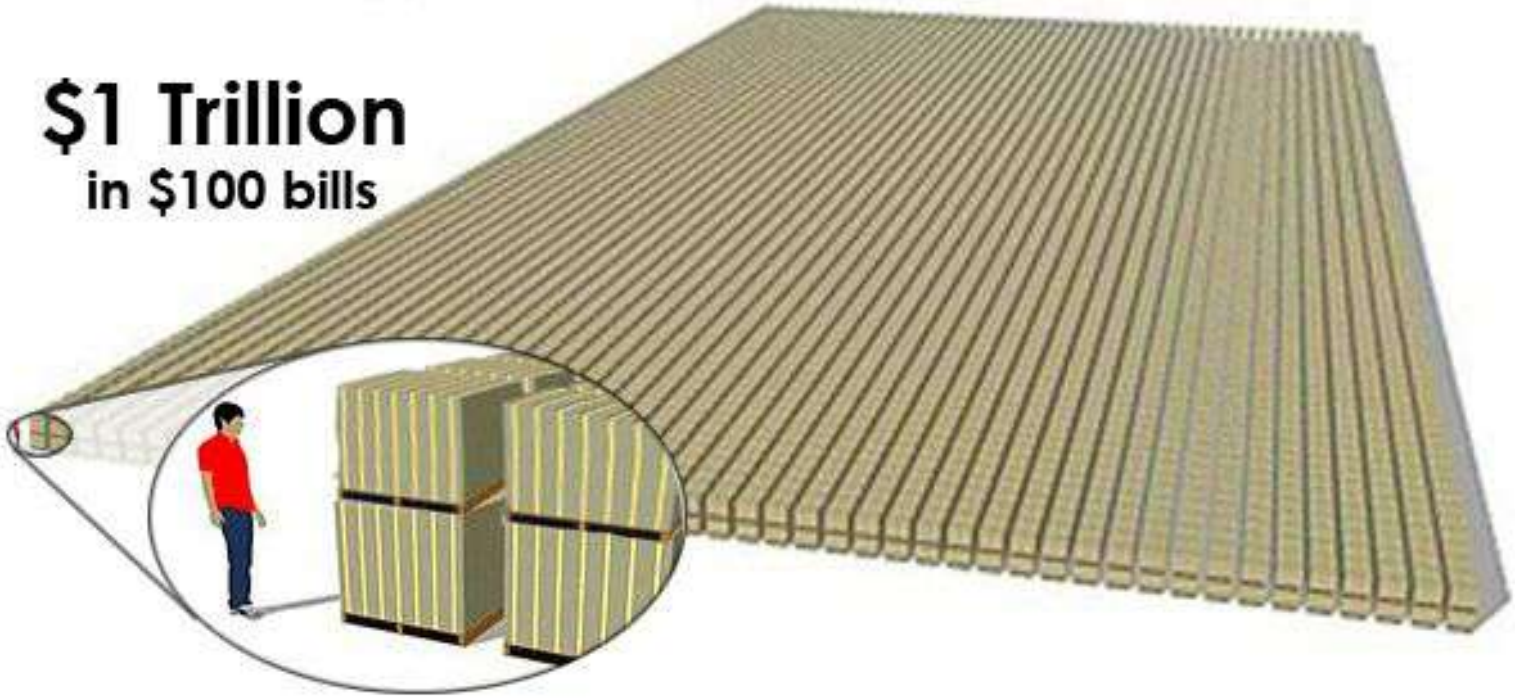
$1,000,000
in $100 bills



$100 Million
in $100 bills



$1 Billion
in $100 bills



$1 Trillion
in $100 bills

USB Type A Female Field Termination Connector



Roll over image to zoom in

L-com Item # USBAFT

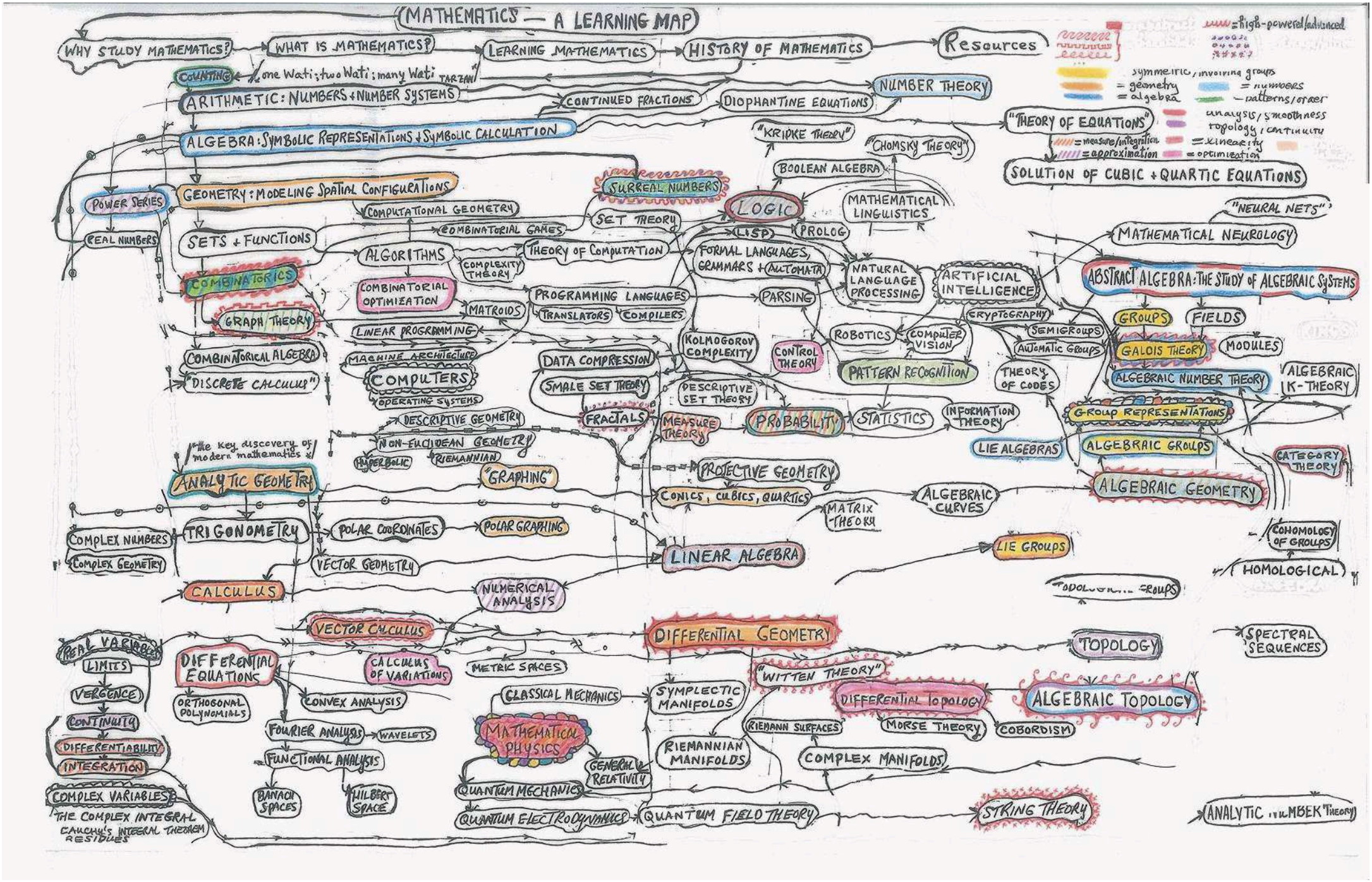
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Your Price 1-9	**$7.24**
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25-99	$6.37
100 +	Call Us

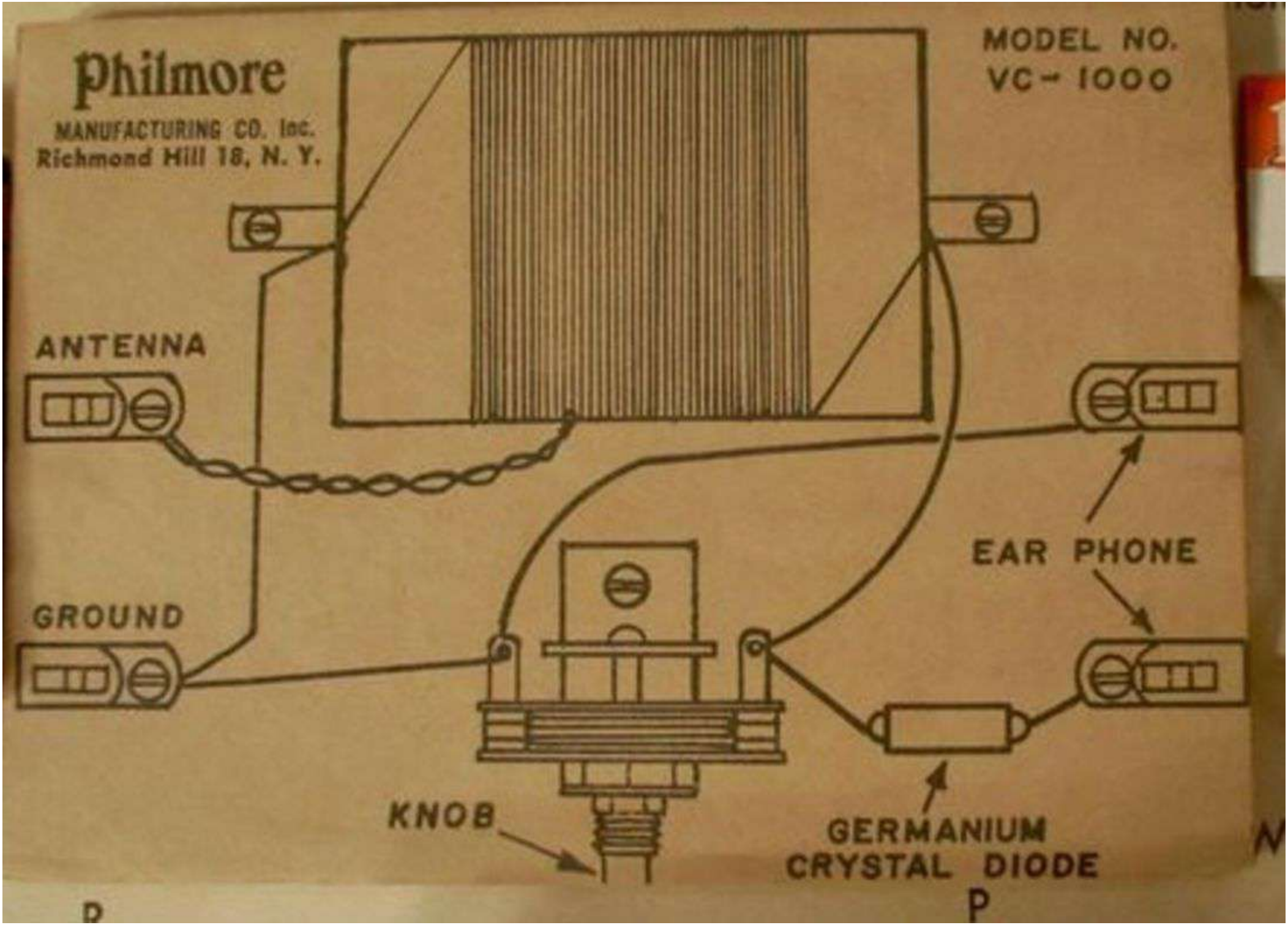
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Available for Same Day Shipping

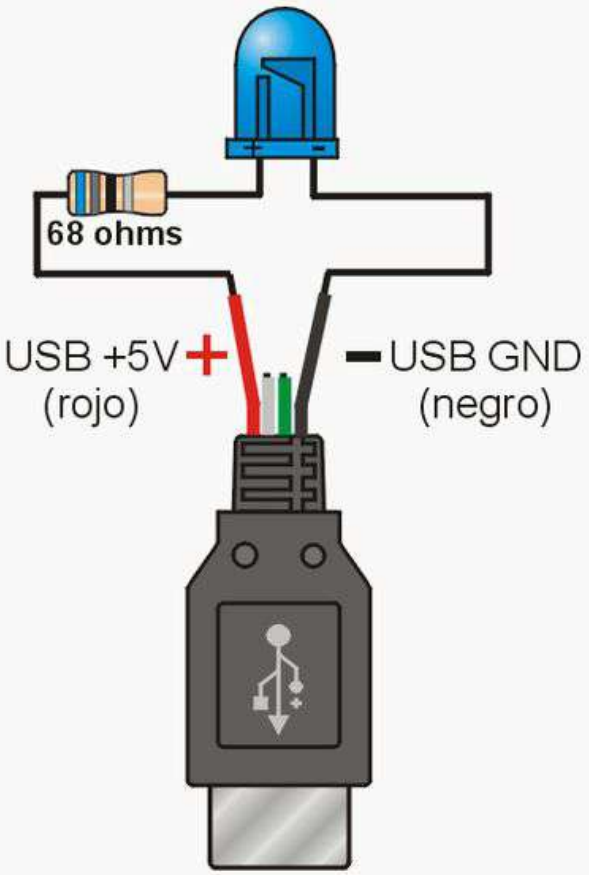
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HISTORY OF MATHEMATICS
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ARITHMETIC: NUMBERS & NUMBER SYSTEMS
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DIOPHANTINE EQUATIONS
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ALGEBRA: SYMBOLIC REPRESENTATIONS & SYMBOLIC CALCULATION
"THEORY OF EQUATIONS"
SOLUTION OF CUBIC & QUARTIC EQUATIONS
"KRIPKE THEORY"
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CONTROL THEORY
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OPERATING SYSTEMS
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PROBABILITY
STATISTICS
INFORMATION THEORY
NON-EUCLIDEAN GEOMETRY
HYPERBOLIC
RIEMANNIAN
LIE ALGEBRAS
ALGEBRAIC GROUPS
CATEGORY THEORY
"the key discovery of modern mathematics"
ANALYTIC GEOMETRY
"GRAPHING"
PROJECTIVE GEOMETRY
CONICS, CUBICS, QUARTICS
MATRIX THEORY
ALGEBRAIC CURVES
ALGEBRAIC GEOMETRY
COMPLEX NUMBERS
TRIGONOMETRY
POLAR COORDINATES
POLAR GRAPHING
COHOMOLOGY OF GROUPS
COMPLEX GEOMETRY
VECTOR GEOMETRY
LINEAR ALGEBRA
LIE GROUPS
HOMOLOGICAL
CALCULUS
NUMERICAL ANALYSIS
"TOPOLOGICAL GROUPS"
VECTOR CALCULUS
DIFFERENTIAL GEOMETRY
SPECTRAL SEQUENCES
REAL VARIABLES
LIMITS
DIFFERENTIAL EQUATIONS
CALCULUS OF VARIATIONS
METRIC SPACES
"WITTEN THEORY"
"TOPOLOGY"
VERGENCE
ORTHOGONAL POLYNOMIALS
CONVEX ANALYSIS
CLASSICAL MECHANICS
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CONTINUITY
FOURIER ANALYSIS
WAVELETS
MATHEMATICAL PHYSICS
RIEMANN SURFACES
MORSE THEORY
COBORDISM
DIFFERENTIABILITY
INTEGRATION
FUNCTIONAL ANALYSIS
RIEMANNIAN MANIFOLDS
COMPLEX MANIFOLDS
GENERAL RELATIVITY
COMPLEX VARIABLES
BANACH SPACES
HILBERT SPACE
QUANTUM MECHANICS
"THE COMPLEX INTEGRAL"
CAUCHY'S INTEGRAL THEOREM
RESIDUES
QUANTUM ELECTRODYNAMICS
QUANTUM FIELD THEORY
STRING THEORY
ANALYTIC NUMBER THEORY
= high-powered/advanced
= symmetric, involving groups
= geometry
= numbers
= algebra
= patterns/orders
= analysis/smoothness
= topology/continuity
= measure/integration
= linearity
= approximation
= optimization

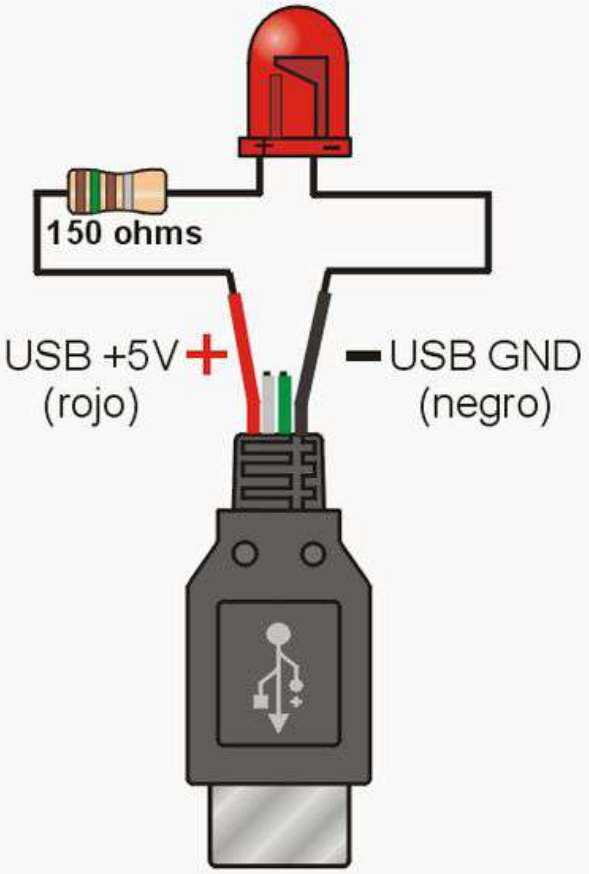

Philmore
MANUFACTURING CO. Inc.
Richmond Hill 18, N. Y.
MODEL NO.
VC-1000
ANTENNA
GROUND
EAR PHONE
KNOB
GERMANIUM
CRYSTAL DIODE

1 LED azul
(con tensión entre 3V y 3,6V)



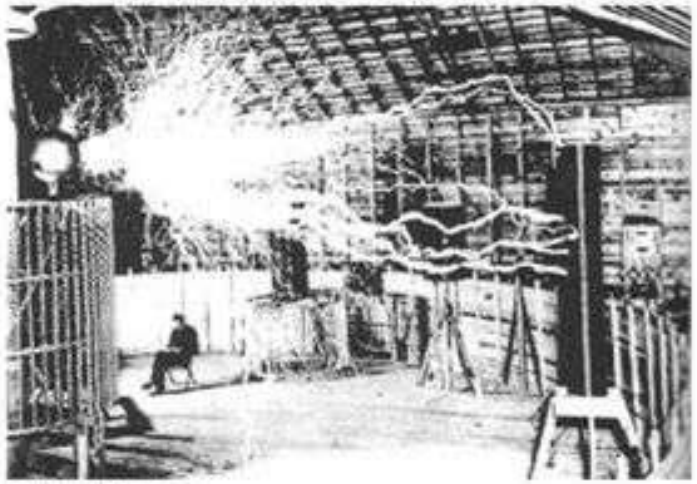
WWW.INVENTABLE.EU

1 LED rojo
(con tensión entre 1,8V y 2,1V)

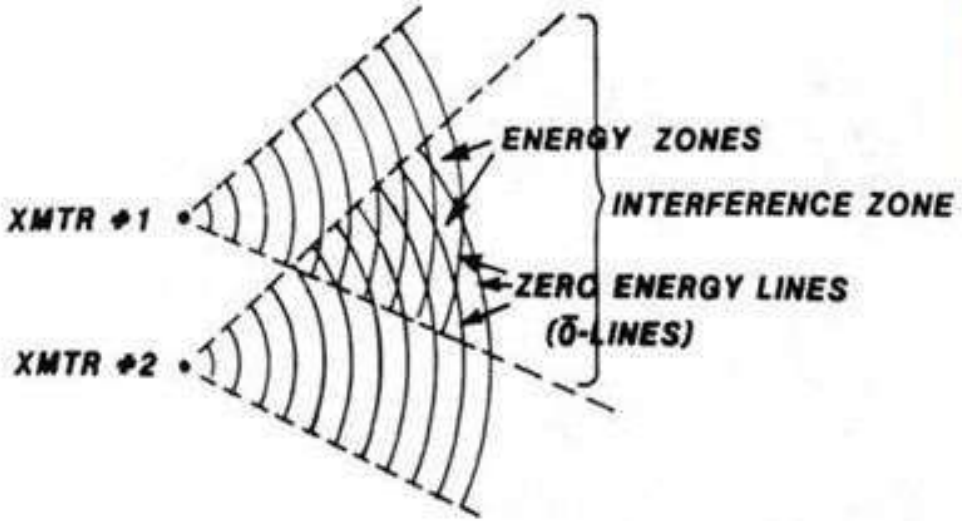


The Tesla Experiment

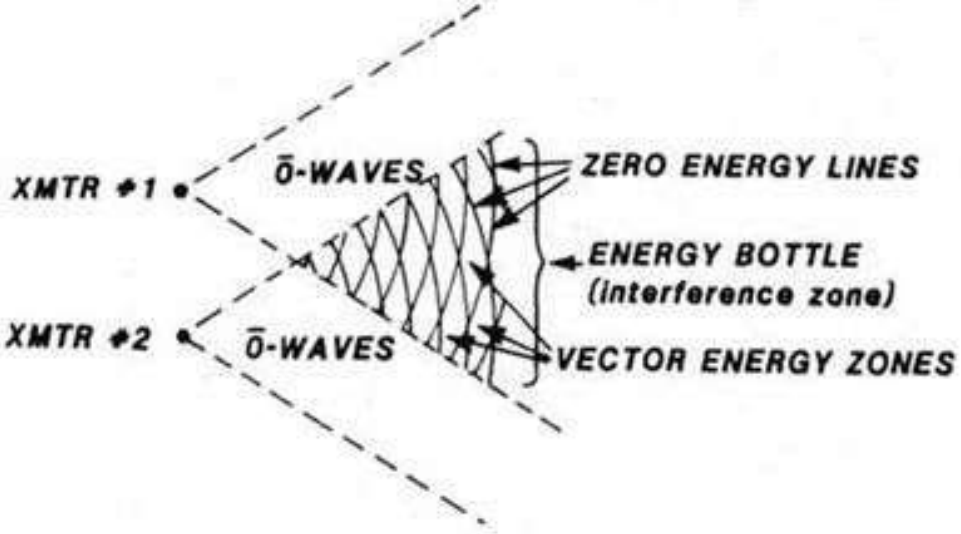




TRANSVERSE WAVE INTERFERENCE



LONGITUDINAL WAVE INTERFERENCE (SCALAR WAVES)



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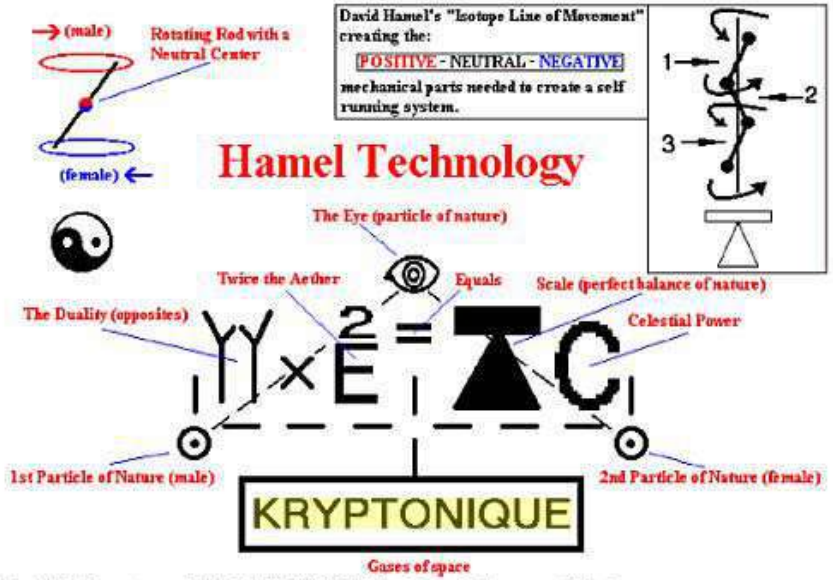
They All Told the Truth: The Antigravity Papers
By Richard P. Crandall

kryptonique Go

About this book

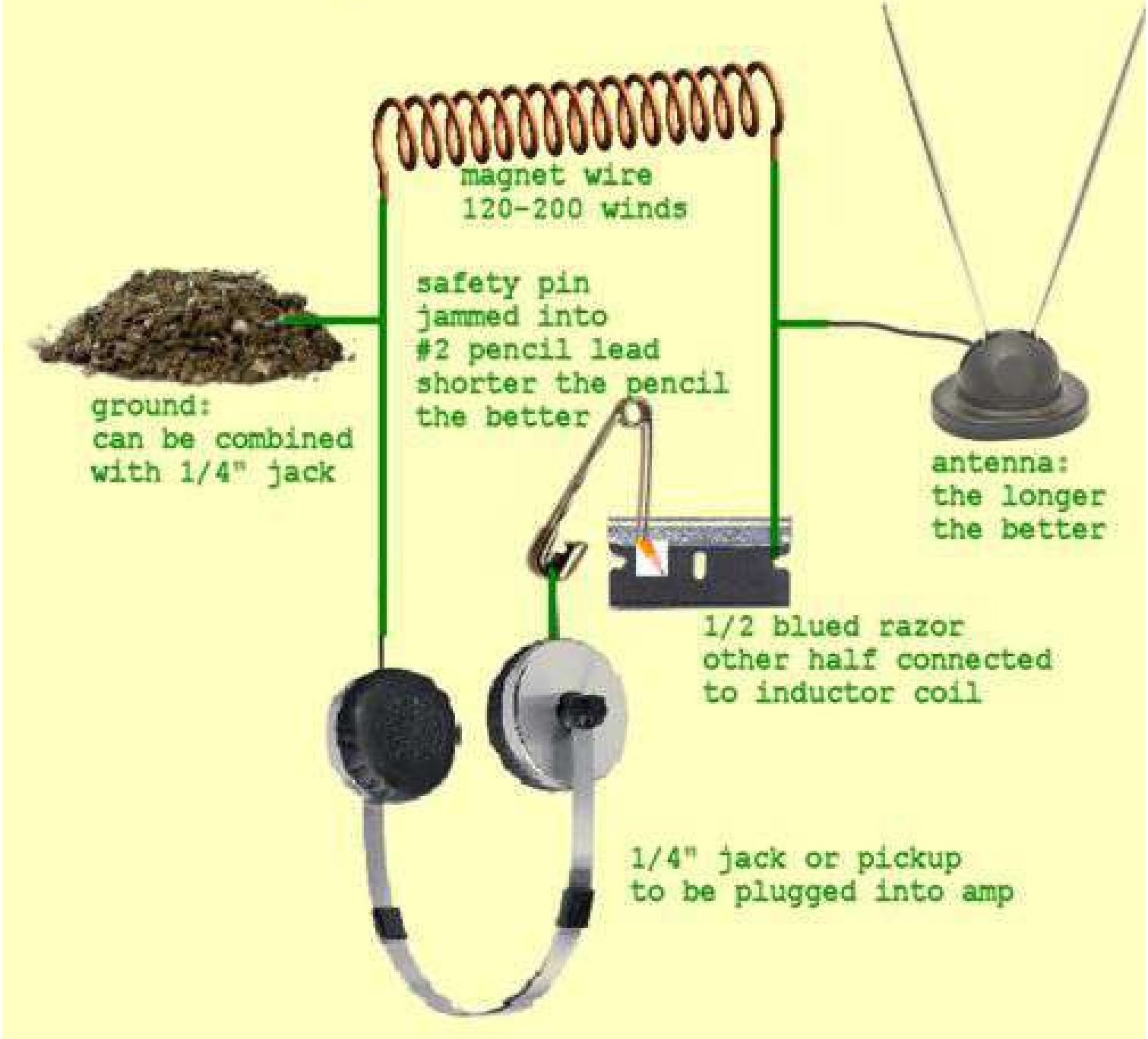
Lost Dwgs & Tech, Ancient India, & "Four"

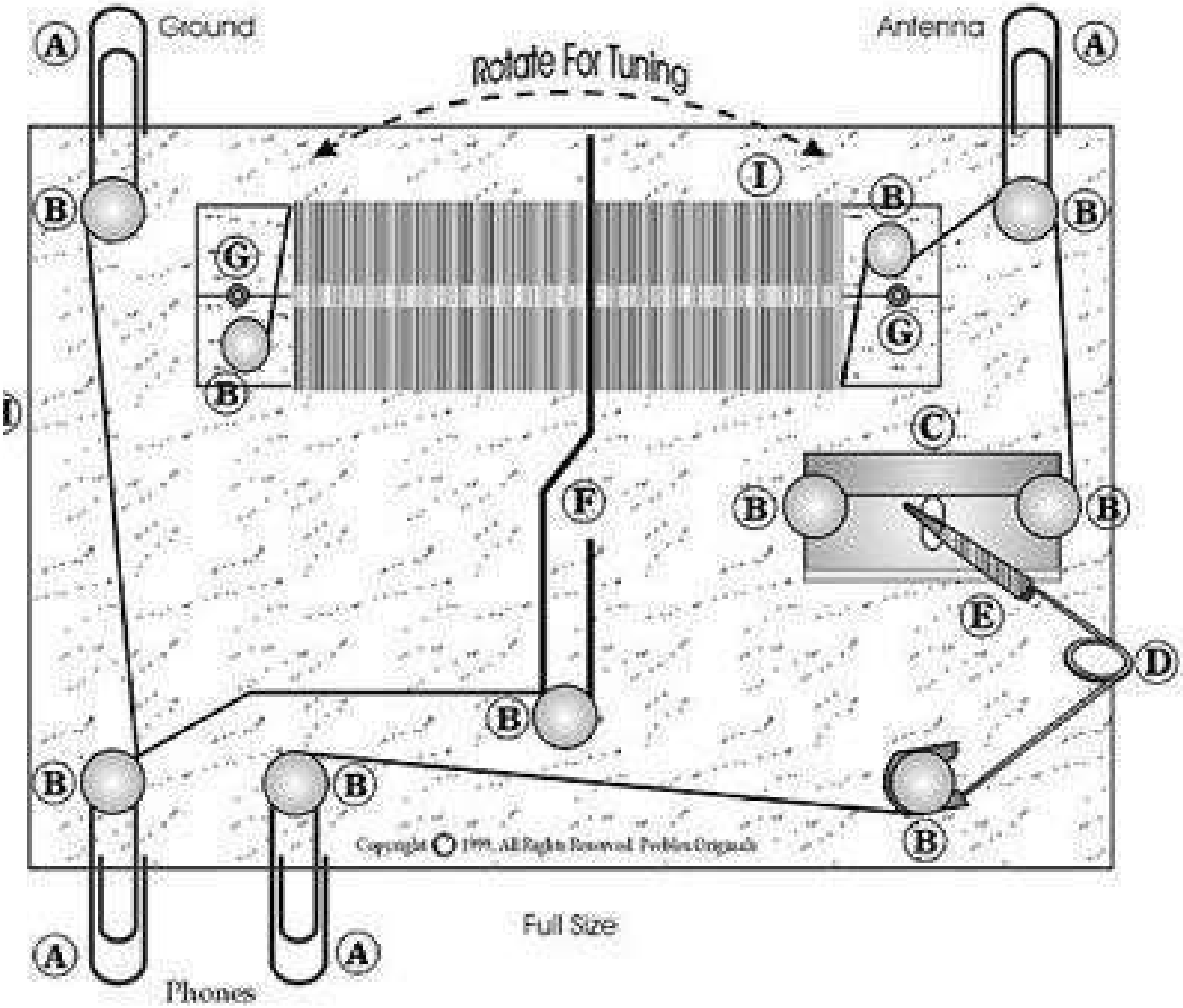
THE LOST HAMEL DRAWINGS:



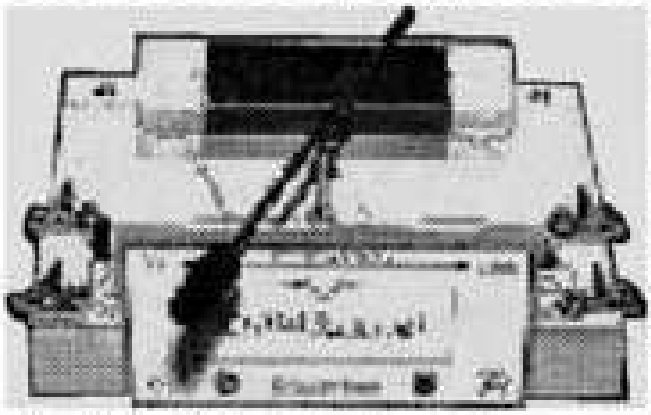
Particle Structure. [The MOST IMPORTANT Hamel Diagram of All.]

Addie's super foxhole radio schematic



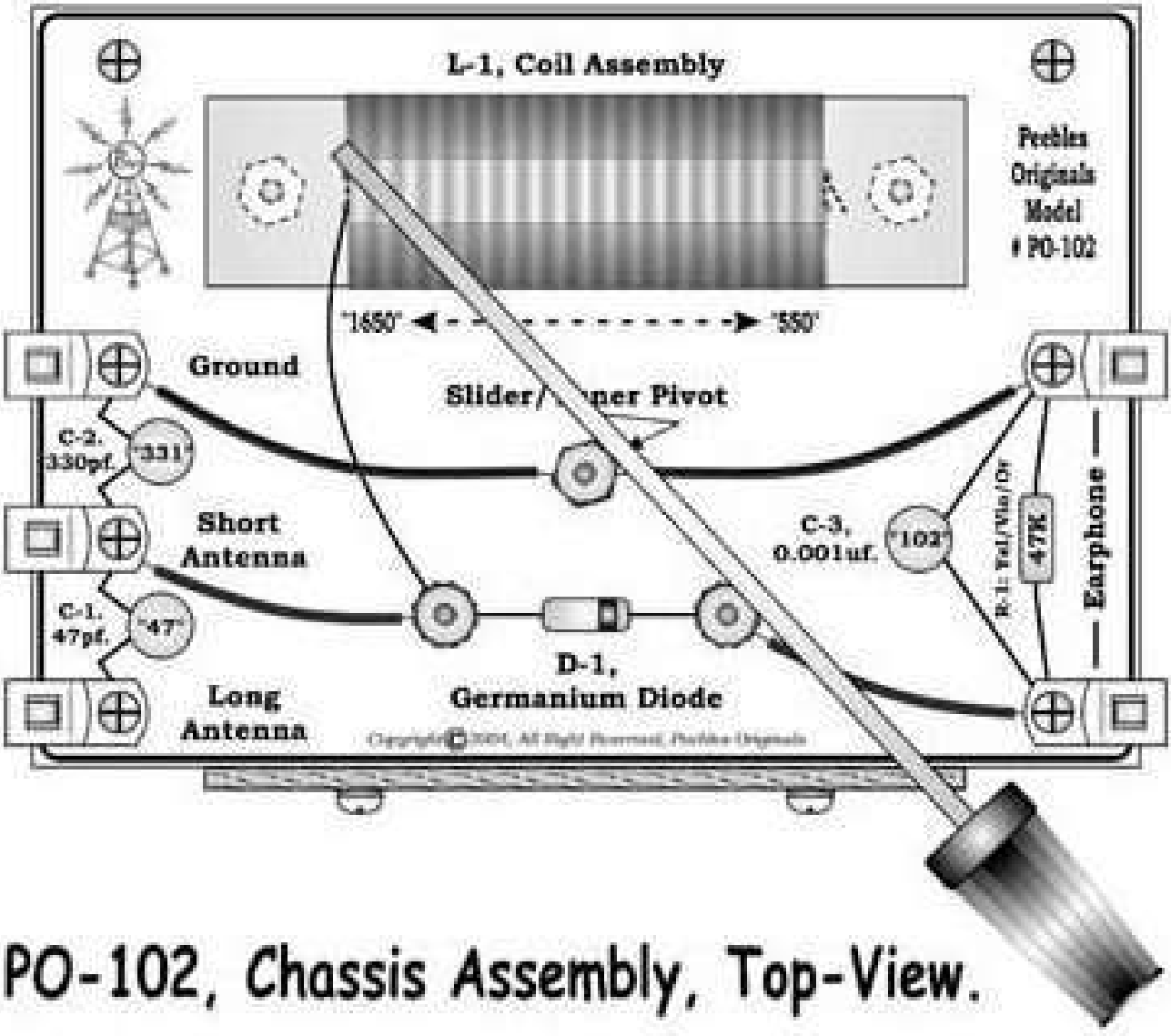

Ground
Antenna
Rotate For Tuning
A
B
C
D
E
F
G
I
Phones
Full Size
Copyright © 1999. All Rights Reserved. Problem Originals

The PO-102, Crystal Radio Kit, w/Slider-Tuning!



Perfect for parents, grandparents, and teachers to build with kids! Also a super starter kit for the beginning adult builder! Includes small coil form, wire, slider assembly, capacitors, and diode. Easy parts layout guide provided for kids. Excellent performance for such a simple but elegant classic slider. Earplug included.

PO-102, w/Crystal Earphone



PO-102, Chassis Assembly, Top-View.

Fire Kit Example





WWW.PREPPERSSHOP.CO.UK

THE ULTIMATE BUG OUT BAG

1. Anglo Arms Rambo Knife
2. Anglo Arms Machete
3. Austrian Ex-Military Water Flask
4. BCB Trekker Lifesaver Pack
5. BCB Compact Fishing Kit
6. Canadian Gas Mask w/ Filters
7. Feit Electric 500 LED Torch
8. French Military Mess Tins
9. Hexamine Solid Fuel Cooker
10. Heavy Duty Camo Tarp
11. Highlander Survival Bag
12. Highlander Solid Fuel Cooker
13. Highlander Trekker Hammock
14. Highlander Folding Saw
15. Kombat UK W/proof Matches
16. Kombat UK 40l Molle Bag
17. Kombat UK Fire Starting Kit
18. Kombat UK Compass
19. Kombat UK Throwing Axe
20. Oasis Water Purification Tablets
21. Pro Force Survival Saw
22. Sawyer Mini Water Filter
23. Sharpening Stone
24. Survival Mirror
25. Turboflame Lighter
26. UST Survival Poncho
27. Wateproof Rucksack Liner
28. Wind Up Solar Torch
29. Wooden Deluxe Knife w/ Case
30. 100ft Paracord
31. 24hr Ration Pack

£280


FRONTIER STRAW

Maine Military Supply's 72 Hr Bug-Out-Bag



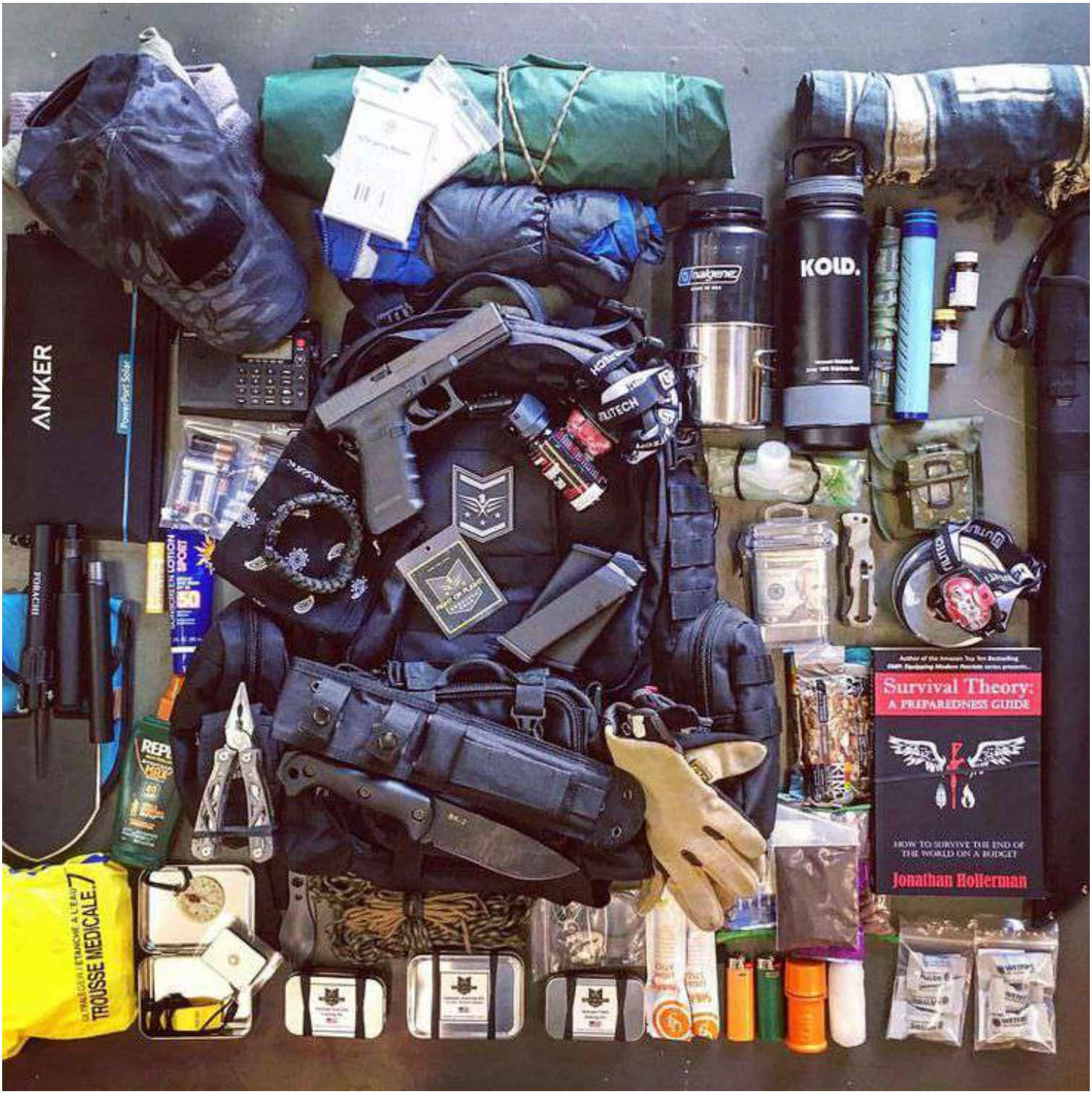
Item	Description	SKU:	Org.Price:
#1:	Solar Panel Charger	014318	$49.99
#2:	Tactical Trauma Kit #1	0082110003	$39.99
#3:	8LED Head Lamp Silver	019140	$4.99
#4:	40IN-1 Dynamo Energy Radio	019138	$19.99
#5:	100' Black Parachute Cord	016704	$6.99
#6:	One (1) Ameriglow 6" Light Stick	018848	$1.99
#7:	Magnesium Fire Starting Tool	005608	$7.99
#8:	Sabre 3-IN-1 Defense Spray	005555	$11.99
#9:	Emergency Survival Blanket	05606	$2.99
#10:	Spork OD	020362	$3.99
#11:	New Wire Handle Canteen Cup	008508	$9.99
#12:	Canteen w/ Cover OD 1qt	003927	$8.98
#13:	Wise Emergency Food Kit 72hr	017279	$29.99
#14:	Medium Transport Pack Black	020355	$48.99
#15:	Adventurer Knife Kit	020363	$24.99
#16:	Trip Wire: Yellow & Green	019917	$2.99
#17:	Waterproof Storage Box	019152	$1.99
#18:	10hr Hand and Body Warmers (x3)	08016	$4.47
#19:	Coin Towels 4pk Tubes (x3)	019415	$1.47
#20:	3-IN-1 Compass Whistle	019133	$2.99
#21:	3-IN-1 Waterproof Match Tube	019759	$1.99
#22:	Marching Lensatic Army Compass	007127	$11.99
#23:	Waterproof Matches	016379	$2.99
#24:	Water Purification PA+Plus Tabs	012838	$11.99
#25:	11 Function Survival Tool	019145	$2.99
#26:	German Folding Stove w/ Fuel	003929	$2.99

Total: $322.69

-20%

Total Bug Out Bag Weight: 12.4lbs

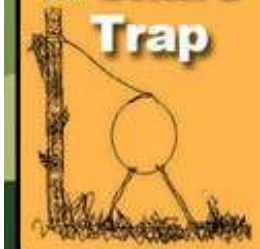
Your Price: $258.15


ANKER
KOLD.
FLITECH
Survival Theory:
A PREPAREDNESS GUIDE
HOW TO SURVIVE THE END OF THE WORLD ON A BUDGET
Jonathan Rollerman
TROUSSE MEDICALE


Bug out Bag
Water Bottle w/ Charcoal Filter
Aquamira Tablets
Handwarmers
Cotton Balls
Fire Starter
Knife
Matches
70 oz Camelbak Bladder in bag
TP
BG Parang
Fenix Flashlight w/
CR123 Batteries
6 MRE's
Fuel Stove Kit
Spare Contcats
First Aid Kit w/ Quikclot
Israeli Bandage
Walther P99 w/ 130 rds
of 9mm
Pampers
Baby Wipes

6 EMERGENCY USES FOR PARACORD

1. Snare Trap



Did you know?

A single length of paracord has been tested to handle 550 lbs of weight.



2. Fishing Line



3. Shelter





Did you know?

There are seven internal strands, each of which comes apart into two, so there's 14 thin lines.

4. Fishing Net



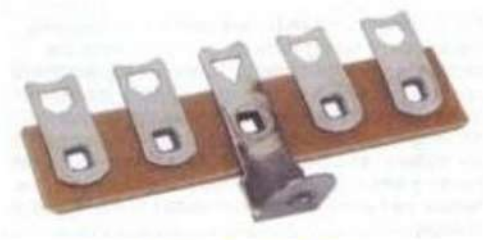
5. Fire



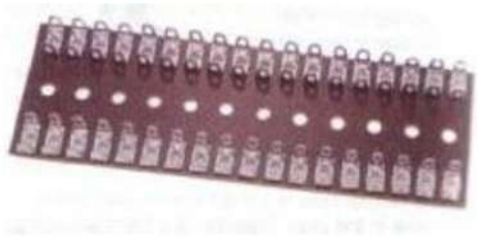
6. Bear Bag




AFTER 1 HOUR
© BRIGHTSIDE



5 WAY TAG STRIP



36 WAY TAG STRIP - TWO ROWS

e wired together ,with a little ingenuity, with the component wires being held together in the grip of solderless crocodile clips, whereby the conne
older.

ex circuits a plastic Terminal Block (sometimes referred to as a choc' or chocolate block) can be utilised very effectively indeed. These are used
15 Amp and 30 Amp. The 5 and 15 Amp Terminal Blocks I have found to be the most suitable. The various component wires can be trappec
makes it easy to change the components around when experiment with different circuits. See The EXPERMENTAL CRYSTAL SET for more det

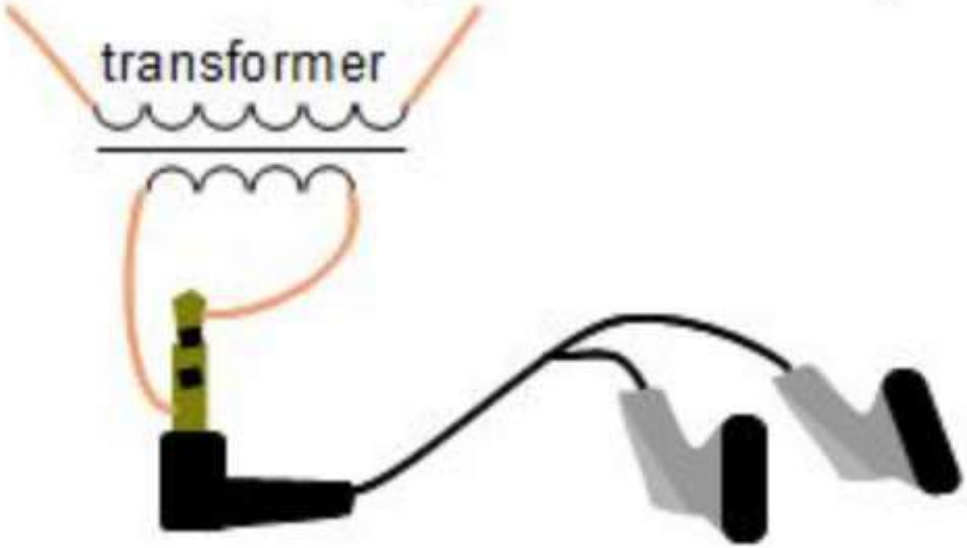


'CHOCOLATE' TERMINAL BLOCK

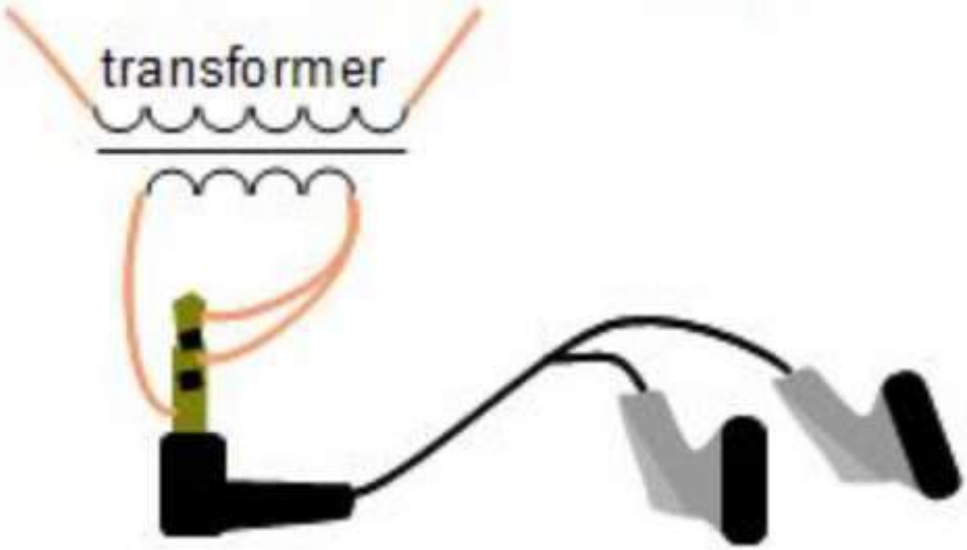
Where to connect to the earbud jack.

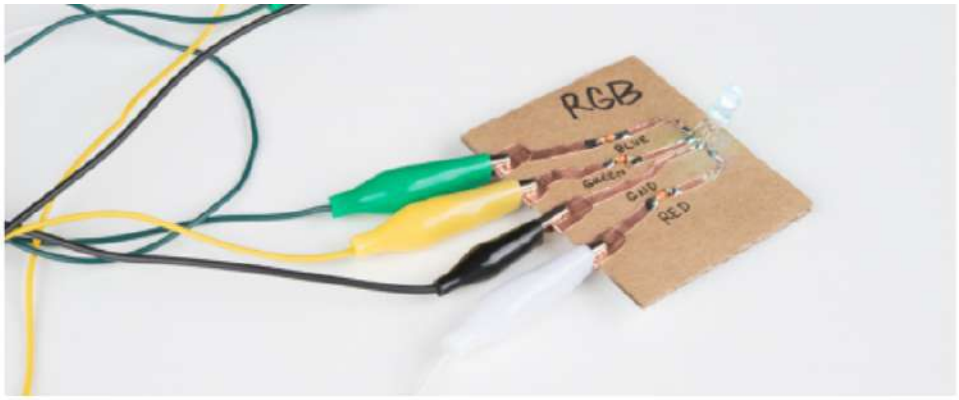


For connecting to one earbud only.

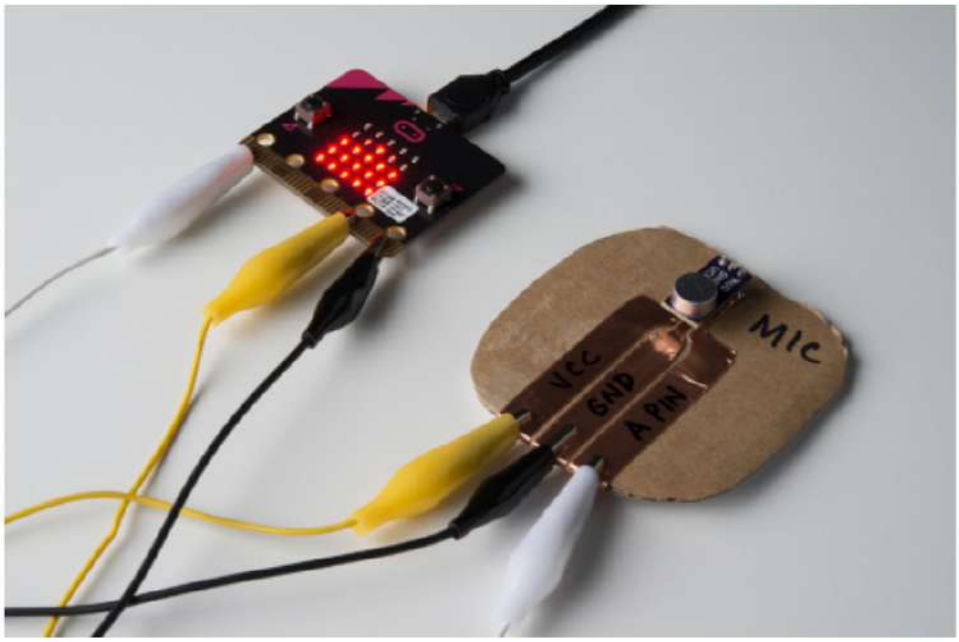


For connecting to both earbuds.





The current-limiting resistors are part of the cardboard circuit. The black spots are where I used the Bare Conductive paint



The micro:bit is plotting the analog values on the 5x5 LED matrix, which represent the noise level in the room.



All you need to get started is a roll of copper tape, a few components and conductive paint. One roll of tape and tube of paint can make about 200 circuits.

COSMIC VIBRATIONS

Octave	Manifestation	Vibrations per second	Gaps
1	TOUCH	2	
2		4	
3		8	
4		16	
5		32	
6		64	
7		128	
8		256	
9	SOUND	512	
10		1,024	
11		2,048	
12		4,096	
13		8,192	
14		16,384	
15		32,768	
16		65,536	
17		131,072	
18		262,144	
19		524,288	
20	ELECTROMAGNETIC (Longer Radio Waves)	1,048,576	
21		2,097,152	
22		4,194,304	
23		8,388,608	
24		16,777,216	
25		33,554,432	
26		67,108,864	
27		134,217,728	
28		268,435,456	
29		536,870,912	
30		1,073,741,824	
31	ELECTROMAGNETIC (Microwaves)	2,147,483,648	
32		4,294,967,296	
33		8,589,934,592	
34		17,179,869,184	
35		34,359,738,368	
36		68,719,476,736	
37		137,438,953,472	
38		274,877,906,944	
39		549,755,813,888	
40		1,099,511,627,776	
41		2,199,023,255,552	
42		4,398,046,511,104	
43	HEAT OR INFRARED	8,796,093,022,208	
44		17,592,186,044,416	
45		35,184,372,088,832	
46		70,368,744,177,664	
47		140,737,488,355,328	
48		281,474,976,710,656	
49	VISIBLE LIGHT	562,949,953,421,312	
50		1,125,899,906,842,624	
51		2,251,799,813,685,248	SPIRIT ELECTRONS
52	ULTRAVIOLET	4,503,599,627,370,496	
53		9,007,199,254,740,992	
54		18,014,398,509,481,984	
55		36,028,797,018,963,968	
56		72,057,594,037,927,936	
57		144,115,188,075,855,872	
58	X-RAY	288,230,376,151,711,744	
59		576,460,752,303,423,488	
60			
61			
62		4,611,686,018,427,387,904	
63			
64		*The Vibrations in these octaves increase to an incomprehensible number per second.*	
65			
66			
67			
68			
69			
70	GAMMA AND COSMIC RAYS	*The phenomena of psychic projections and soul essence occur in octaves considerably beyond those of any known material manifestations. Consequently, they must not be considered as immediately following any manifestation which we have shown on this chart.*	PSYCHIC PROJECTIONS
71			
72			
73			
74			
75			
76			SOUL ESSENCE
77			
78			
79			
80			

(THESE INTERVALS AND FIGURES ARE APPROXIMATE AND NOT EXACT)

NOTICE

This chart was carefully compiled by the Editorial and Research Departments of AMORC College after consulting the most eminent scientific authorities on the subjects of physics and chemistry and comparing their observations and notations with the reports from the Rosicrucian laboratories in foreign countries.

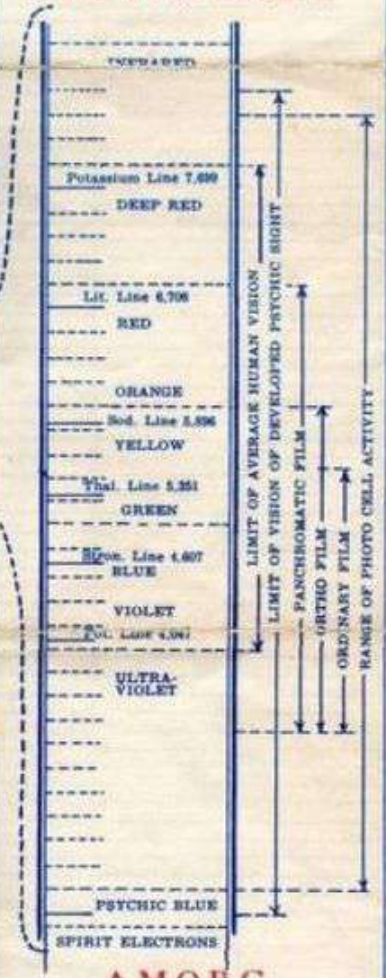
There is a slight disagreement in regard to the rates of vibrations for the various keys of the musical keyboard, due to different standards of pitch in various countries, and there is some disagreement among scientific authorities in regard to the colors associated with various musical notes. This chart represents not only the consensus of most of these authorities but also adheres strictly to what the Rosicrucians have been able to demonstrate as truth in their own laboratories and in the experiments of thousands of members in various parts of the world. Regardless, therefore, of any disagreement with authorities outside the organization, this chart is the authentic presentation of the Rosicrucian knowledge.

This chart is to be used by the members of the Rosicrucian Order in connection with their studies and experiments and is not to be used for any other purpose or in any other way. Like the lessons themselves, this chart and the facts contained on it are reserved and restricted in use under the rules and regulations of the organization.

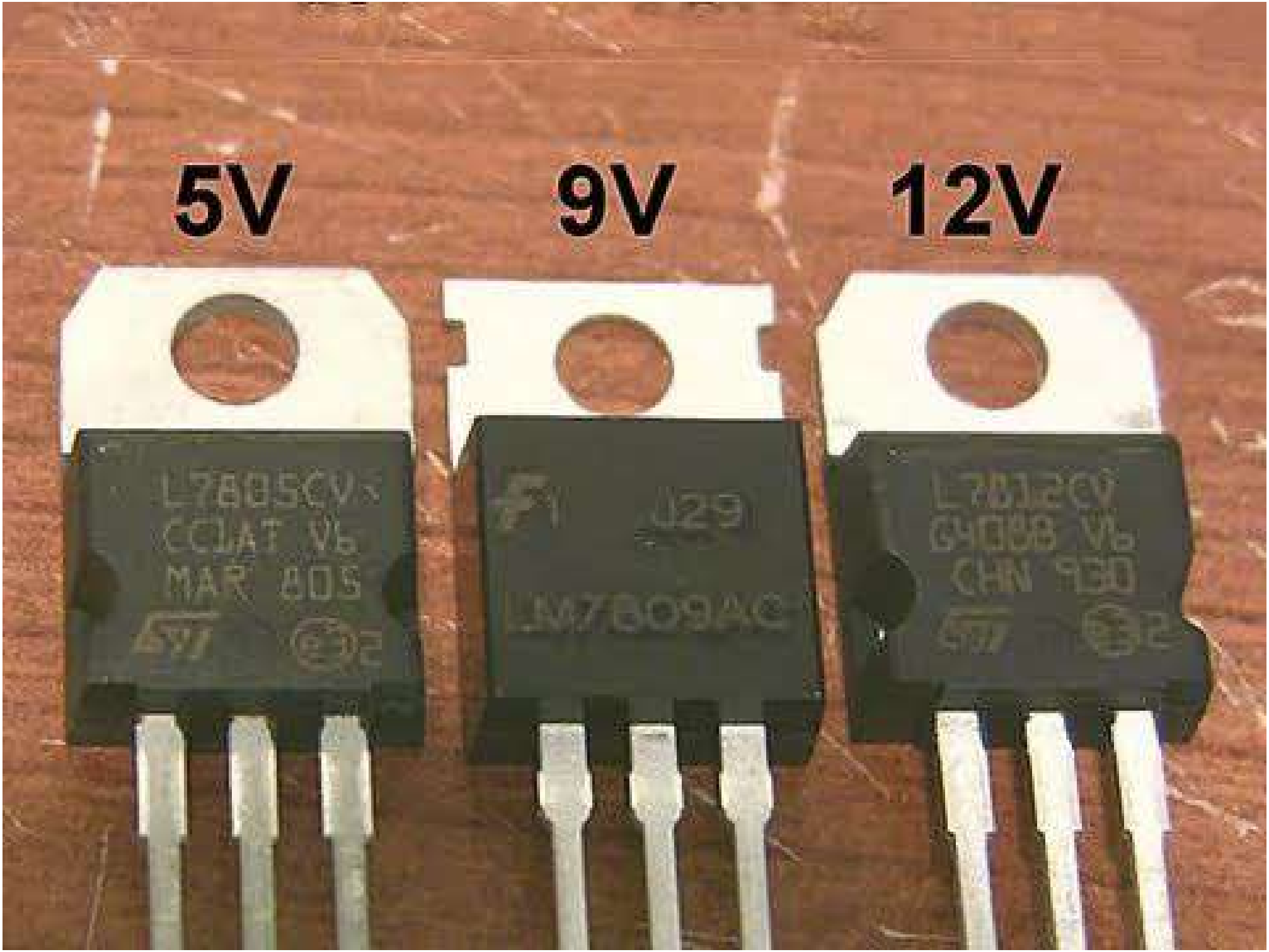
INTERNATIONAL SEAL OF THE SUPREME LODGE of the Rosicrucian Order

AD ROSAM PER CRUCEM · AD CRUCEM PER ROSAM ·

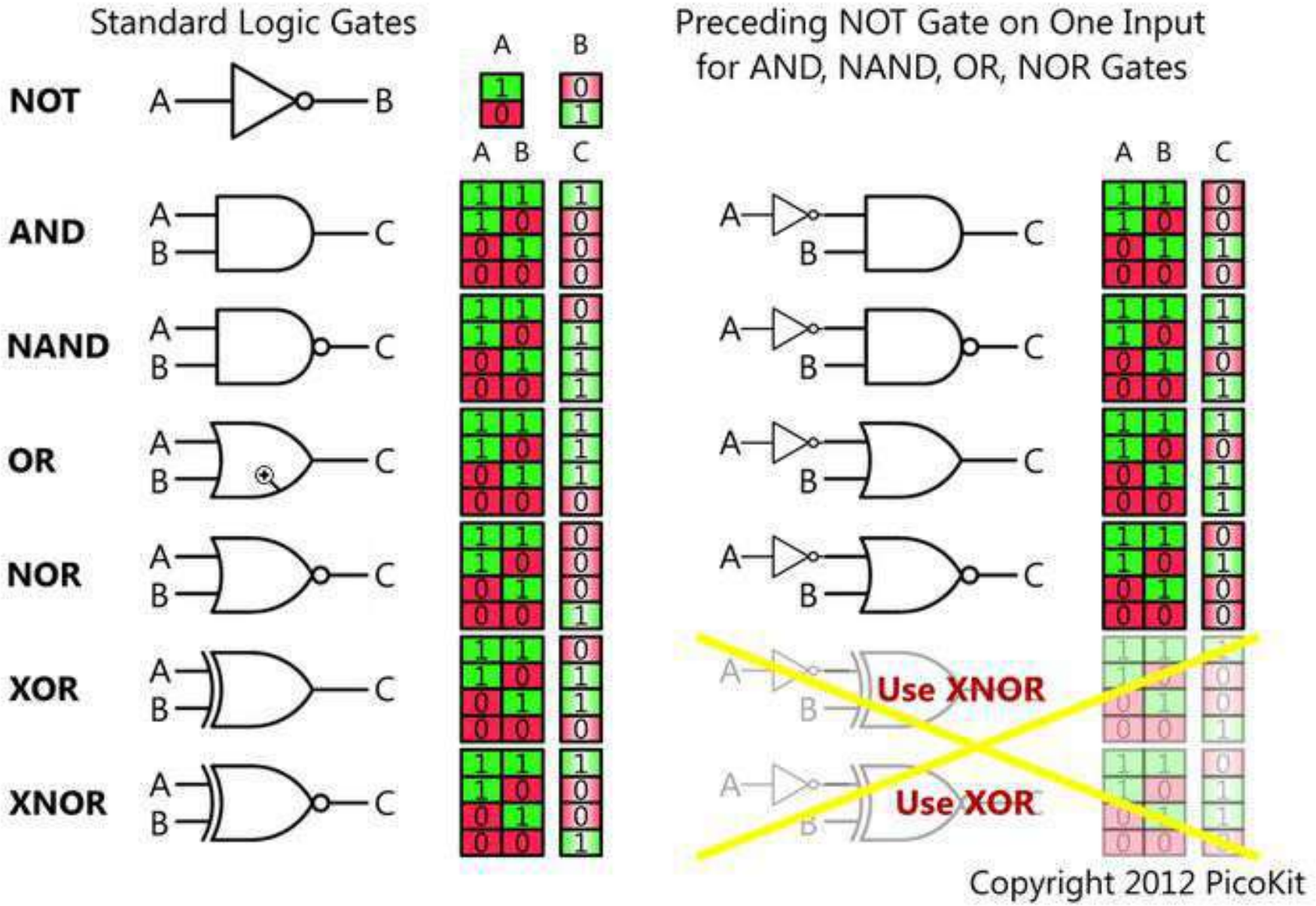
THE SOLAR SPECTRUM



AMORC
THE
Rosicrucian Order
San Jose, California


5V
9V
12V

7 LOGIC GATES & 4 USEFUL COMBINATIONS



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TYPE N F



SMA M



PAL/BELLING LEE F



UHF F



MCX MALE
(OTHER END)



TYPE F F



BNC F



SMA F



TYPE N F



SMA M



PAL/BELLING LEE F



UHF F



MCX MALE
(OTHER END)



TYPE F F

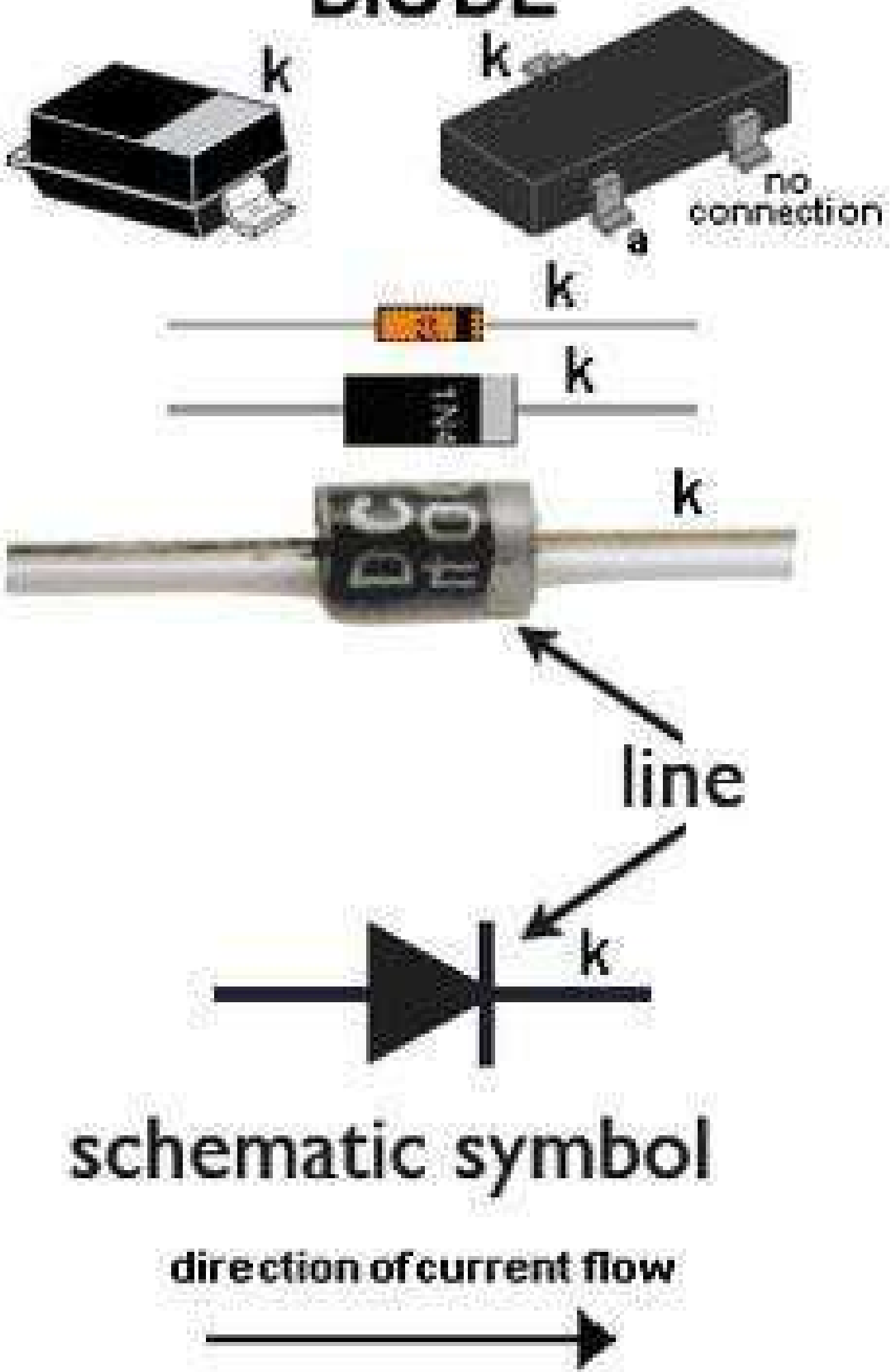


BNC F



SMA F

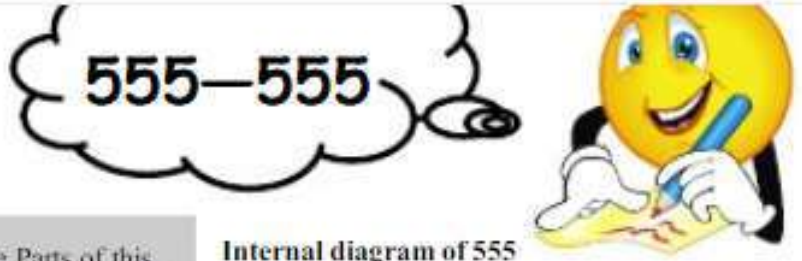
DIODE



schematic symbol

direction of current flow

7. 555 Timer Projects



In this section we will make :

7.1 4 Key Piano
7.2 Light sensitive music circuit
7.3 Light controlled Police Siren
7.4 Touch Switch
7.5 Timer
7.6 Continuity Tester
7.7 Knight Rider
7.8 Cricket Game
7.9 Multipurpose circuit
7.10 Johnson counter



Some Parts of this project are available in Video CD ROM

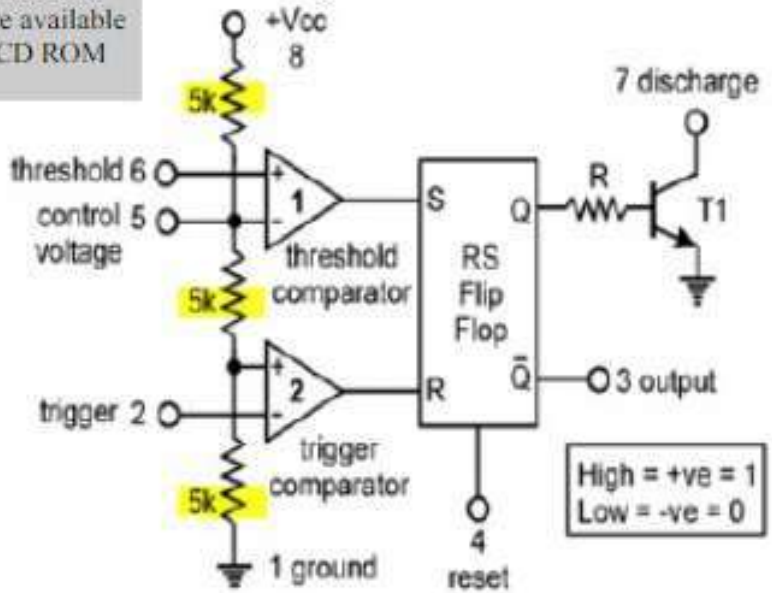


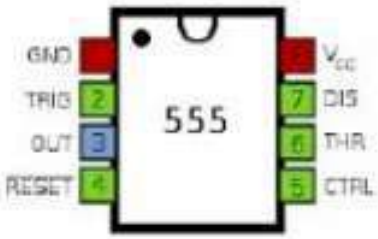
What is it about ?

555 timer integrated circuit (IC) is a very popular chip used in variety of applications like timer, pulse generation and oscillators. This is a low cost, stable and widely available chip which makes it favorite for hobbyists. The internal components of 555 as shown in figure consists of 2 comparators and a flip flop. All of these components contain 25 transistors and 15 resistors packed in the IC.

The three highlighted 5k resistors shown in figure are the reason why this IC is named as 555.

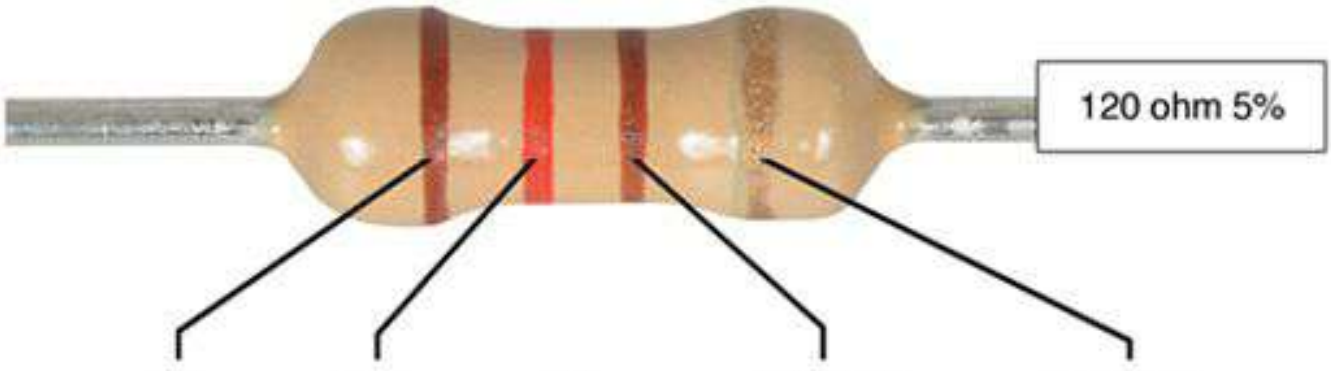
Internal diagram of 555





Please note the notch near first pin. This is made to indentify the first pin of IC.

Pin	Name	Purpose
1	GND	Ground reference voltage, low level (0 V)
2	TRIG	The OUT pin goes high and a timing interval starts when this input falls below 1/2 of CTRL voltage (which is typically 1/3 of V_{CC}, when CTRL is open).
3	OUT	This output is driven to approximately 1.7V below $+V_{CC}$ or GND.
4	RESET	A timing interval may be reset by driving this input to GND, but the timing does not begin again until RESET rises above approximately 0.7 volts. Overrides TRIG which overrides THR.
5	CTRL	Provides "control" access to the internal voltage divider (by default, 2/3 V_{CC}).
6	THR	The timing (OUT high) interval ends when the voltage at THR is greater than that at CTRL.
7	DIS	Open collector output which may discharge a capacitor between intervals. In phase with output.
8	V_{cc}	Positive supply voltage, which is usually between 3 and 15 V depending on the variation.

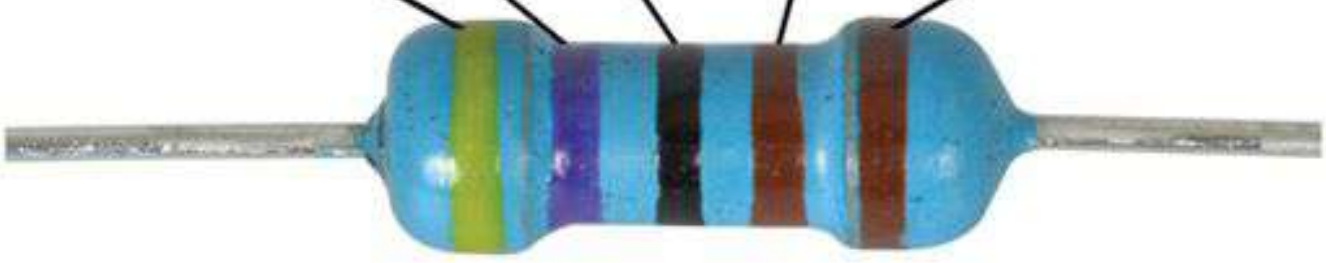


120 ohm 5%

1st 2nd 3rd Multiplier Tolerance

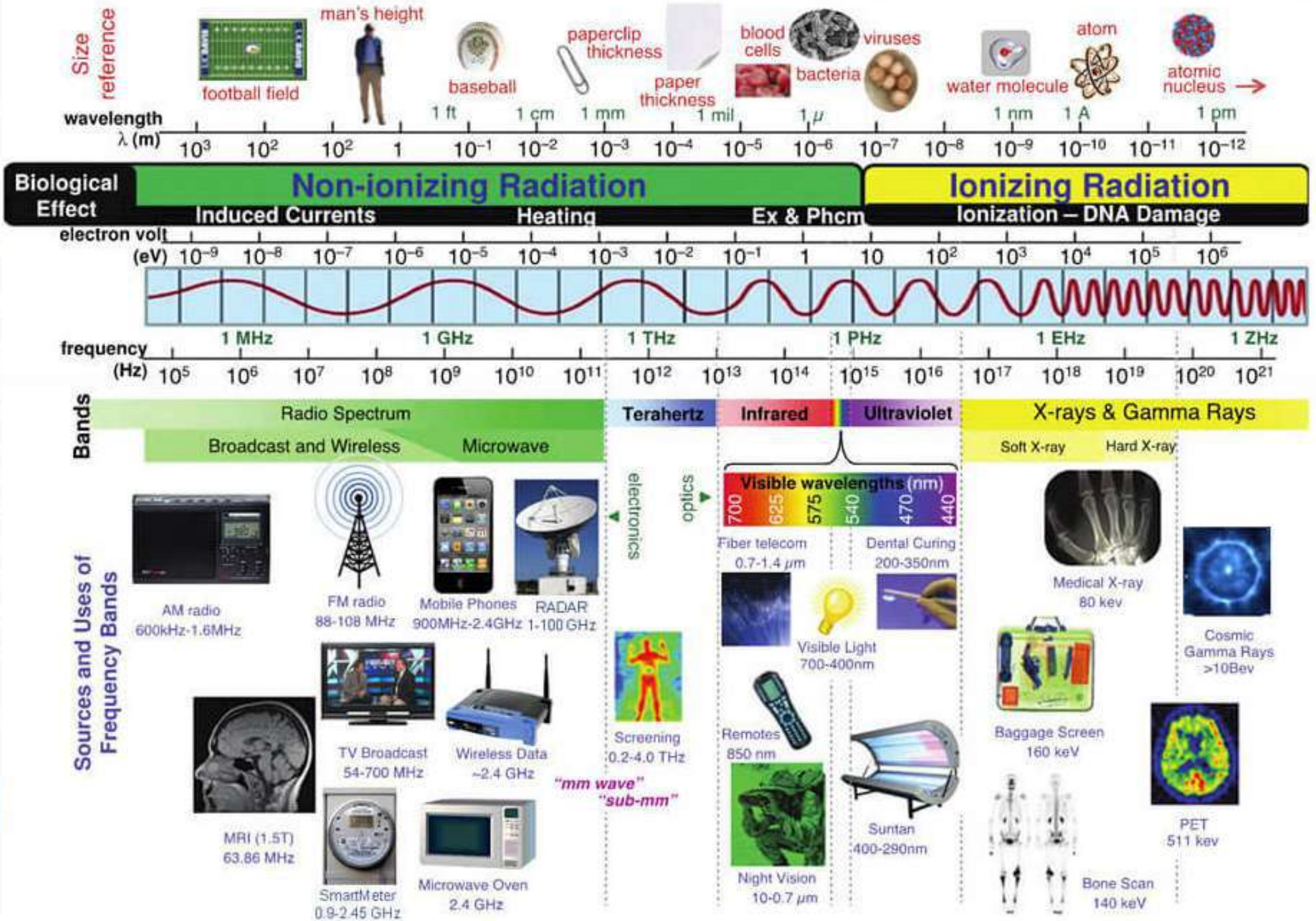
	1st	2nd	3rd	Multiplier		Tolerance	
0	Black	Black	Black	Black	1		
1	Brown	Brown	Brown	Brown	10^1	Brown	1%
2	Red	Red	Red	Red	10^2	Red	2%
3	Orange	Orange	Orange	Orange	10^3		
4	Yellow	Yellow	Yellow	Yellow	10^4		
5	Green	Green	Green	Green	10^5		
6	Blue	Blue	Blue	Blue	10^6		
7	Violet	Violet	Violet	Violet	10^7		
8	Grey	Grey	Grey	Grey	10^8		
9	White	White	White	White	10^9		
				Gold	0.1	Gold	5%
				Silver	0.01	Silver	10%

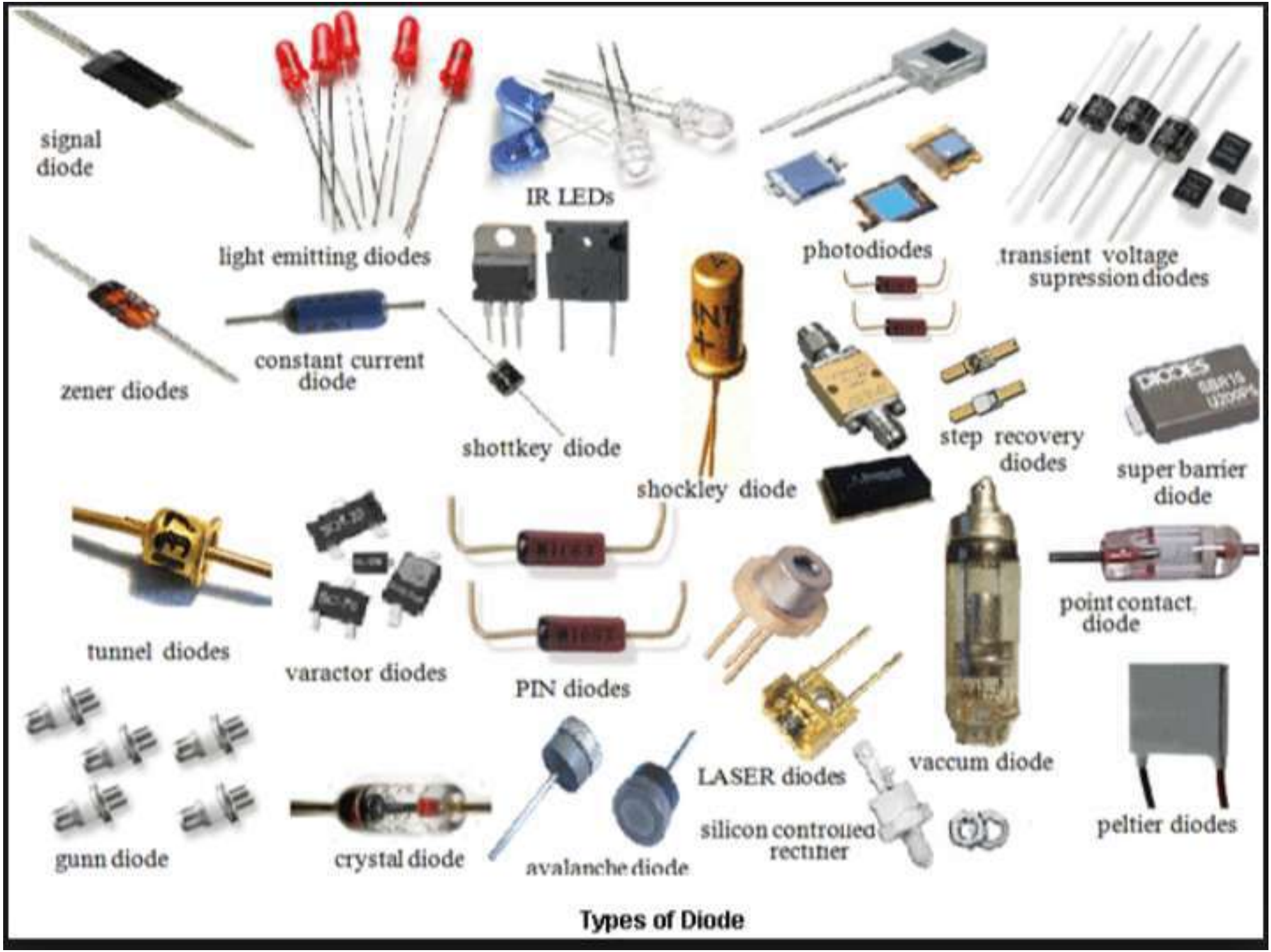
1st 2nd 3rd Multiplier Tolerance



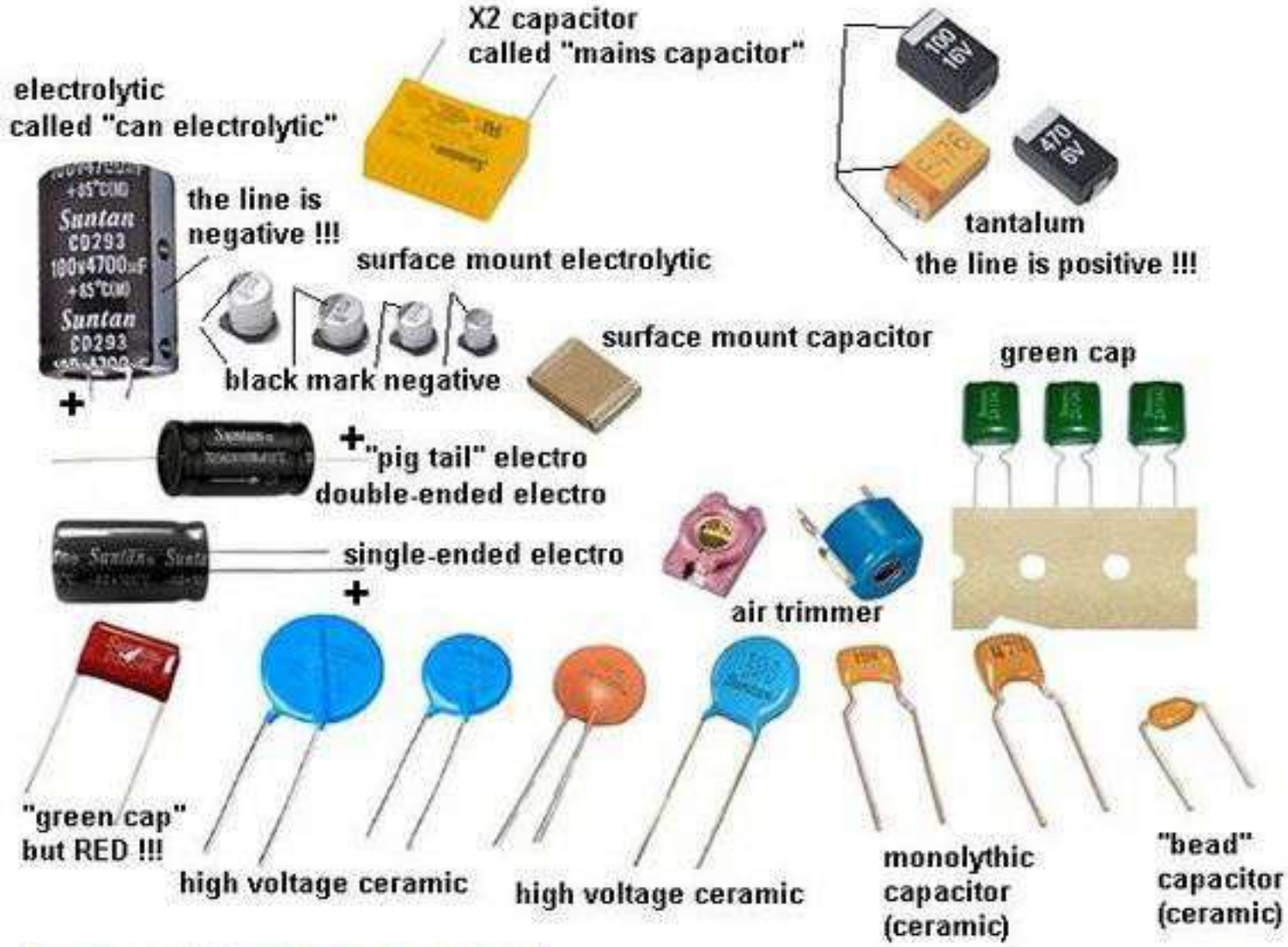
4.7k ohm 1%

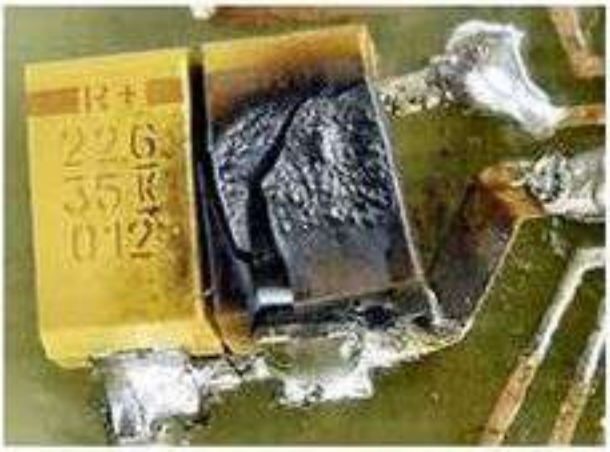
ELECTROMAGNETIC RADIATION SPECTRUM





Types of Diode



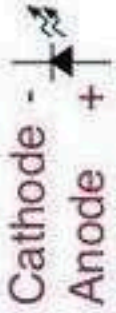


tantalum capacitors can
"go up in smoke"



"bead" tantalum

Electronics
Reference Sheet v1.1b



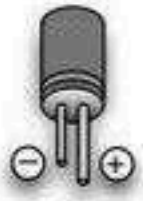
LED



Marked by color or dot



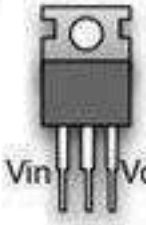
CAPACITOR

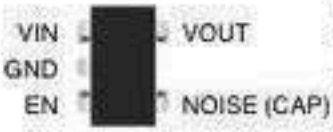






REGULATOR (e.g. LM78xx)



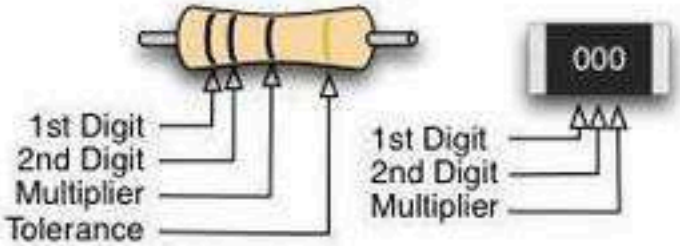


Resistor

		Digit	Multiplier	Tolerance
Silver		-	0.01	±10%
Gold		-	0.1	±5%
Black		0	1	-
Brown		1	10	±1%
Red		2	100	±2%
Orange		3	1k	-
Yellow		4	10k	-
Green		5	100k	±0.5%
Blue		6	1M	±0.25%
Violet		7	10M	±0.1%
Gray		8	-	-
White		9	-	-

DIODE





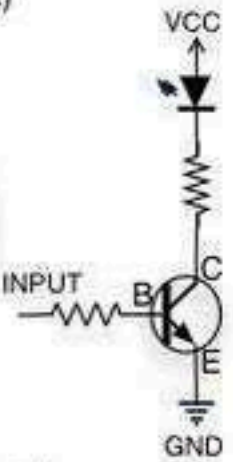
NPN transistor (Current sink)
(e.g. PN2222)

TO-92

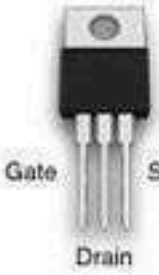


SOT-23



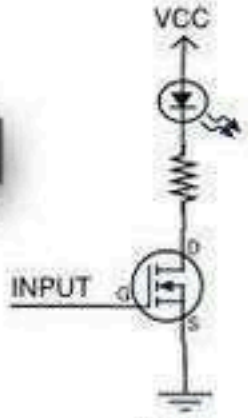


N-channel MOSFET



SOT-23





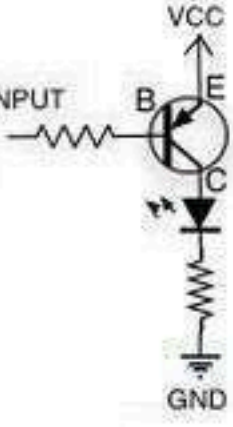
PNP transistor (Current source)
(e.g. PN2907)

TO-92



SOT-23



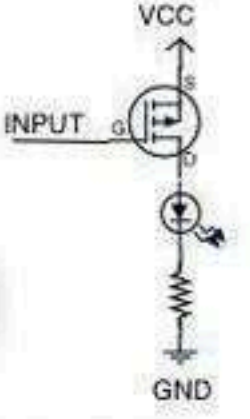


P-channel MOSFET

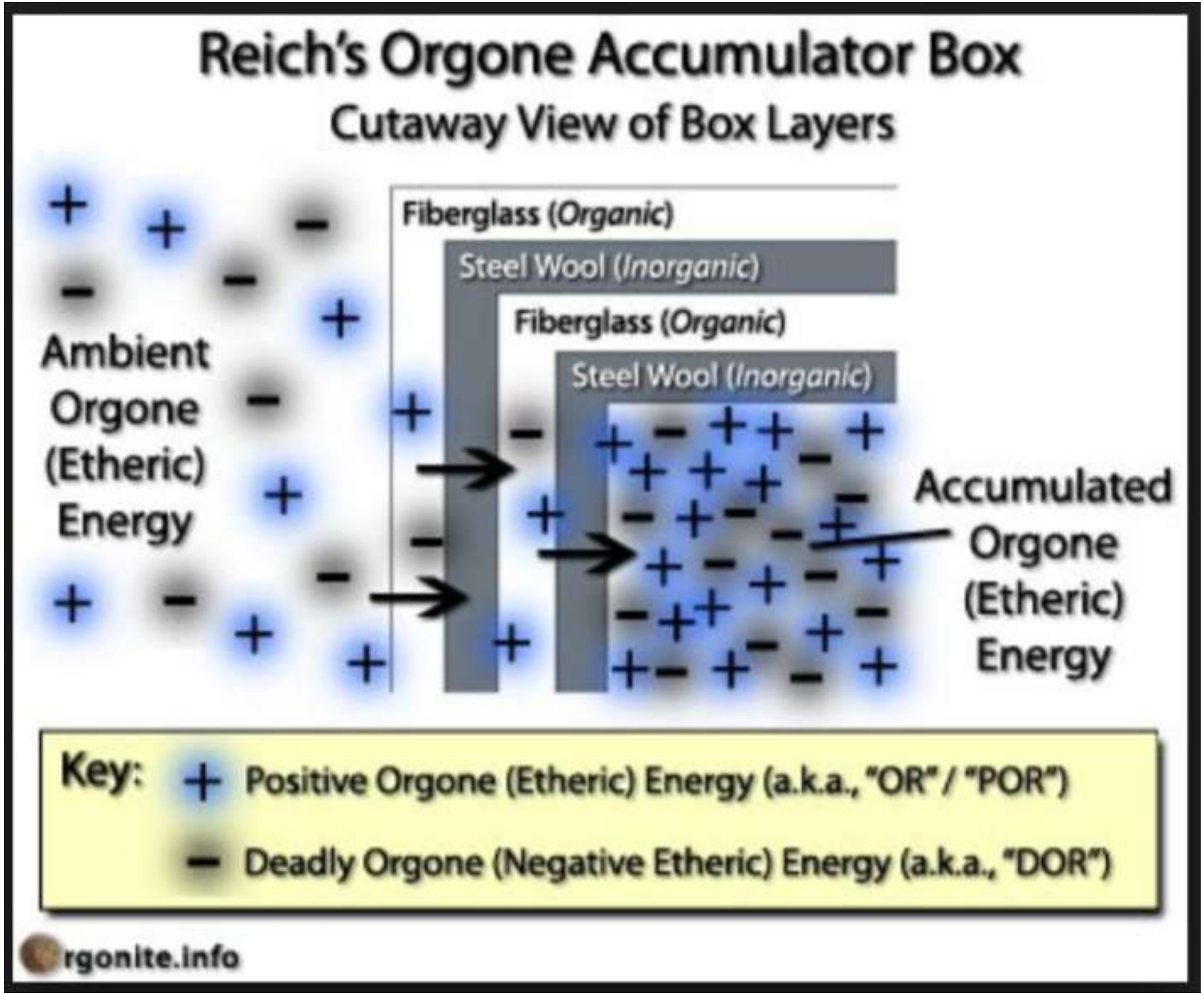


SOT-23





* Please note that some components may have a different pinout than the one showed above, you should always check the data sheet before using a new component.


Reich's Orgone Accumulator Box
Cutaway View of Box Layers
Fiberglass (Organic)
Steel Wool (Inorganic)
Fiberglass (Organic)
Steel Wool (Inorganic)
Ambient Orgone (Etheric) Energy
Accumulated Orgone (Etheric) Energy
Key:
Positive Orgone (Etheric) Energy (a.k.a., "OR" / "POR")
Deadly Orgone (Negative Etheric) Energy (a.k.a., "DOR")
rgonite.info

How to build a Don Croft ORGONITE CLOUD BUSTER

Materials List:
Wear safety gear as necessary
- respirator, gloves when pouring resin.
- gloves & goggles when cutting wood - with a respirator if cutting MDF etc.

4 x 10' lengths of copper (or other) pipe (cut 3 lengths in half, and one length into six 1' pieces)

6 pipe endcaps and 6 pipe connectors

2 gallon bucket (polypropylene if possible)

10 double terminated quartz (6 of these must fit into garden hose for insertion into base of pipes)

6 pieces of garden hose (3/4" - 1" long)

Resin and metal suitable for orgonite

A roll of tape (duct tape etc)

Glue (silicone glue will work)

Stick for mixing metal into resin when pouring layers

Top, middle (temporary) and bottom spacers cut and drilled out of wood. If not buying readymade, use templates or measure with copmass, ruler, pencil.
Drill the holes with 1 1/8" and 1 1/4" wood drill bits, and cut into shape with a Jigsaw.

Refer to (Part 1 - 2) How to Make an Orgonite CloudBuster:
http://www.youtube.com/watch?v=cCn1DO2Rj6k

Third - The temporary spacer is removed and the pipe-tops are taped up to stop resin or metal getting into them.
Further layers are poured, allowing resin to cure and cool between pouring.
More crystals or other components may be added with the basic orgonite mixture.
When done, the tape is removed from the pipe ends.

Second poured layer
(the temporary spacer is fixed in place while this layer is curing, and then removed)

First poured layer
(1" - 1 1/2" high) Include four double-terminated crystals at compass points



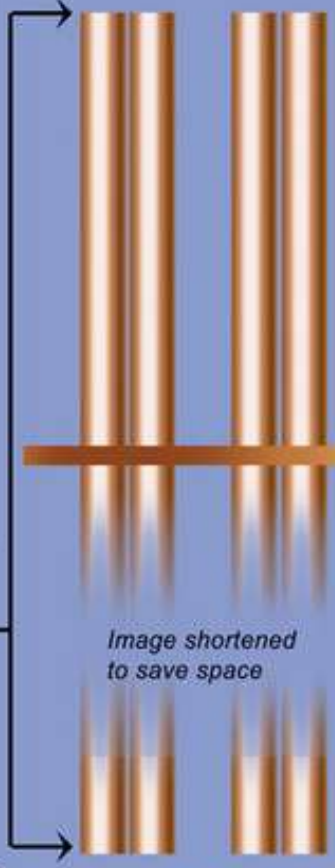
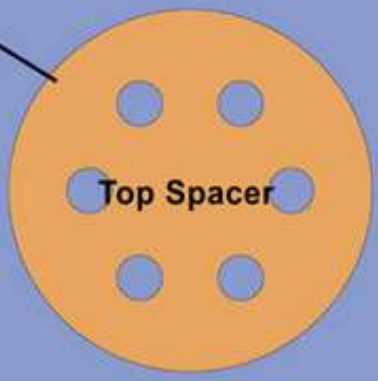


Image shortened to save space

Six 5' lengths of copper pipe
When the orgonite base of the cloud buster is complete, fix the top pipes to the bottom ones using pipe connectors, then fix the top spacer in place to provide stability.



Pipe connectors

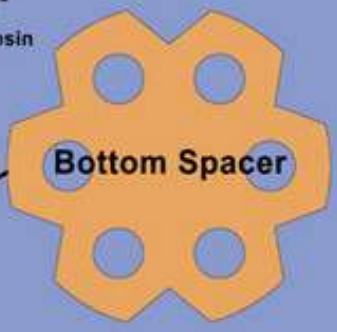
Six 1' lengths of copper pipe
(1" diameter pipe)

Temporary Spacer
This spacer fits tightly into the top of the bucket. (used to hold the pipes in place while the first layer of resin cures)

2 Gallon .....plastic bucket
(8" bottom-interior diameter, 9" top interior diameter)

Orgonite 50:50 metal:resin

Double Treminated Crystal
(secured into hose with glue)



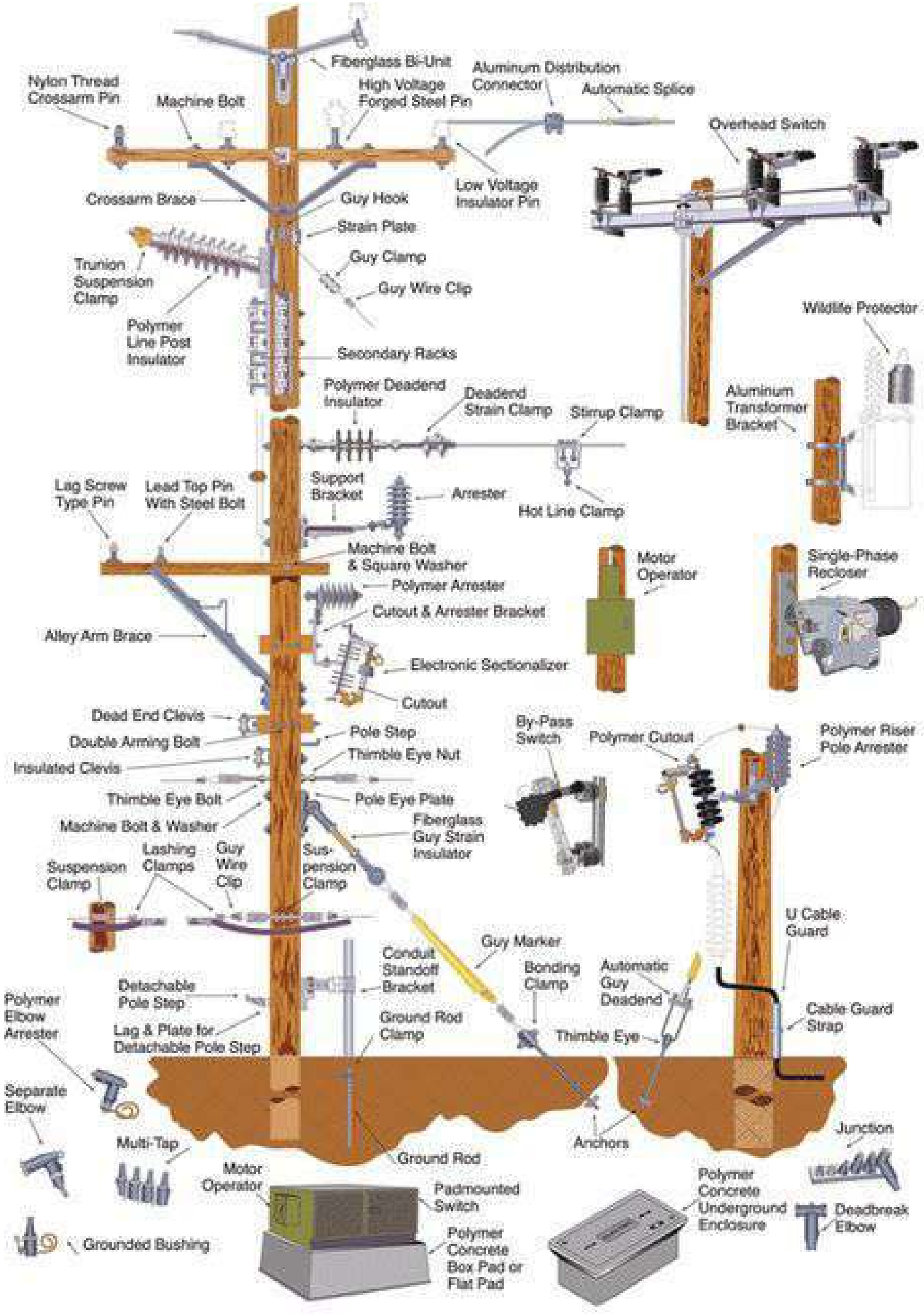
Section of garden hose 3/4" - 1" piece (glued into end cap with silicone glue)

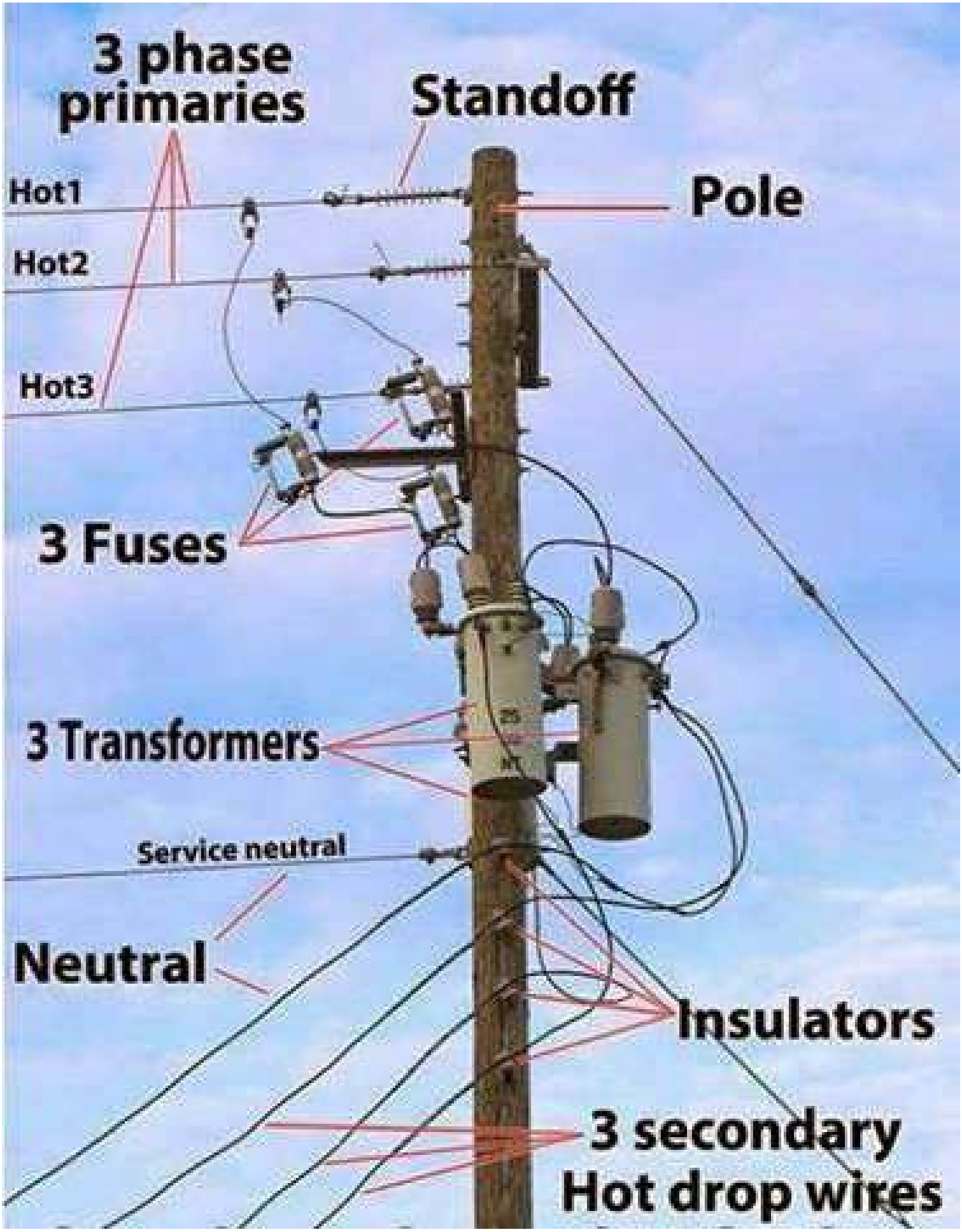
Copper end cap

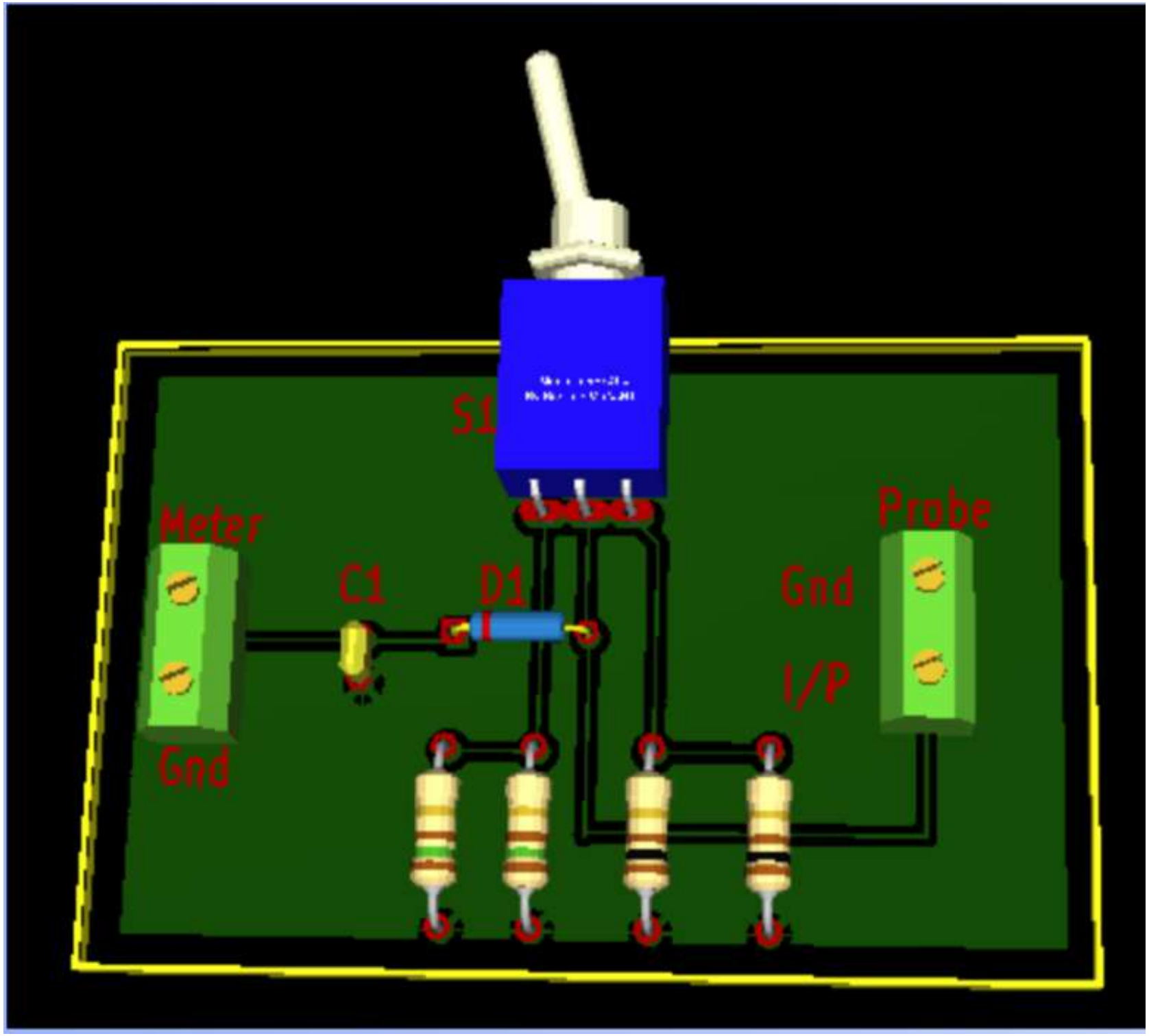
Four double terminated crystals in the base are aligned with the cardinal directions

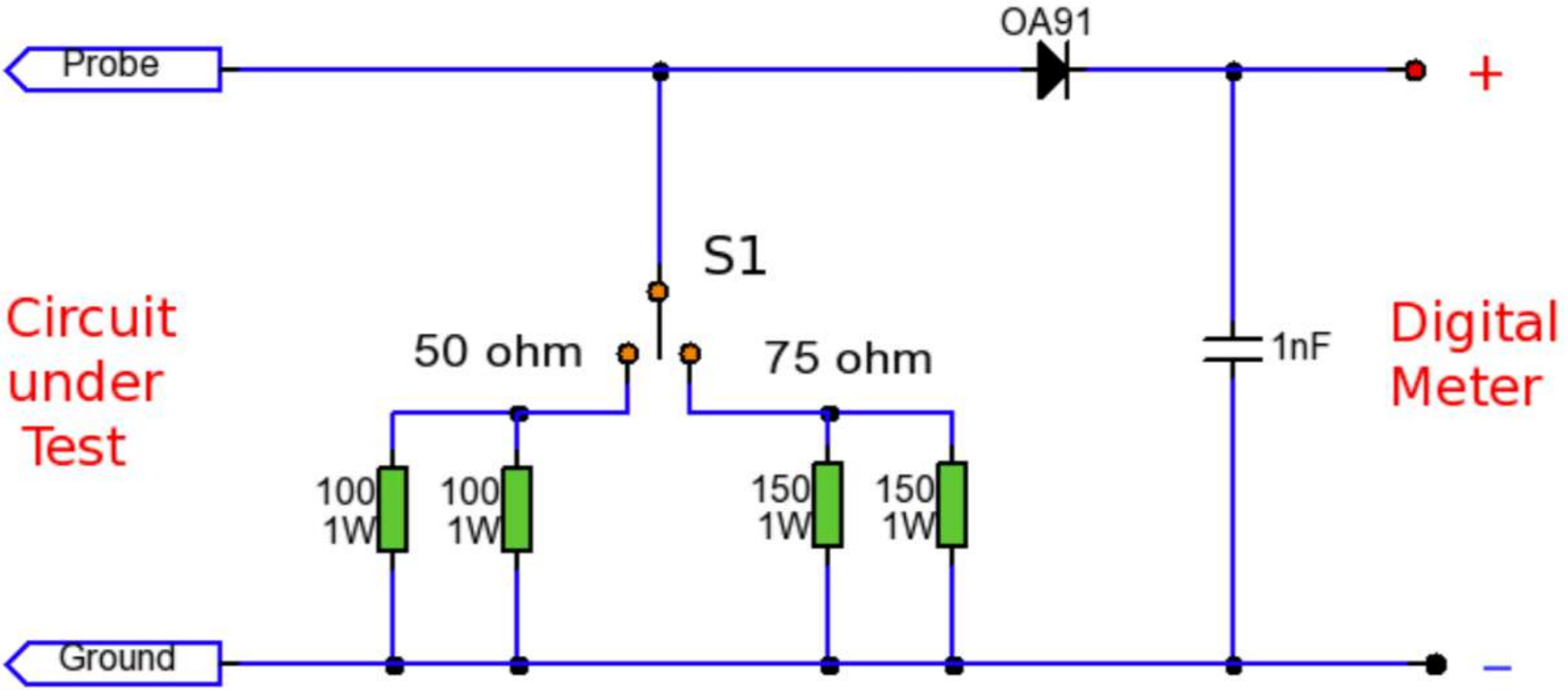
Taped joint where each copper pipe fits into its end cap (duct tape or any kind to stop resin seeping into endcap)


BOAT
BOAT
GLOP


Fiberglass Bi-Unit
Aluminum Distribution Connector
Automatic Splice
Nylon Thread Crossarm Pin
Machine Bolt
High Voltage Forged Steel Pin
Overhead Switch
Low Voltage Insulator Pin
Crossarm Brace
Guy Hook
Strain Plate
Guy Clamp
Guy Wire Clip
Trunion Suspension Clamp
Polymer Line Post Insulator
Secondary Racks
Wildlife Protector
Polymer Deadend Insulator
Deadend Strain Clamp
Stirrup Clamp
Aluminum Transformer Bracket
Lag Screw Type Pin
Lead Top Pin With Steel Bolt
Support Bracket
Arrester
Hot Line Clamp
Machine Bolt & Square Washer
Motor Operator
Single-Phase Recloser
Polymer Arrester
Cutout & Arrester Bracket
Alley Arm Brace
Electronic Sectionalizer
Cutout
Dead End Clevis
Pole Step
By-Pass Switch
Polymer Cutout
Polymer Riser Pole Arrester
Double Arming Bolt
Thimble Eye Nut
Insulated Clevis
Thimble Eye Bolt
Pole Eye Plate
Machine Bolt & Washer
Fiberglass Guy Strain Insulator
Lashing Clamps
Guy Wire Clip
Sus-pension Clamp
Suspension Clamp
U Cable Guard
Guy Marker
Conduit Standoff Bracket
Bonding Clamp
Automatic Guy Deadend
Detachable Pole Step
Polymer Elbow Arrester
Lag & Plate for Detachable Pole Step
Ground Rod Clamp
Thimble Eye
Cable Guard Strap
Separate Elbow
Junction
Multi-Tap
Anchors
Ground Rod
Motor Operator
Padmounted Switch
Polymer Concrete Underground Enclosure
Deadbreak Elbow
Grounded Bushing
Polymer Concrete Box Pad or Flat Pad


3 phase primaries
Standoff
Hot1
Pole
Hot2
Hot3
3 Fuses
3 Transformers
Service neutral
Neutral
Insulators
3 secondary Hot drop wires


S1
Meter
C1
D1
Probe
Gnd
I/P
Gnd

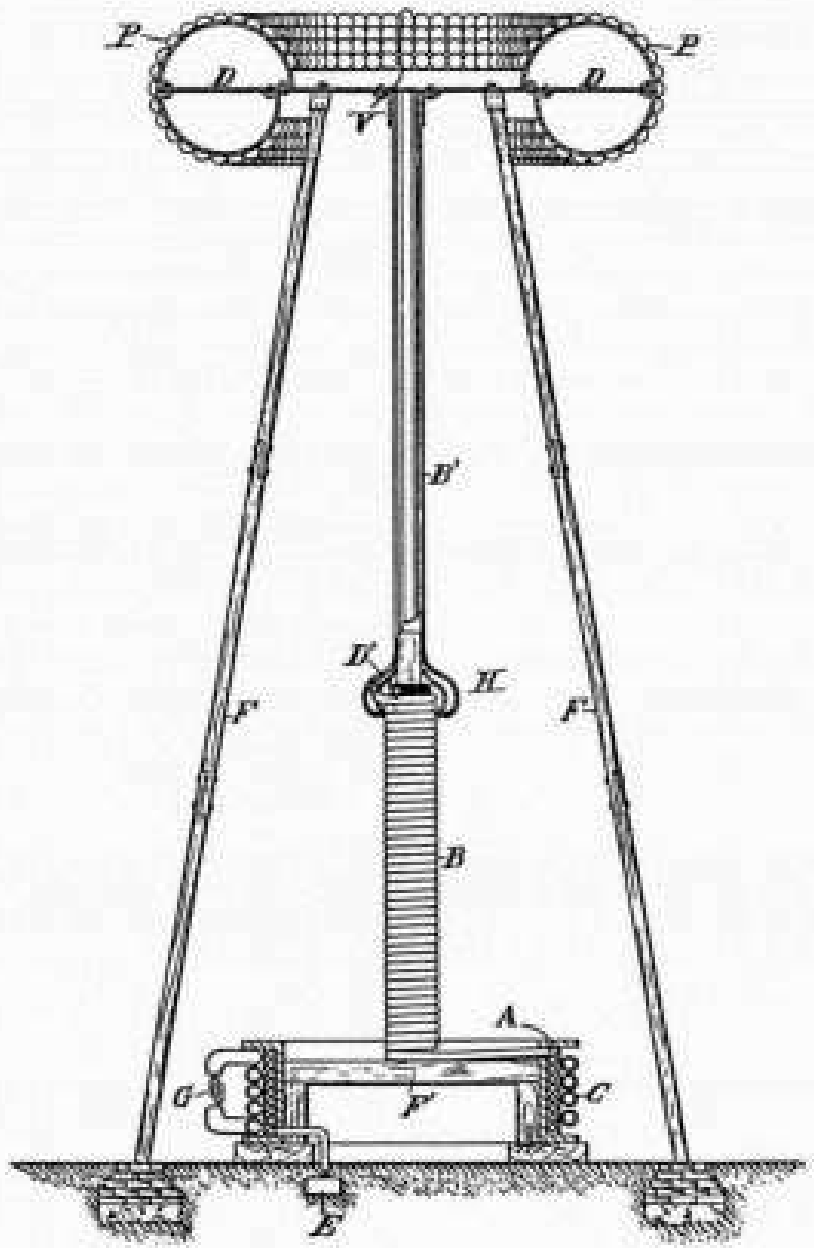

Probe
OA91
+
S1
Circuit
under
Test
50 ohm
75 ohm
1nF
Digital
Meter
100
1W
100
1W
150
1W
150
1W
Ground
–

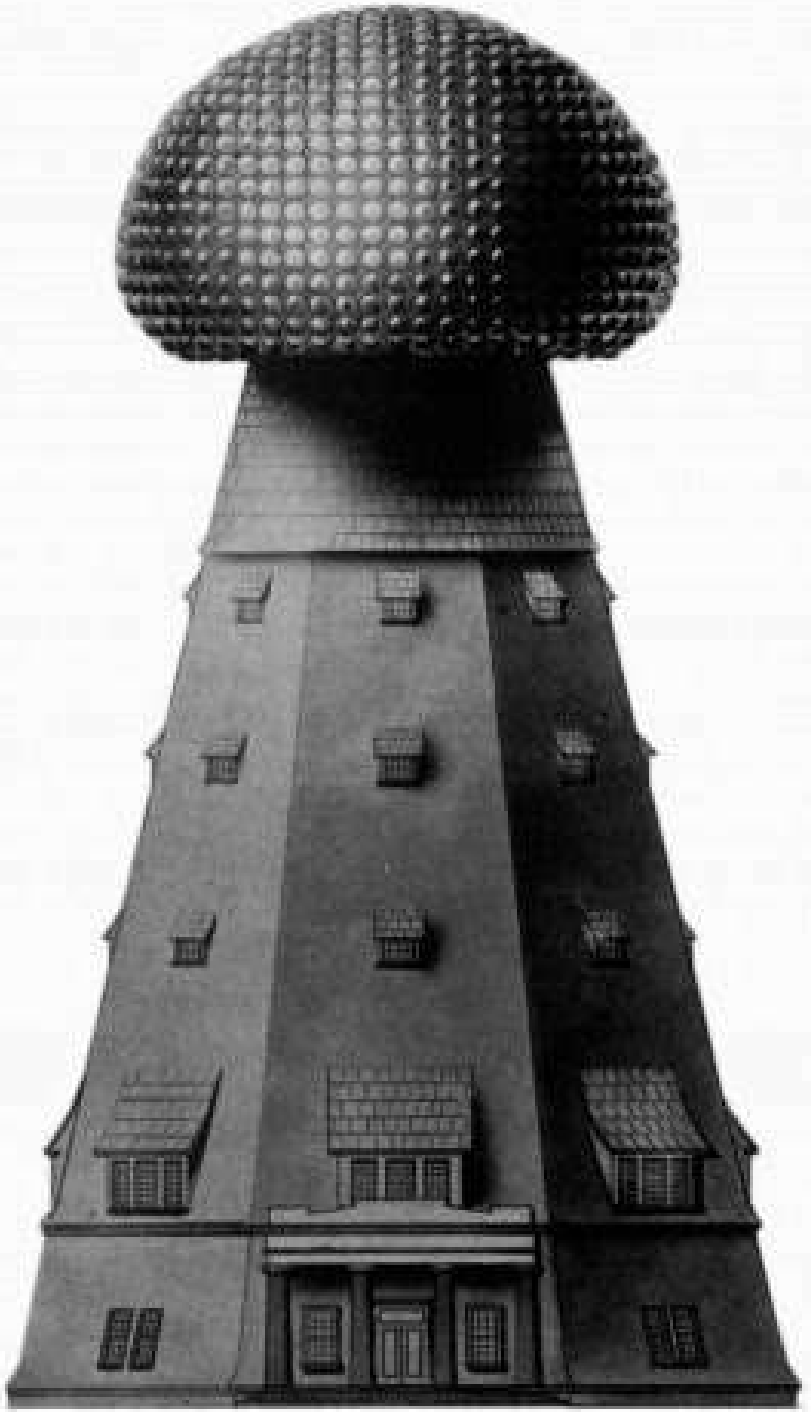
N. TESLA.

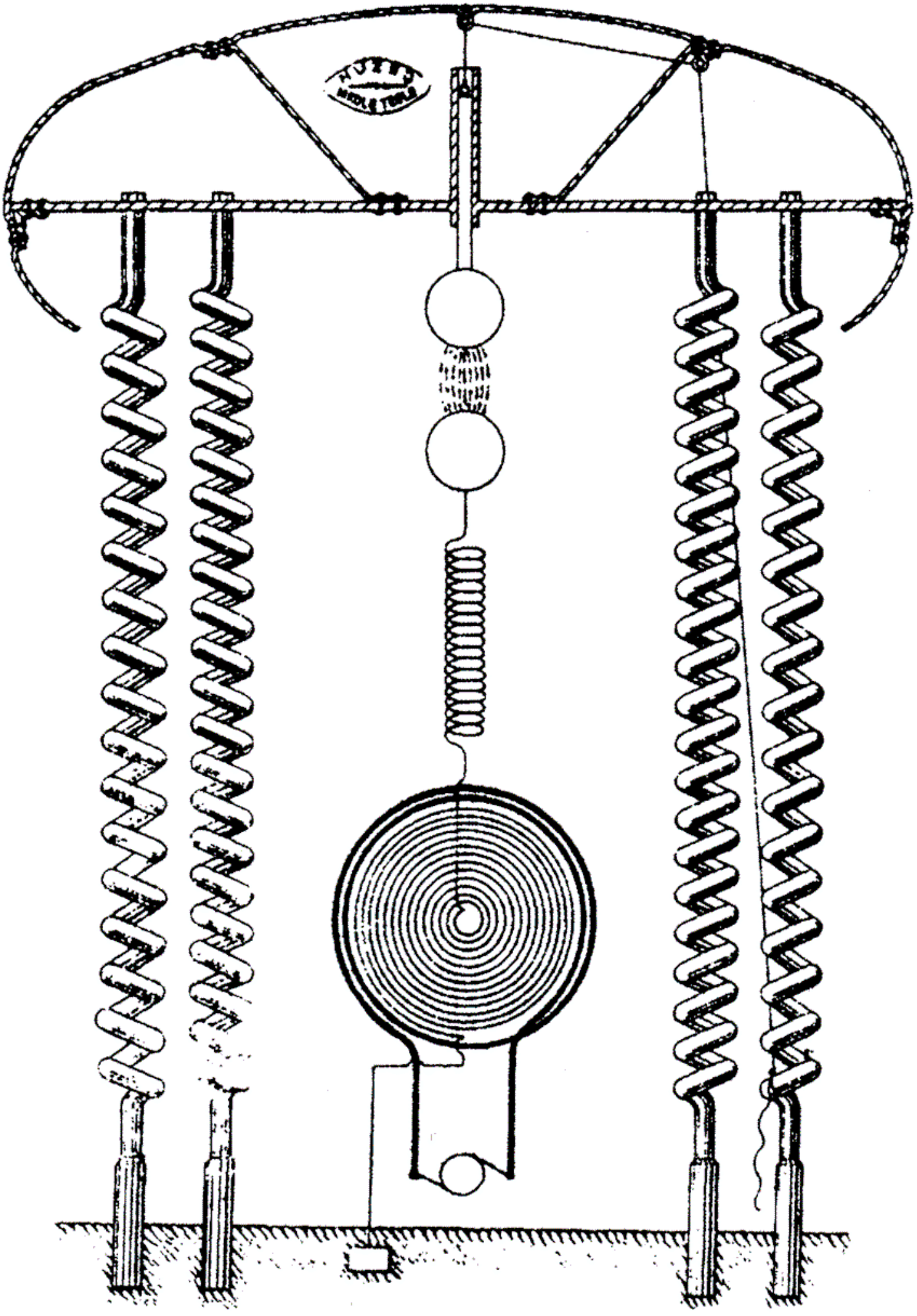
APPARATUS FOR TRANSMITTING ELECTRICAL ENERGY.

APPLICATION FILED JAN. 18, 1902. RENEWED MAY 6, 1907.

1,119,732. Patented Dec. 1, 1914.







New York, Aug. 30th, 1901
46 & 48 East Houston Str.

Mr. Stanford White
160 Fifth Ave.
New York City

My Dear Stanford:
Many thanks for your suggestions. I am writing to Mr. Powell today. Perhaps he will be able to clear the land altogether.

I want you to understand that I went to the American Bridge Company simply because of my anxiety to have the work pushed through as fast as practicable. I am only too glad to follow your advice and beg you to consider yourself absolutely free in your choice and arrangements regarding this work.

Yours very sincerely,
N. Tesla

New York, Sep. 12th, 1901
46 & 48 East Houston Str.

Babcock & Wilcox Co.
85 Liberty Street
New York City

Gentlemen:
Under enclosure I forward sketch showing your two boilers as they will be placed in my building and their position relative to and exact distance from the chimney. The scale is ½ inch to a foot.

You will greatly oblige me by furnishing the drawings of the flues leading to the chimney and the position of the breech, as the builder cannot proceed without this information.

Yours very truly,
Encl.

Anyone familiar with the Wardenclyffe Tower knows it to have been a colossal structure. Yet, few realize that it was supposed to have been even larger. Although the exact figures are not revealed, Tesla must have drastically underestimated the cost of building his structure as is evidenced by the following response to White.

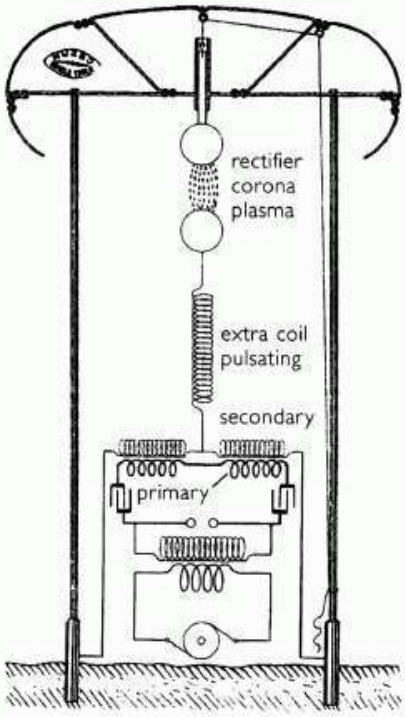


Fig. 5 Oscillating statically charged terminal.

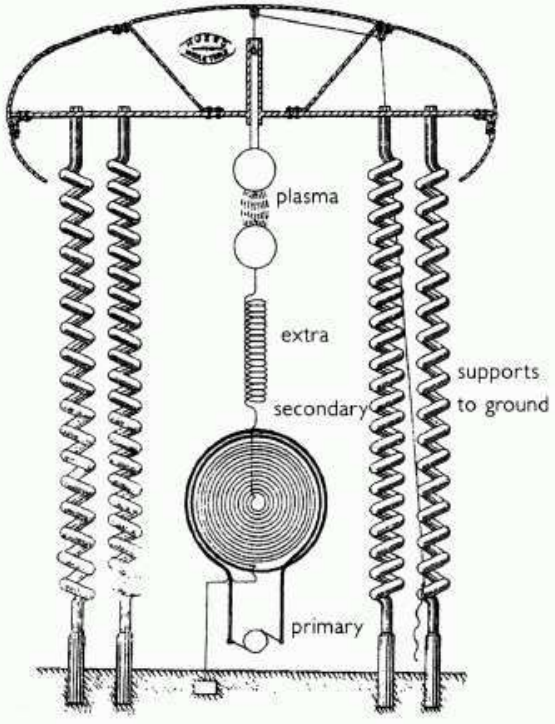


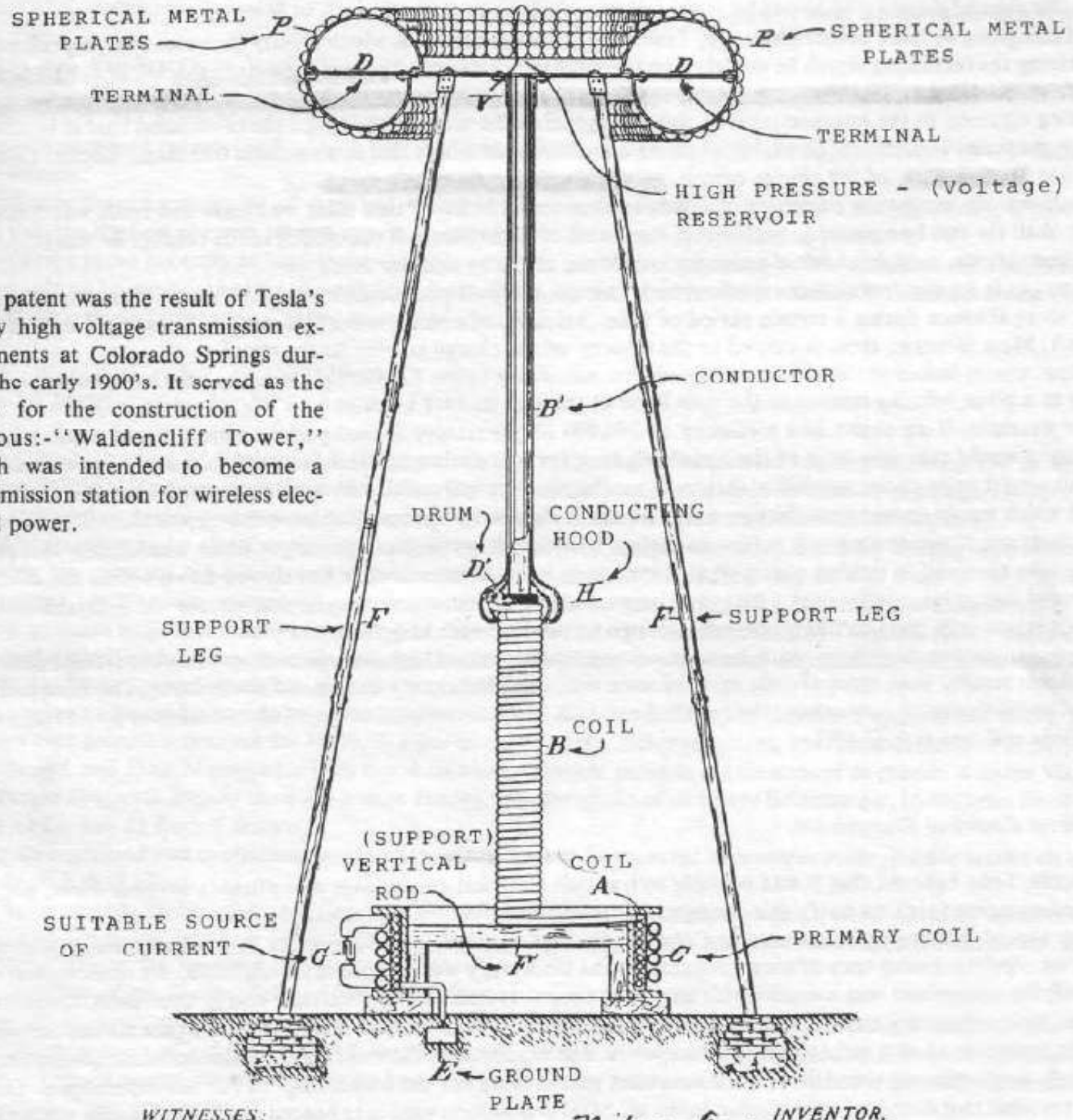
Fig. 6 Oscillating electrostatically charged dome.

N. TESLA

APPARATUS FOR TRANSMITTING ELECTRICAL ENERGY.

APPLICATION FILED JAN. 18, 1902. RENEWED MAY 4, 1907.

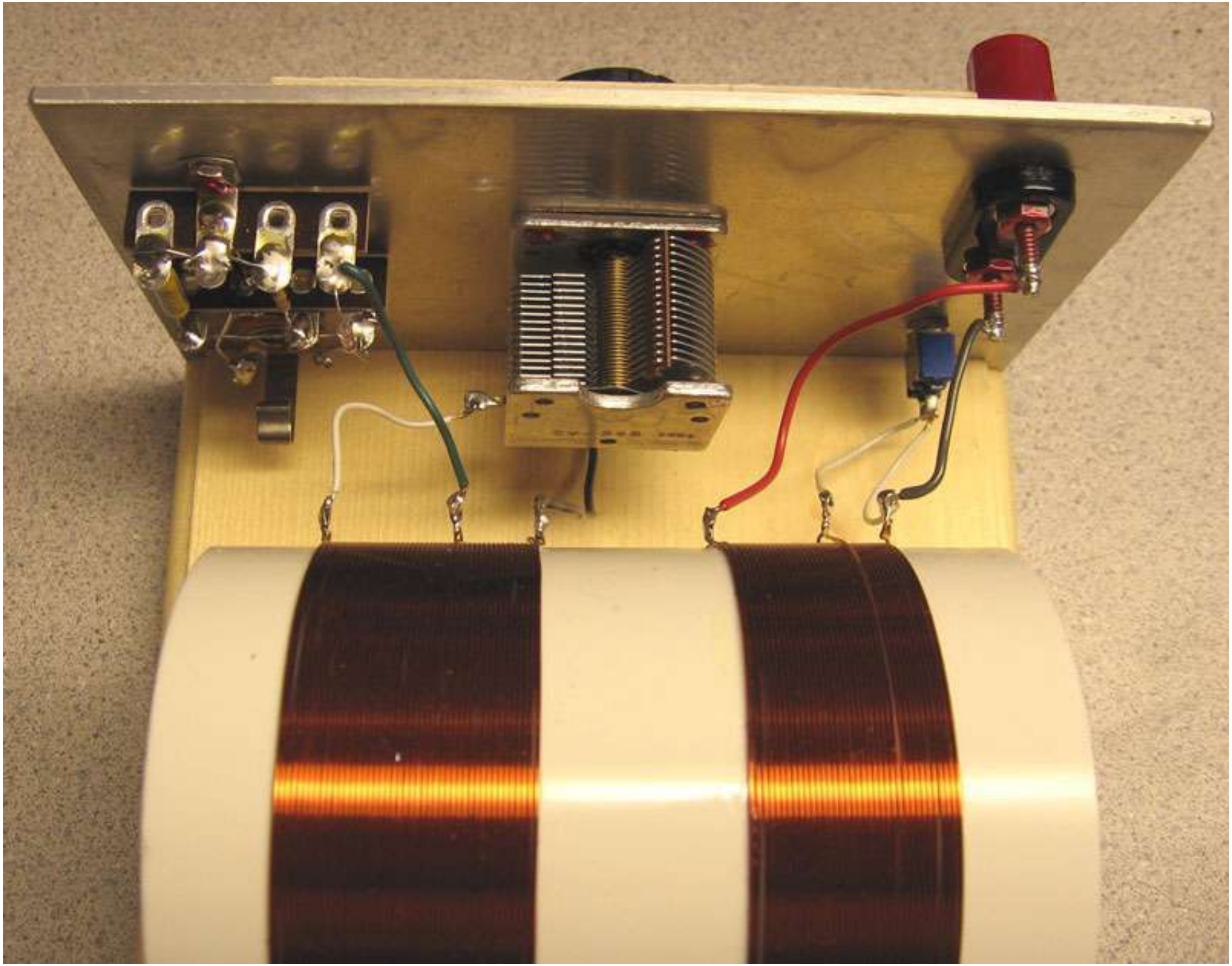
1,119,732. Patented Dec. 1, 1914.



This patent was the result of Tesla's many high voltage transmission experiments at Colorado Springs during the early 1900's. It served as the basis for the construction of the famous:-"Waldencliff Tower," which was intended to become a transmission station for wireless electrical power.

WITNESSES:
H. Lawson Dyer
Benjamin Miller.

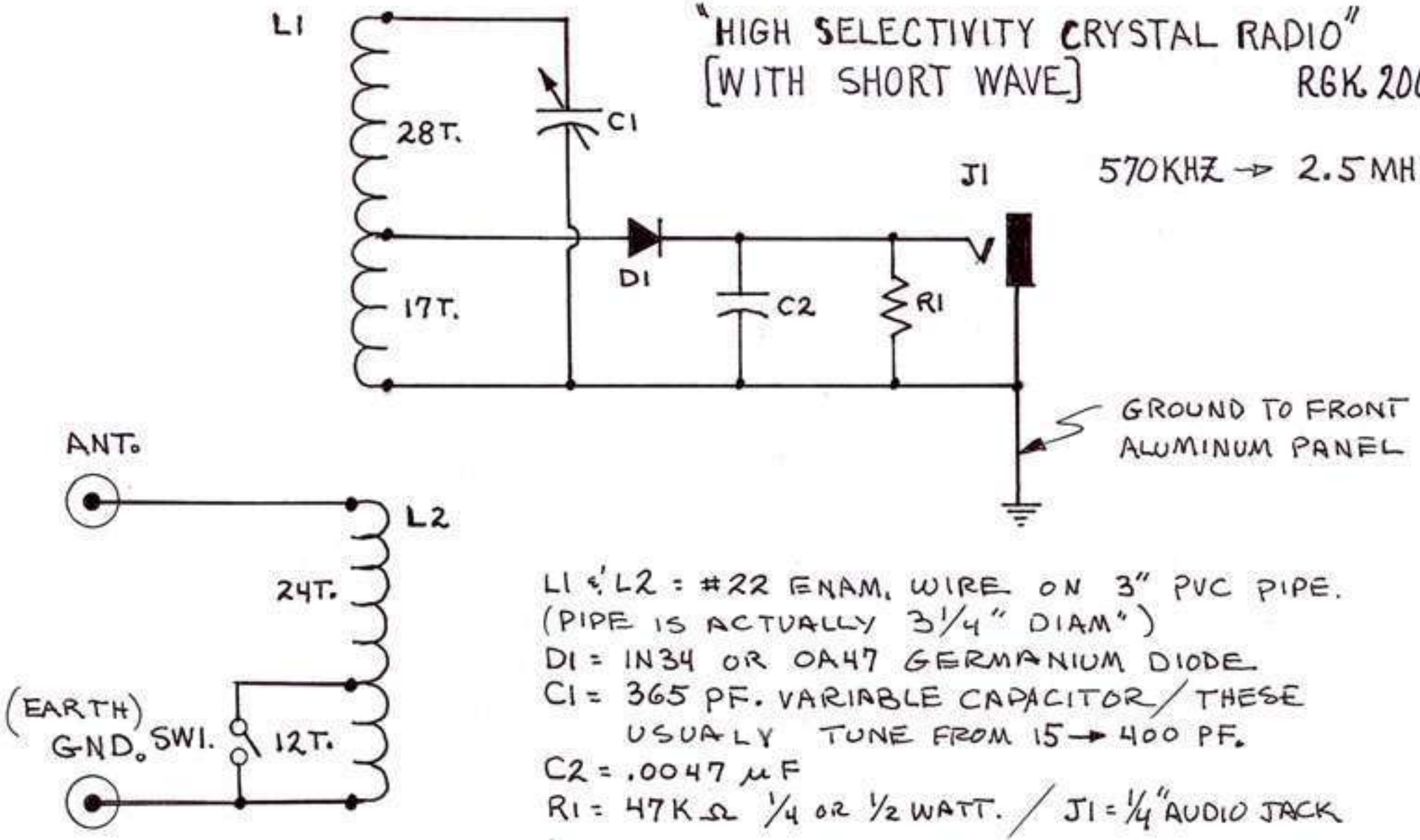
INVENTOR,
Nikola Tesla,
BY Kerr, Page & Cooper,
his ATTORNEYS.



"HIGH SELECTIVITY CRYSTAL RADIO" [WITH SHORT WAVE]

RGK. 2007

570KHZ → 2.5MHZ



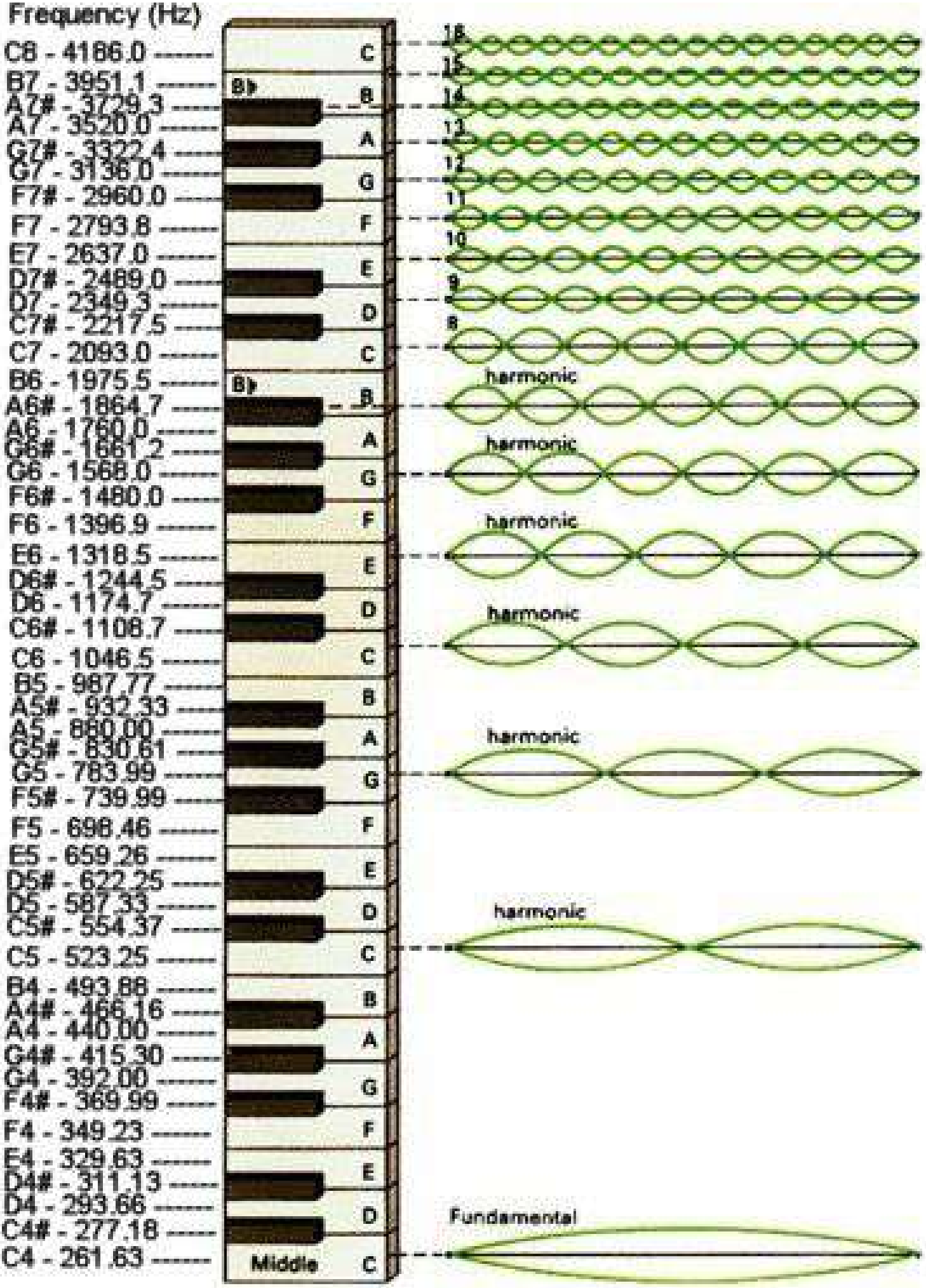
L1 & L2 = #22 ENAM. WIRE ON 3" PVC PIPE. (PIPE IS ACTUALLY 3 1/4" DIAM.)
D1 = IN34 OR OA47 GERMANIUM DIODE
C1 = 365 PF. VARIABLE CAPACITOR / THESE USUALY TUNE FROM 15 → 400 PF.
C2 = .0047 μF
R1 = 47KΩ 1/4 OR 1/2 WATT. / J1 = 1/4" AUDIO JACK

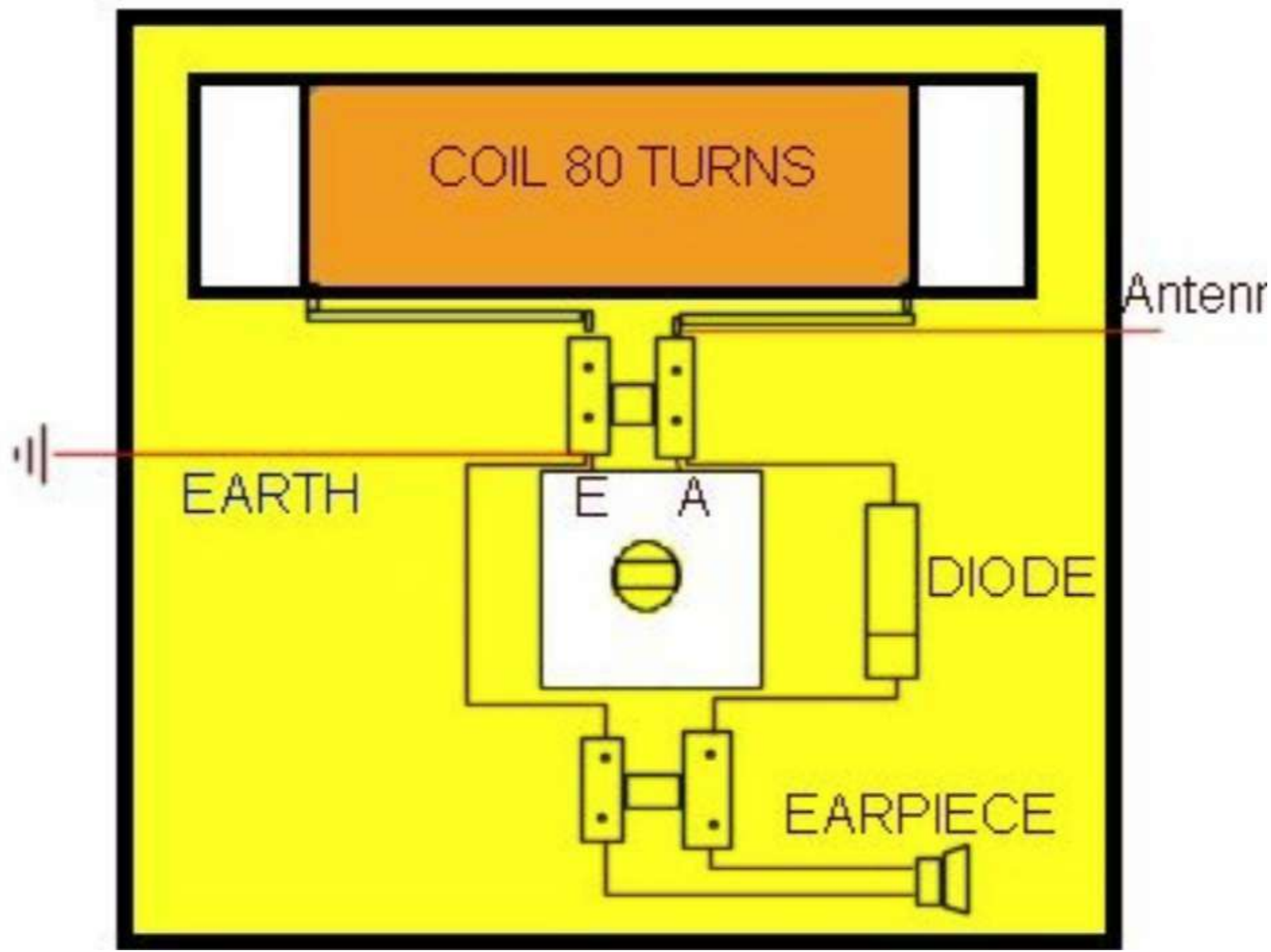
[L1/L2 NOTES: L1 = 45 TURNS TOTAL & L2 = 36 TURNS TOTAL. THE SPACE BETWEEN L1 & L2 IS 1 1/16".]

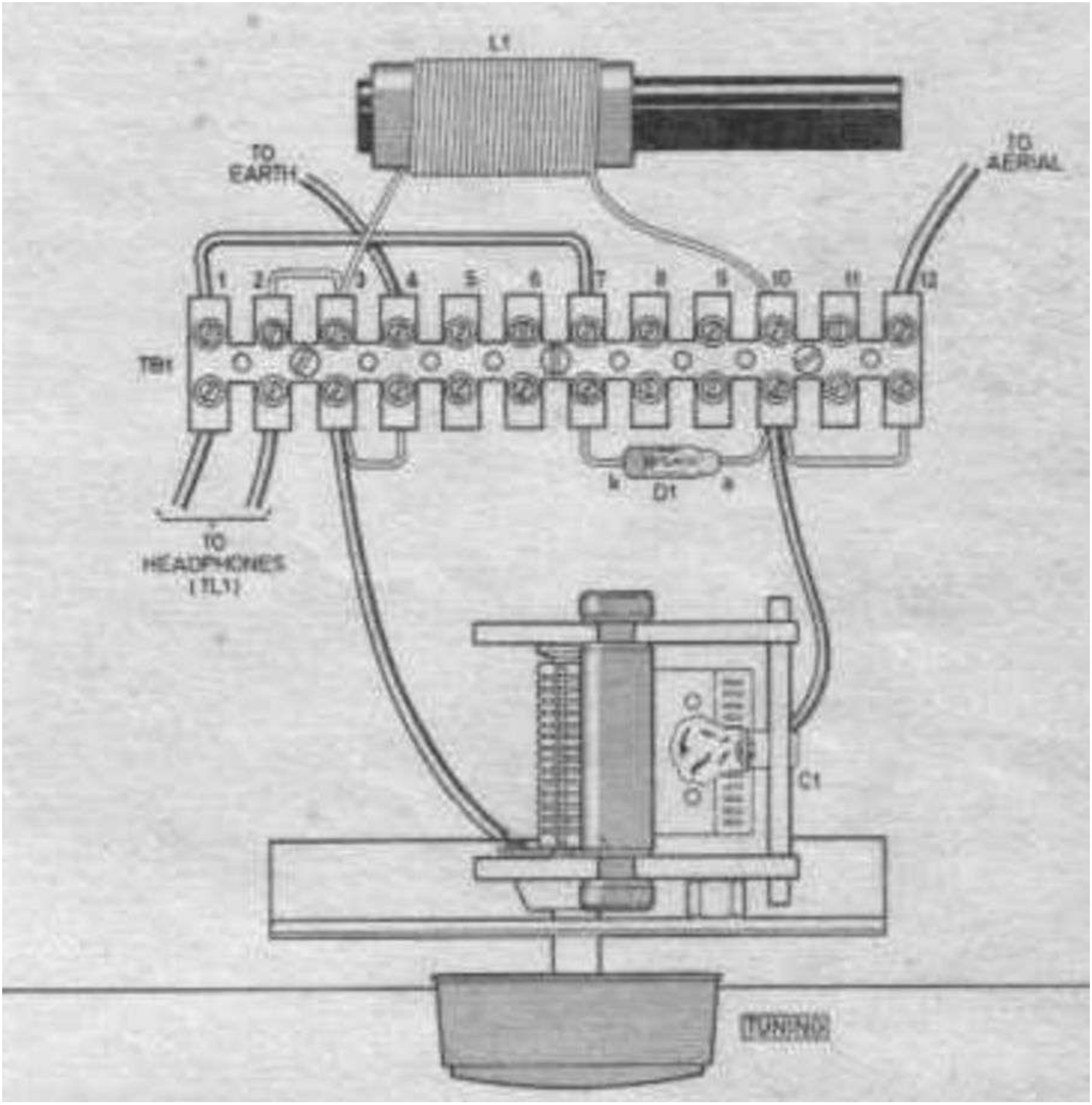
SW1 = SP.S.T. SWITCH / FOR ANTENNA MATCHING


630V 0245
150M


EXTENDED DAY CREED
WATCH YOUR THOUGHTS THEY BECOME YOUR WORDS,
WATCH YOUR WORDS THEY BECOME YOUR FEELINGS,
WATCH YOUR FEELINGS THEY BECOME YOUR ACTIONS,
WATCH YOUR ACTIONS THEY BECOME YOUR HABITS,
WATCH YOUR HABITS THEY BECOME YOUR LIFESTYLE ,
WATCH YOUR LIFESTYLE IT CONTROLS YOUR DESTINY.
05/07/2013 04:26 PM

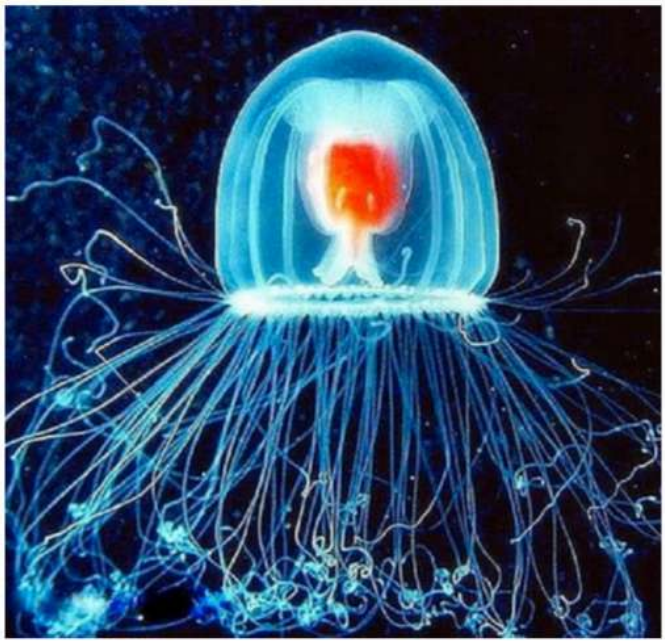

Frequency (Hz)
C8 - 4186.0
B7 - 3951.1
A7# - 3729.3
A7 - 3520.0
G7# - 3322.4
G7 - 3136.0
F7# - 2960.0
F7 - 2793.8
E7 - 2637.0
D7# - 2489.0
D7 - 2349.3
C7# - 2217.5
C7 - 2093.0
B6 - 1975.5
A6# - 1864.7
A6 - 1760.0
G6# - 1661.2
G6 - 1568.0
F6# - 1480.0
F6 - 1396.9
E6 - 1318.5
D6# - 1244.5
D6 - 1174.7
C6# - 1108.7
C6 - 1046.5
B5 - 987.77
A5# - 932.33
A5 - 880.00
G5# - 830.61
G5 - 783.99
F5# - 739.99
F5 - 698.46
E5 - 659.26
D5# - 622.25
D5 - 587.33
C5# - 554.37
C5 - 523.25
B4 - 493.88
A4# - 466.16
A4 - 440.00
G4# - 415.30
G4 - 392.00
F4# - 369.99
F4 - 349.23
E4 - 329.63
D4# - 311.13
D4 - 293.66
C4# - 277.18
C4 - 261.63
Middle
16
15
14
13
12
11
10
9
8
harmonic
harmonic
harmonic
harmonic
harmonic
harmonic
Fundamental


COIL 80 TURNS
Antenn
EARTH
E
A
DIODE
EARPIECE


L1
TO EARTH
TO AERIAL
1
2
3
4
5
6
7
8
9
10
11
12
TB1
D1
TO HEADPHONES (TL1)
C1

4

The **immortal jellyfish** (***Turritopsis dohrnii***) is capable of biological immortality.



It's one of few known species capable of reverting completely to a sexually immature, colonial polyp stage after having reached sexual maturity as a solitary (free-floating) individual (called a medusa).

> Theoretically, this process can go on indefinitely, effectively rendering the jellyfish biologically immortal

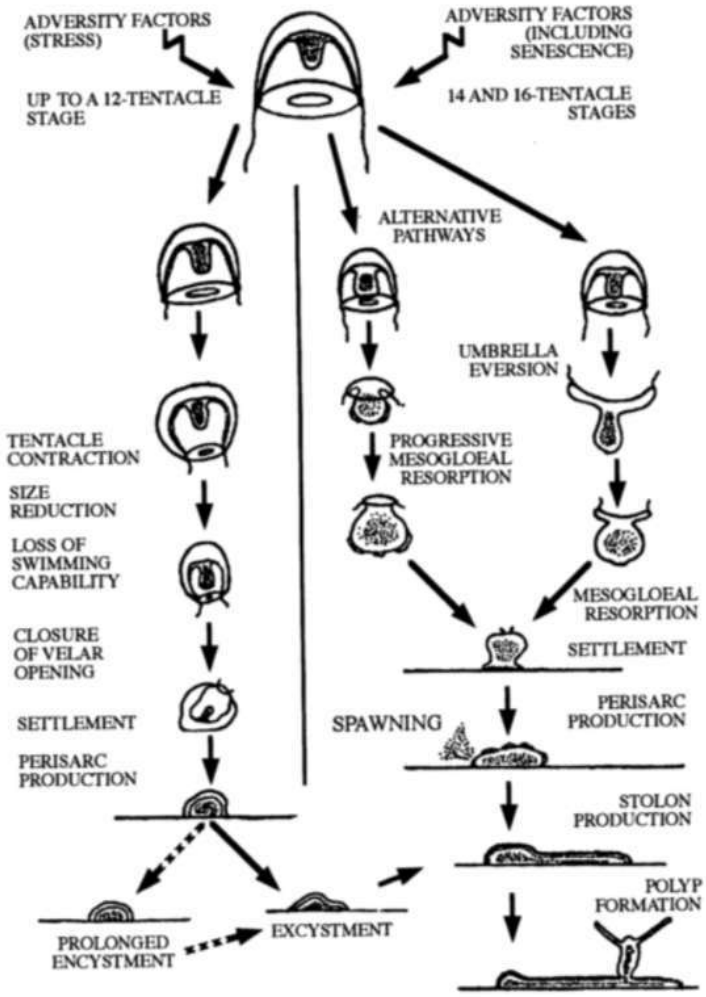
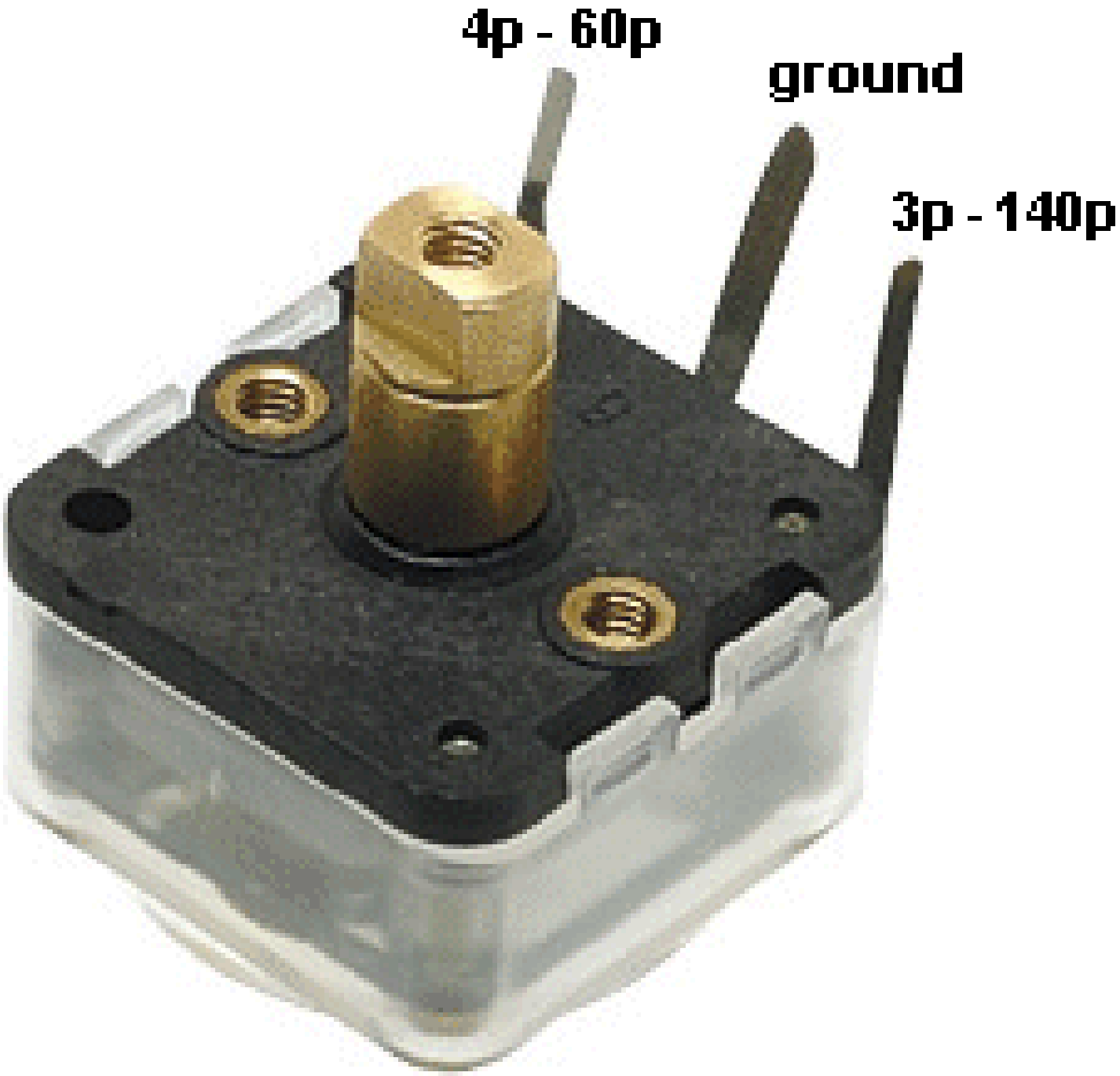


Figure 3. Pathways of transformation from medusa into polyp. Fate of stressed medusae up to 12-tentacle stage (left side), and alternative transformations of stressed or spawning medusae from a 14-tentacle or 16-tentacle stage (right side). The final product is always the polyp colony (bottom), directly or through a resting stage.


4p - 60p
ground
3p - 140p


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eisco
Germanium Diode
A
K
1N60
Max. 50 V
CE

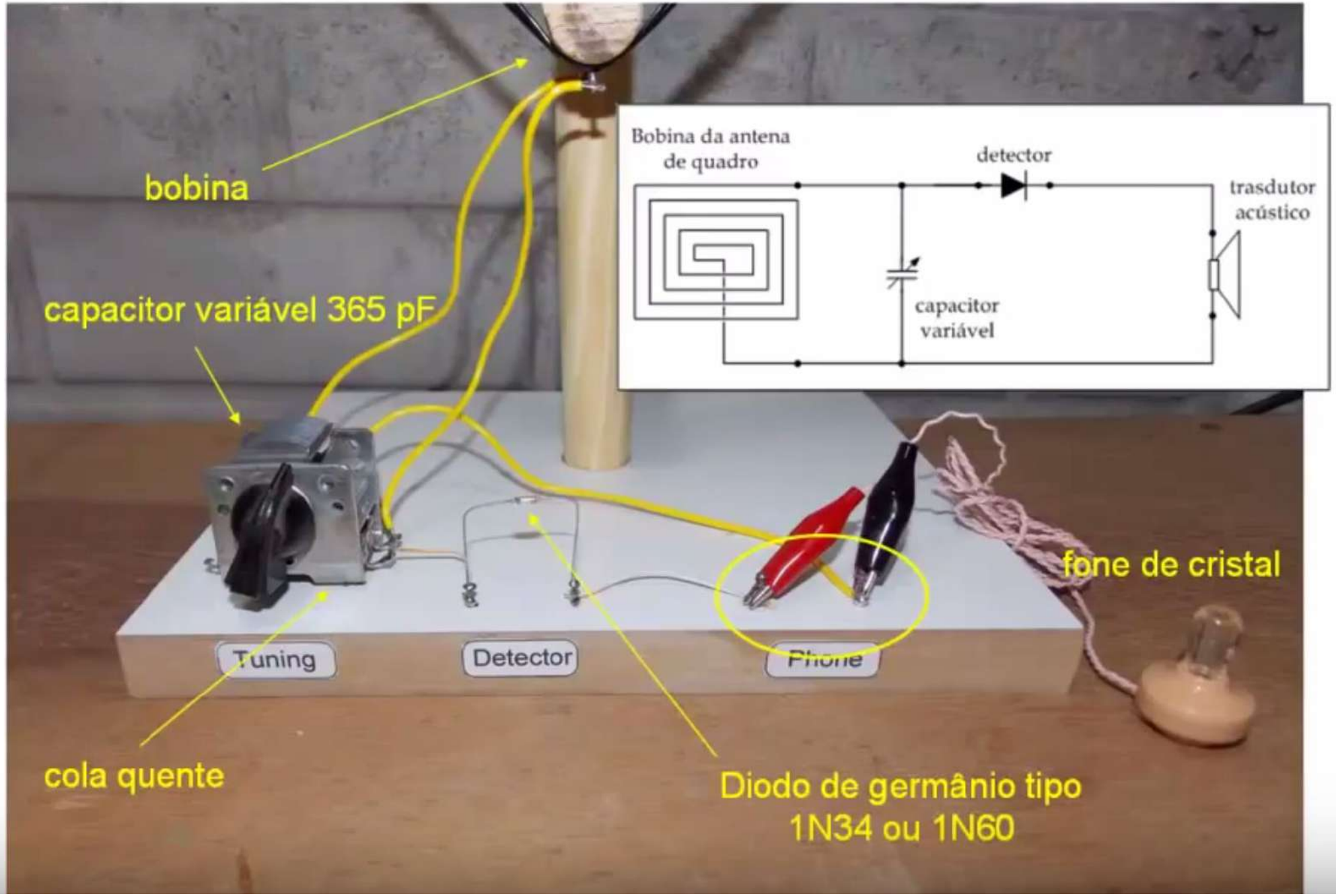

bobina
capacitor variável 365 pF
cola quente
Diodo de germânio tipo
1N34 ou 1N60
fone de cristal
Tuning
Detector
Phone
Bobina da antena
de quadro
detector
trasdutor
acústico
capacitor
variável

Figure 12. (a) Output power for a half-wave and full-wave CWVM, and (b) portable electronic calculator running with the AM energy harvester. Detected input signal in LC resonator is 1.5 V at 1 MHz.

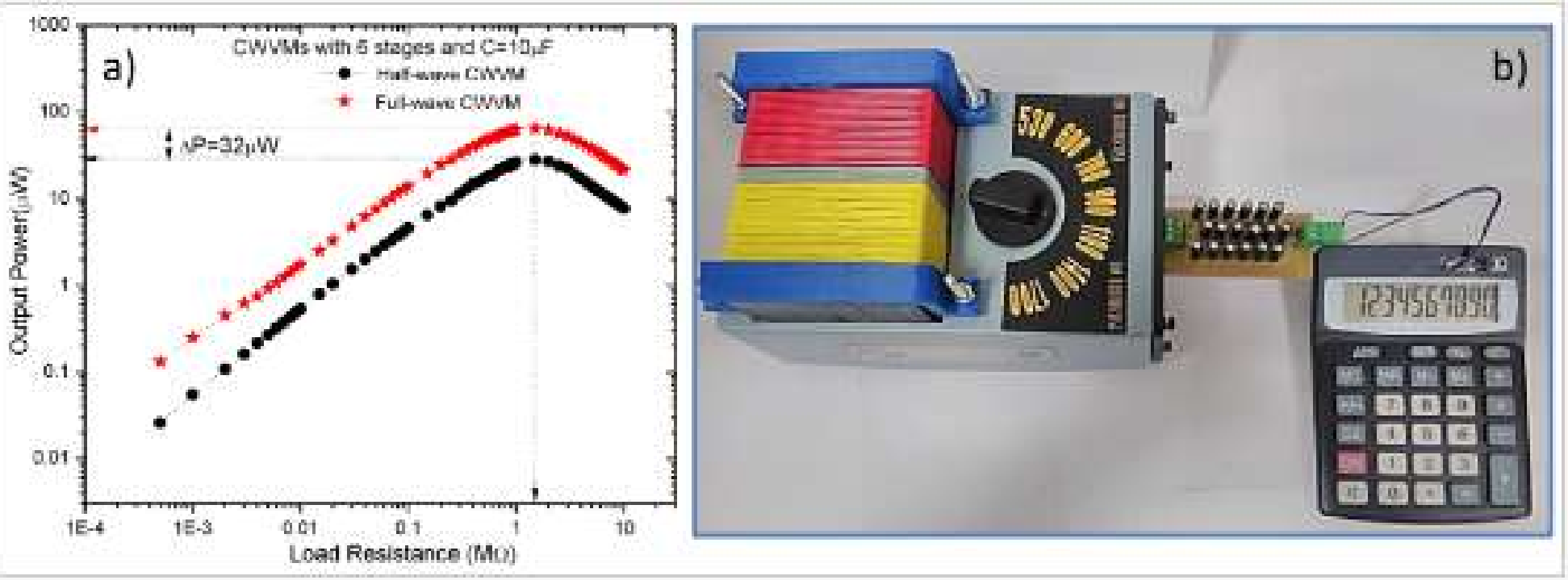
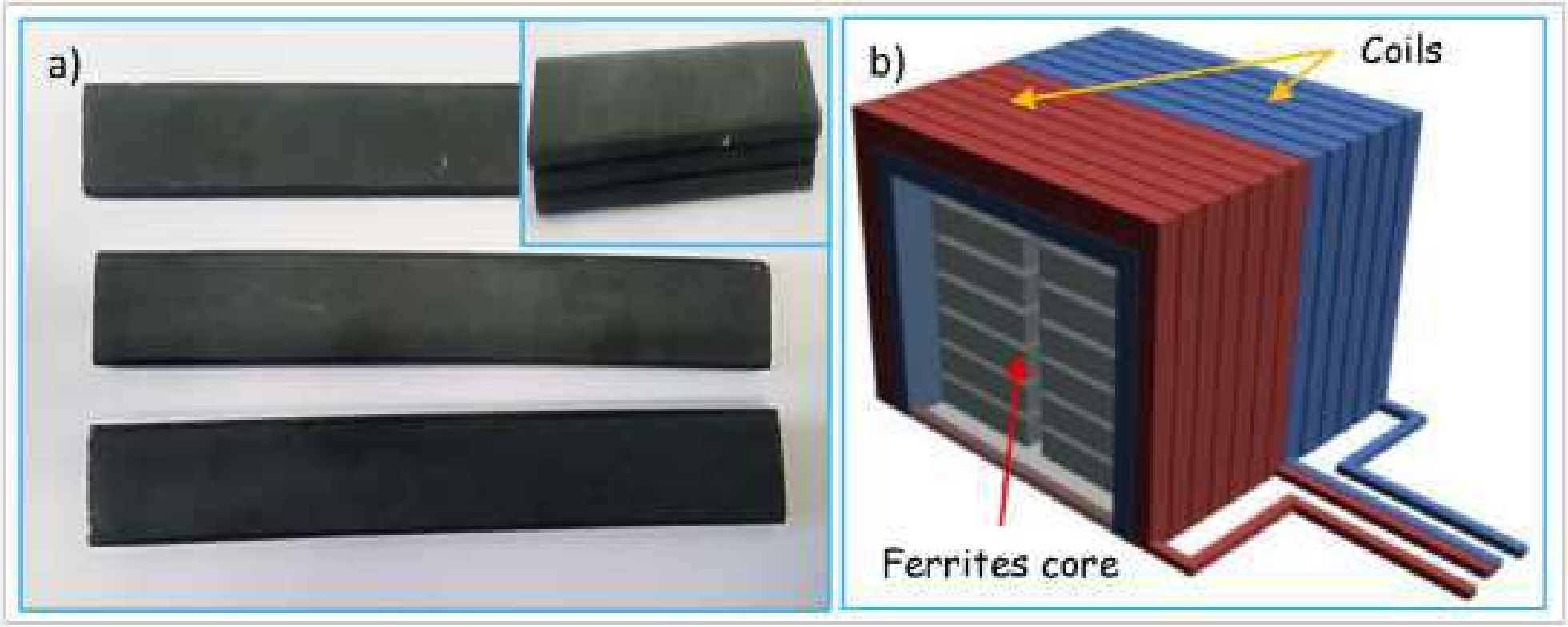


Figure 4. (a) Ferrite cores used for antenna coil, inset shows the stacked cores, and (b) scheme of the composed ferrite core.



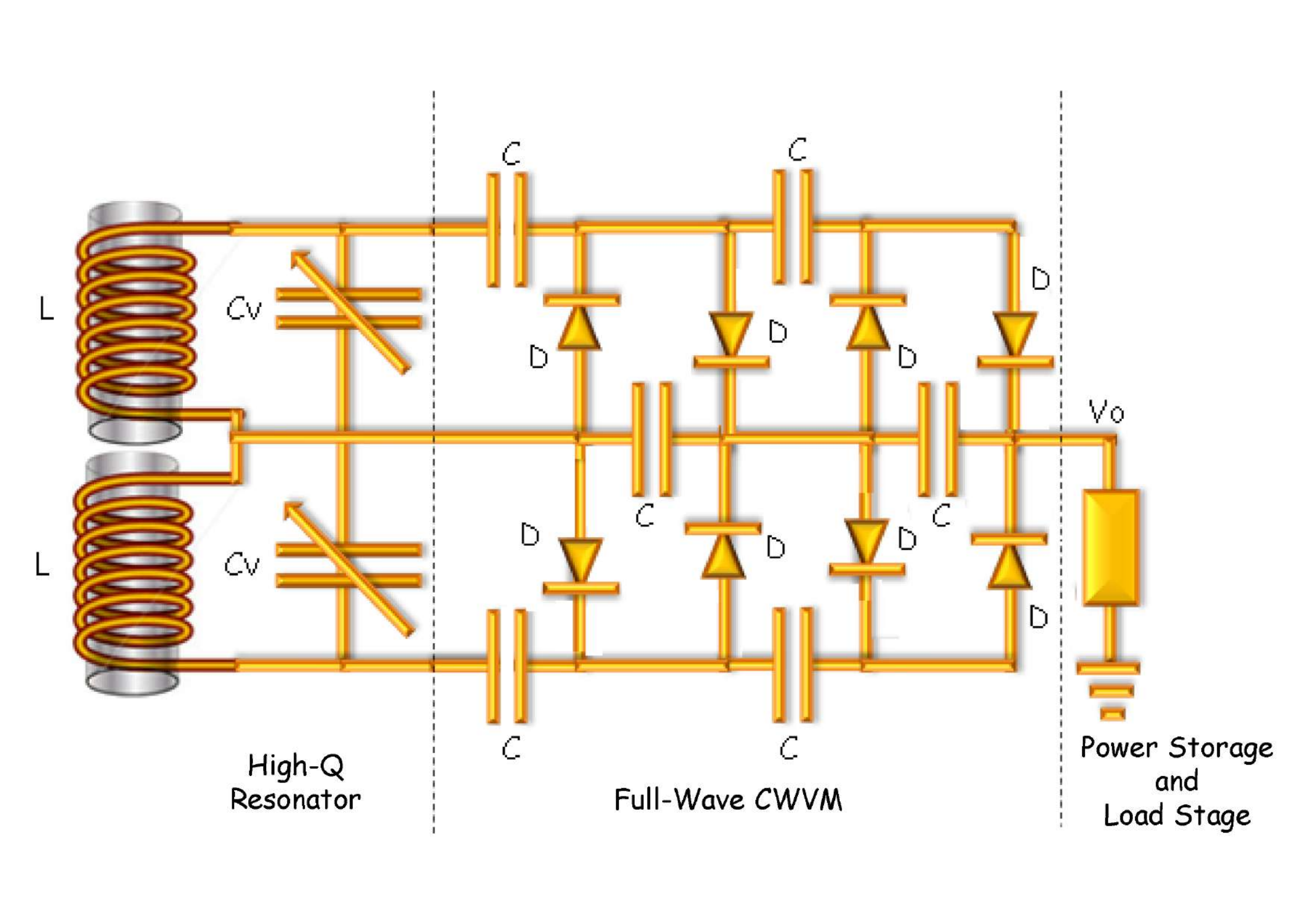

L
L
Cv
Cv
C
C
C
C
D
D
D
D
D
D
D
D
C
C
Vo
High-Q
Resonator
Full-Wave CWVM
Power Storage
and
Load Stage

Figure 5. (a) circuit for a six-stage conventional CWVM, and (b) circuit for a six-stage full wave-CWVM. Here, Cs stands for the series capacitances.

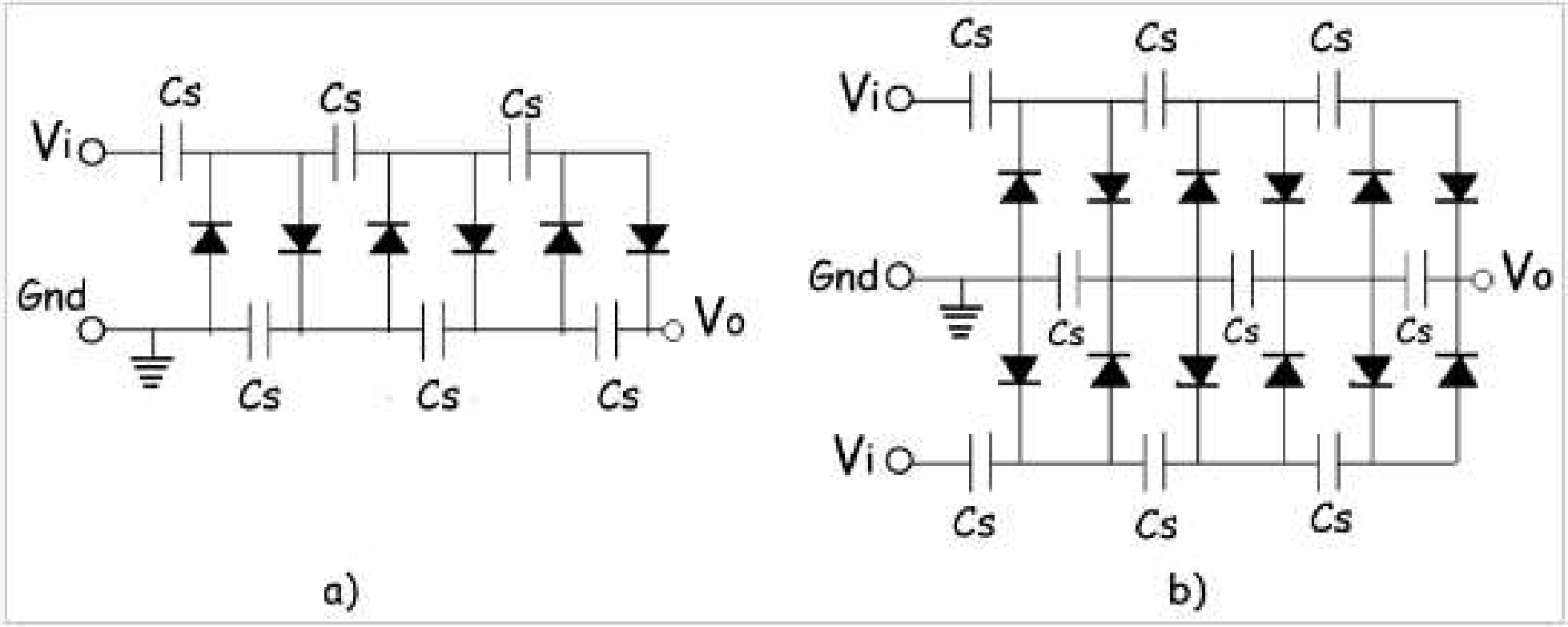


Figure 6. Pictorial image of the AM-RF energy harvesting system.

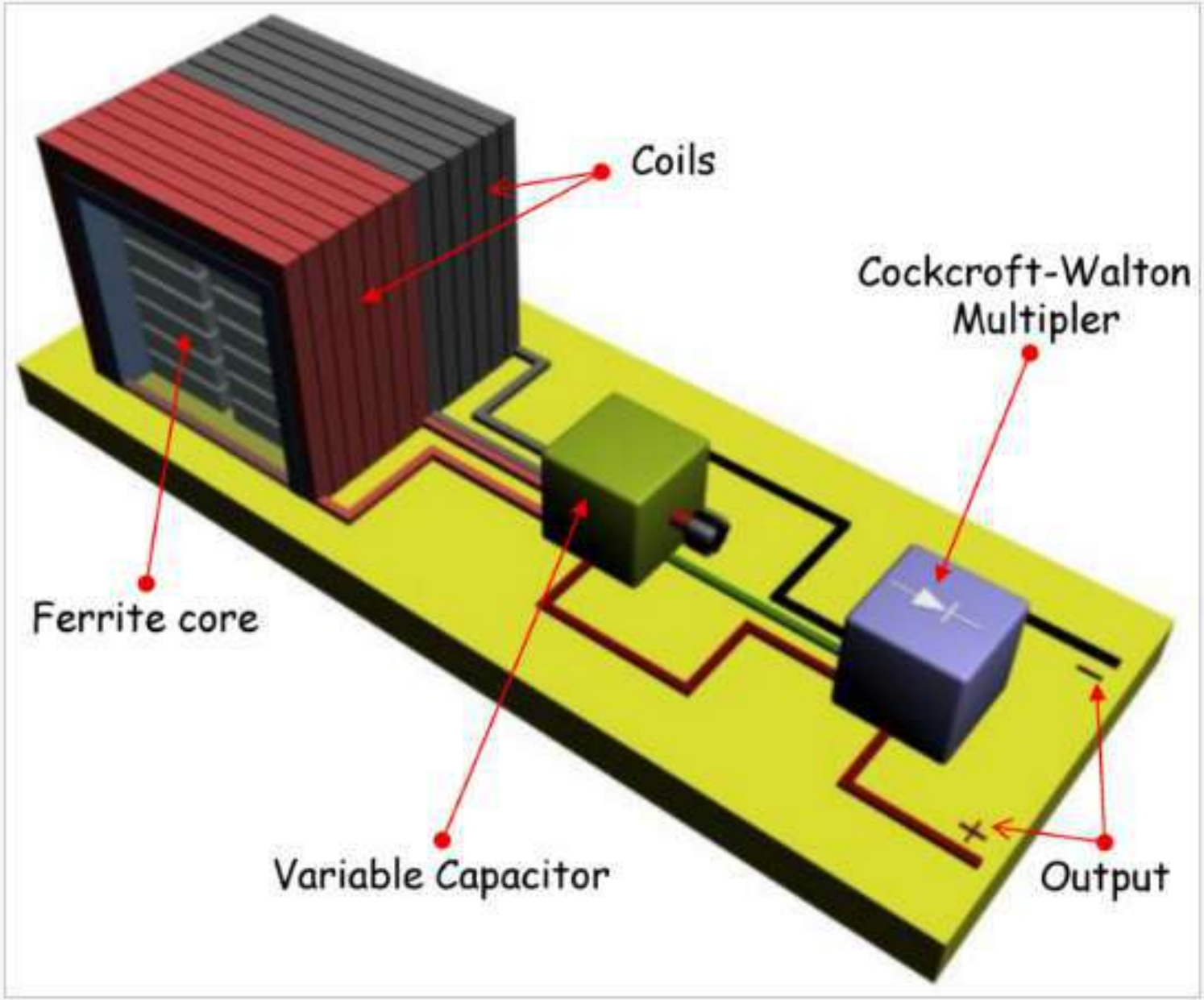
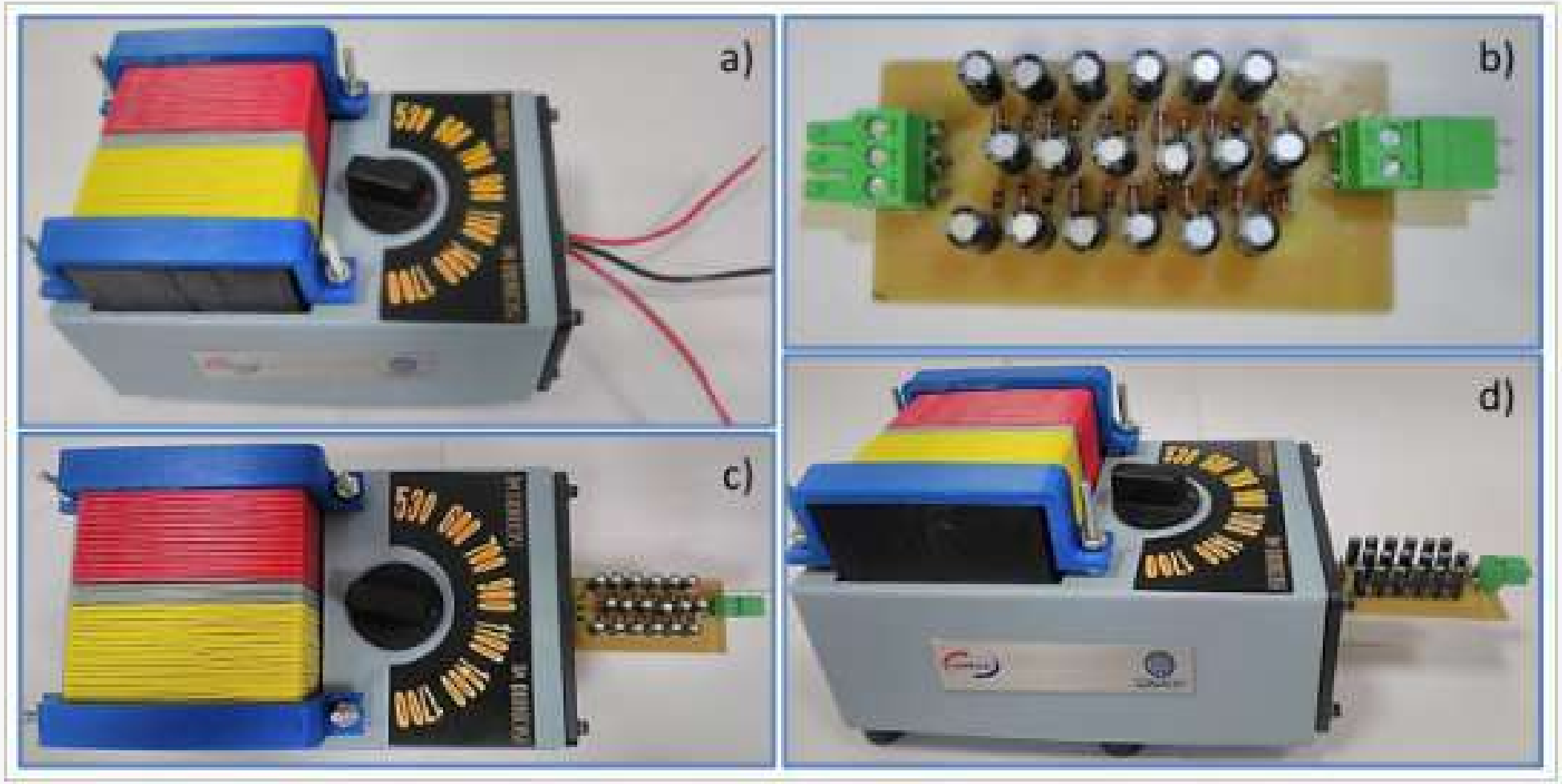
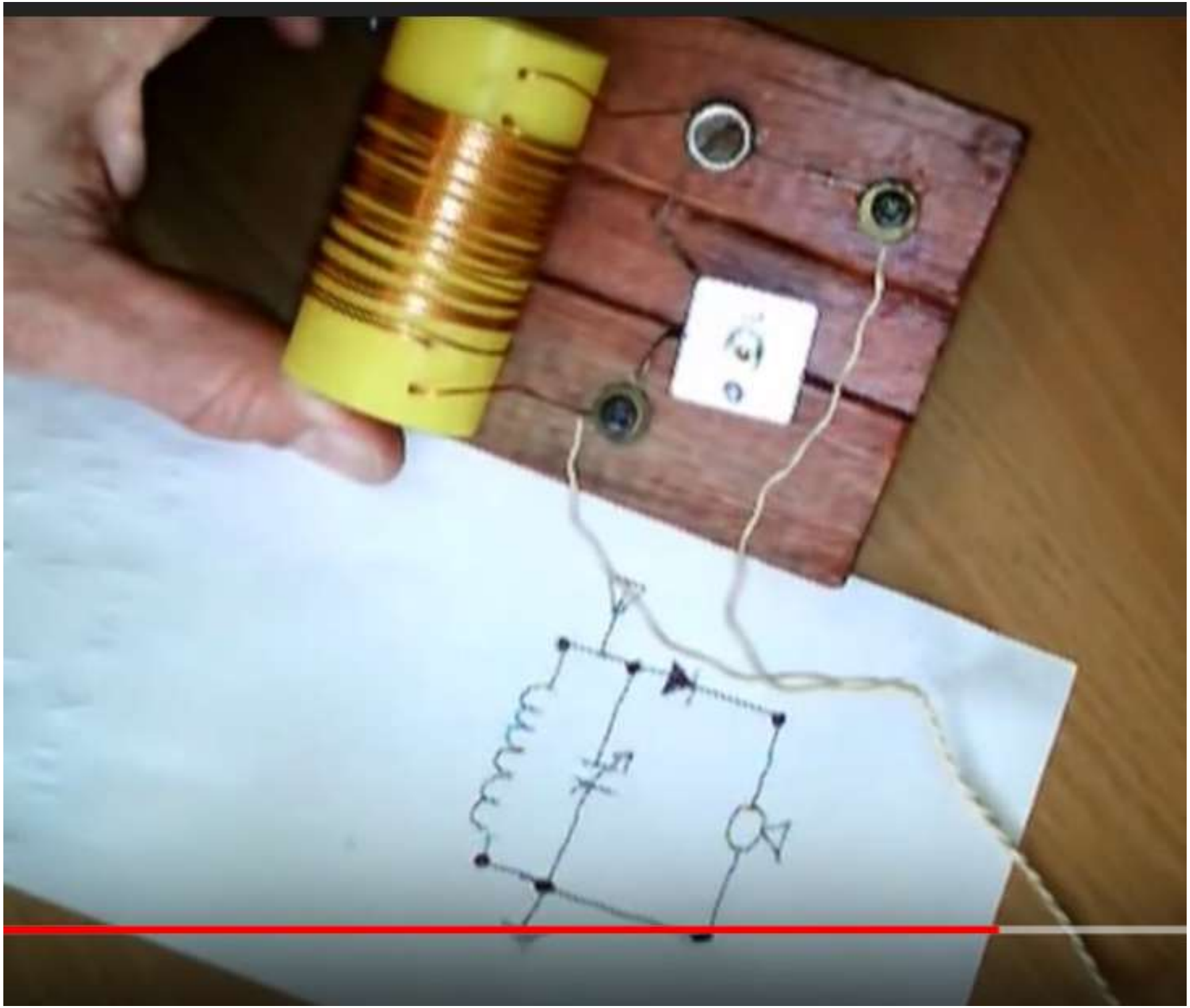
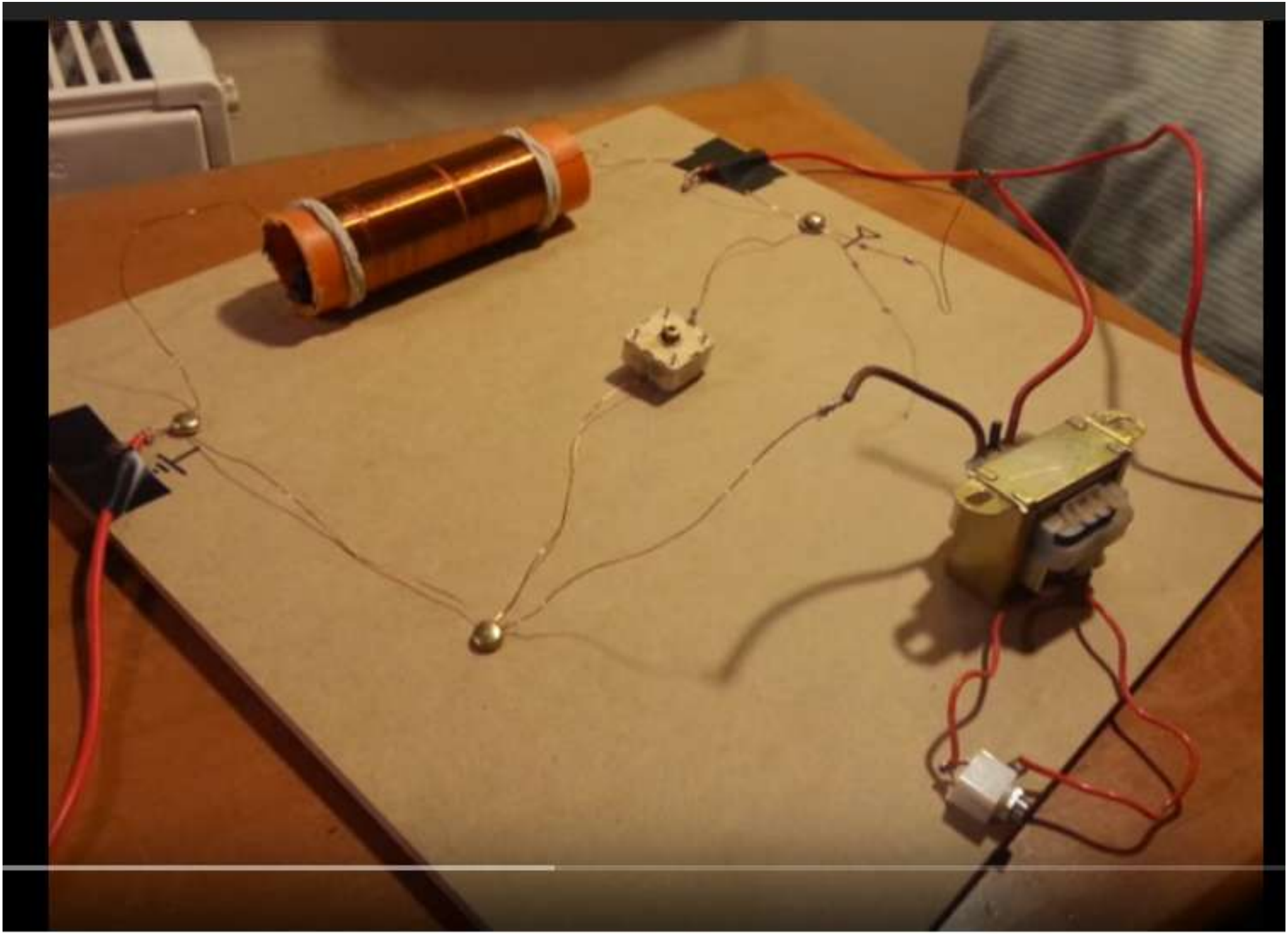
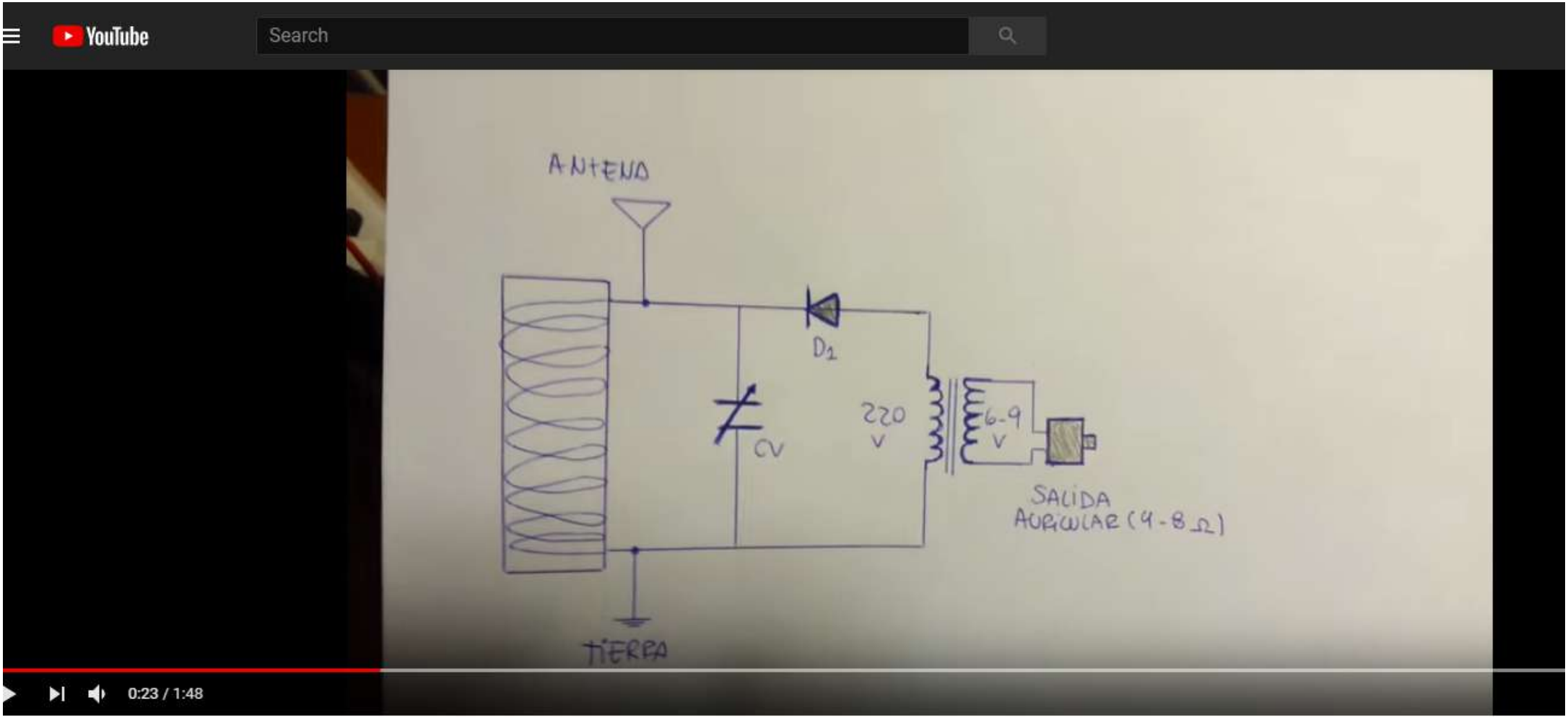


Figure 11. (a) AM resonator implemented, (b) Full-wave CWVM implemented, (c) top view of the AM resonator and full-wave CWVM, and (d) lateral view of the AM resonator and full-wave CWVM.



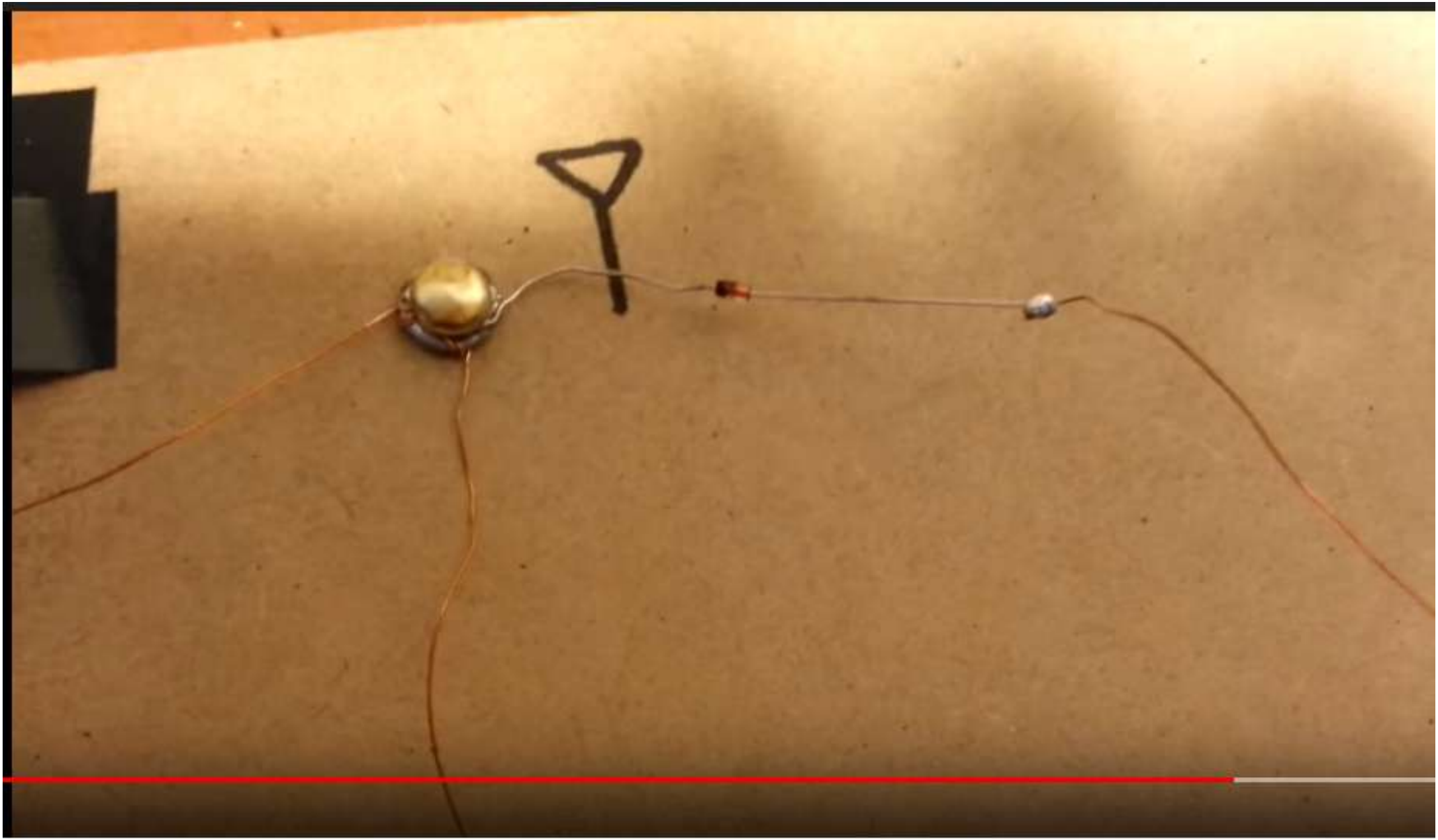


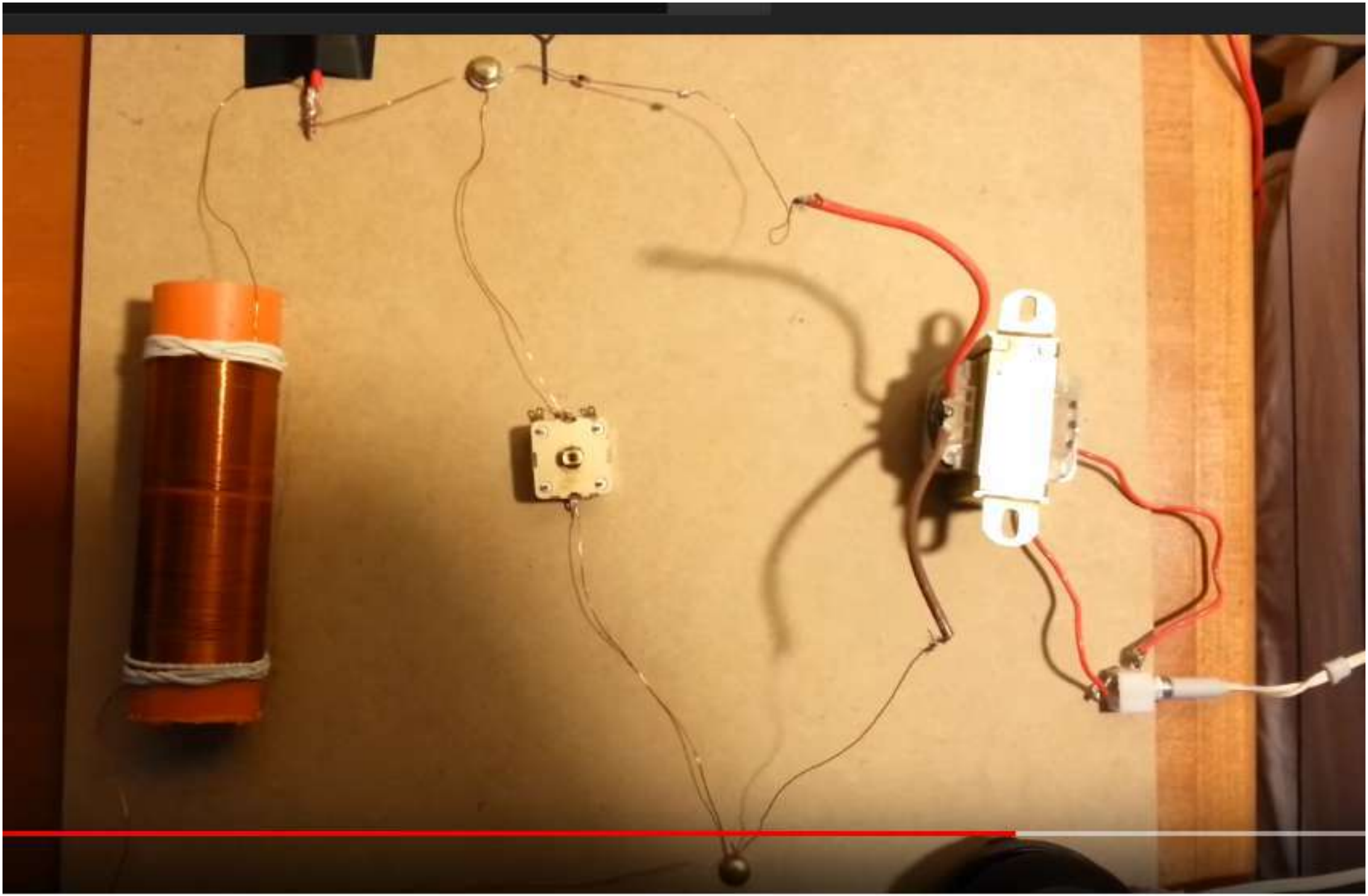


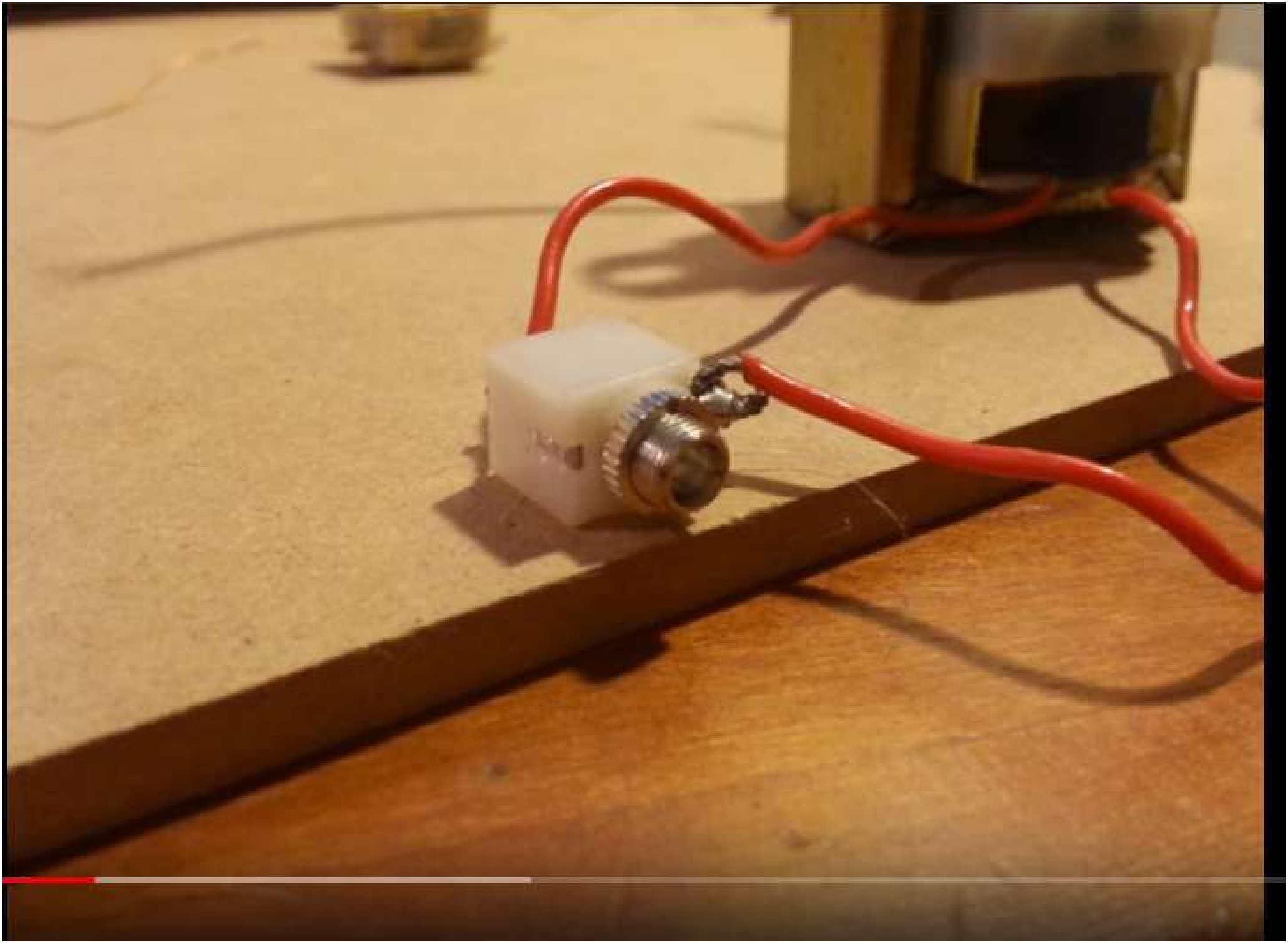


Radio Galena

Up next







Step 1: LED+RF Diode

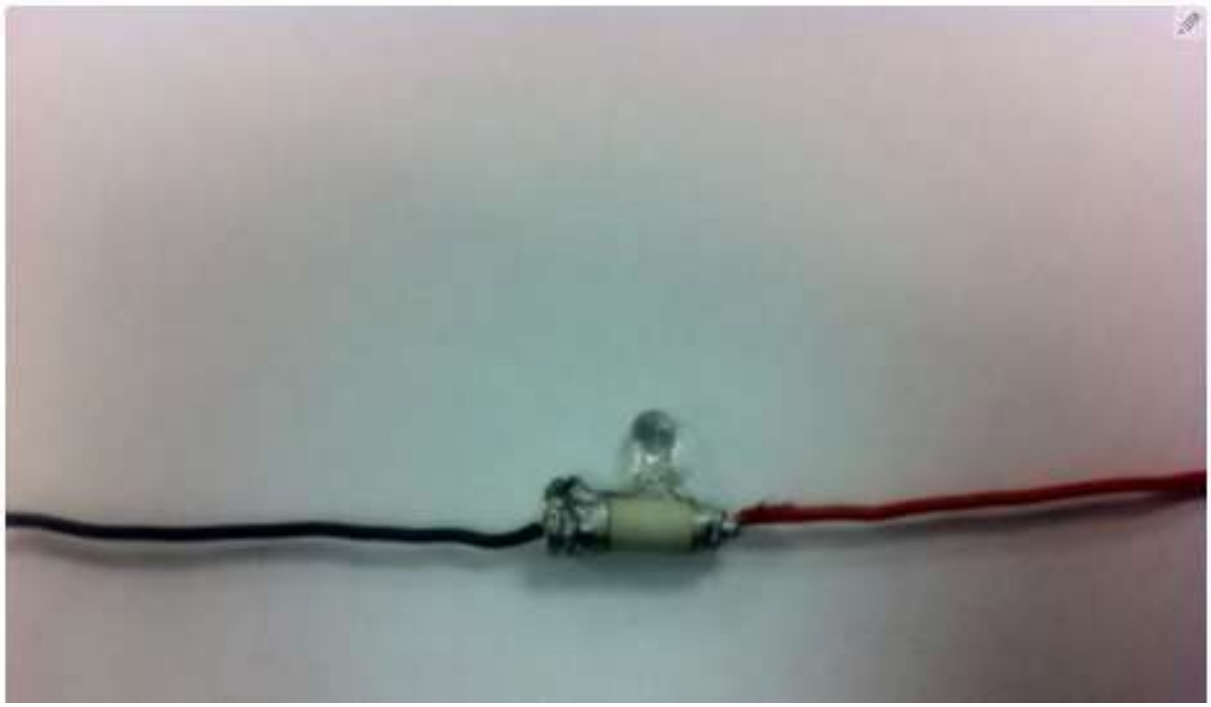


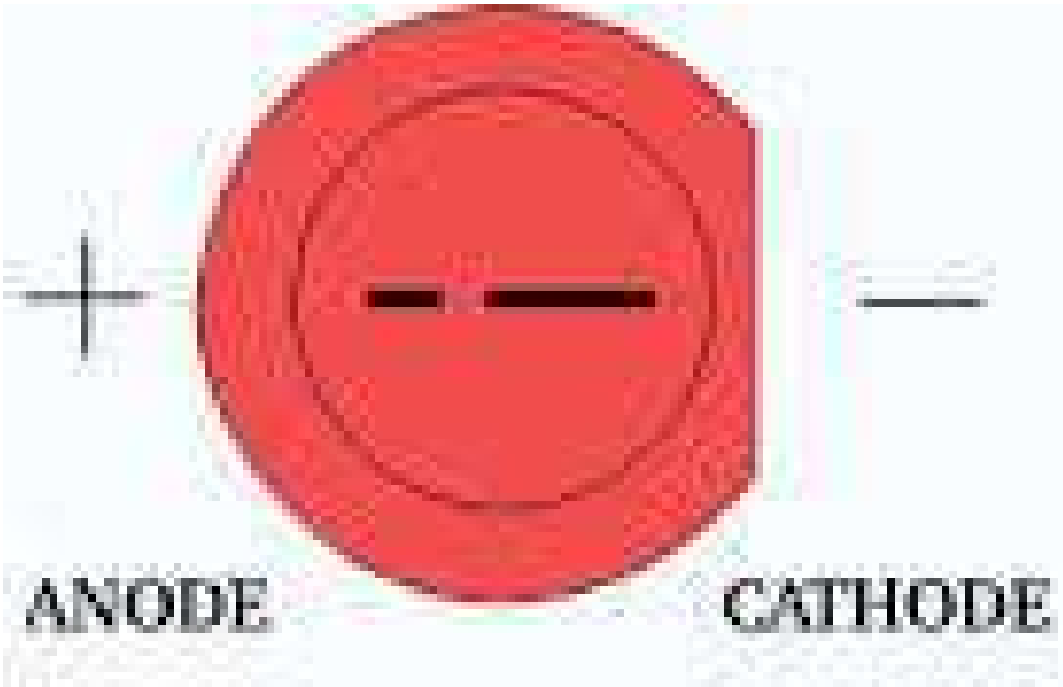


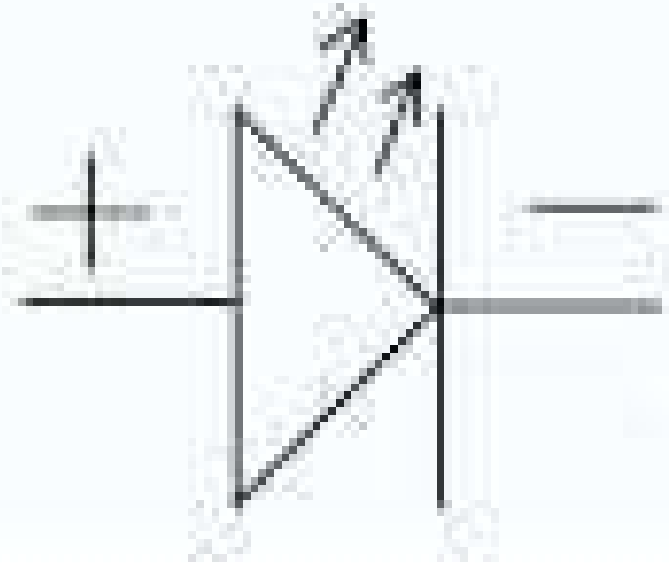
First Solder the led parallel to the Rf diode

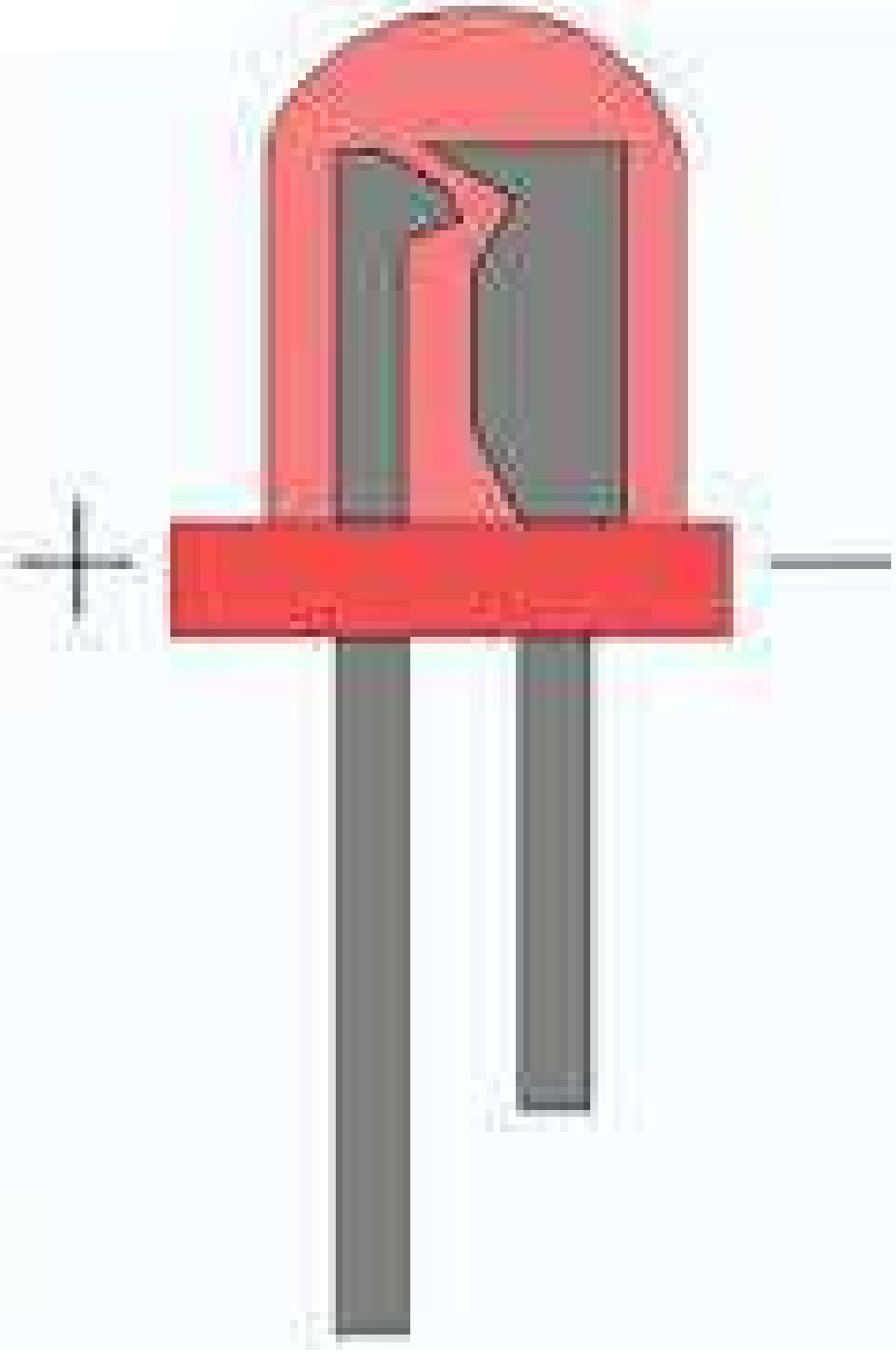
Add Tip Ask Question Comment Download

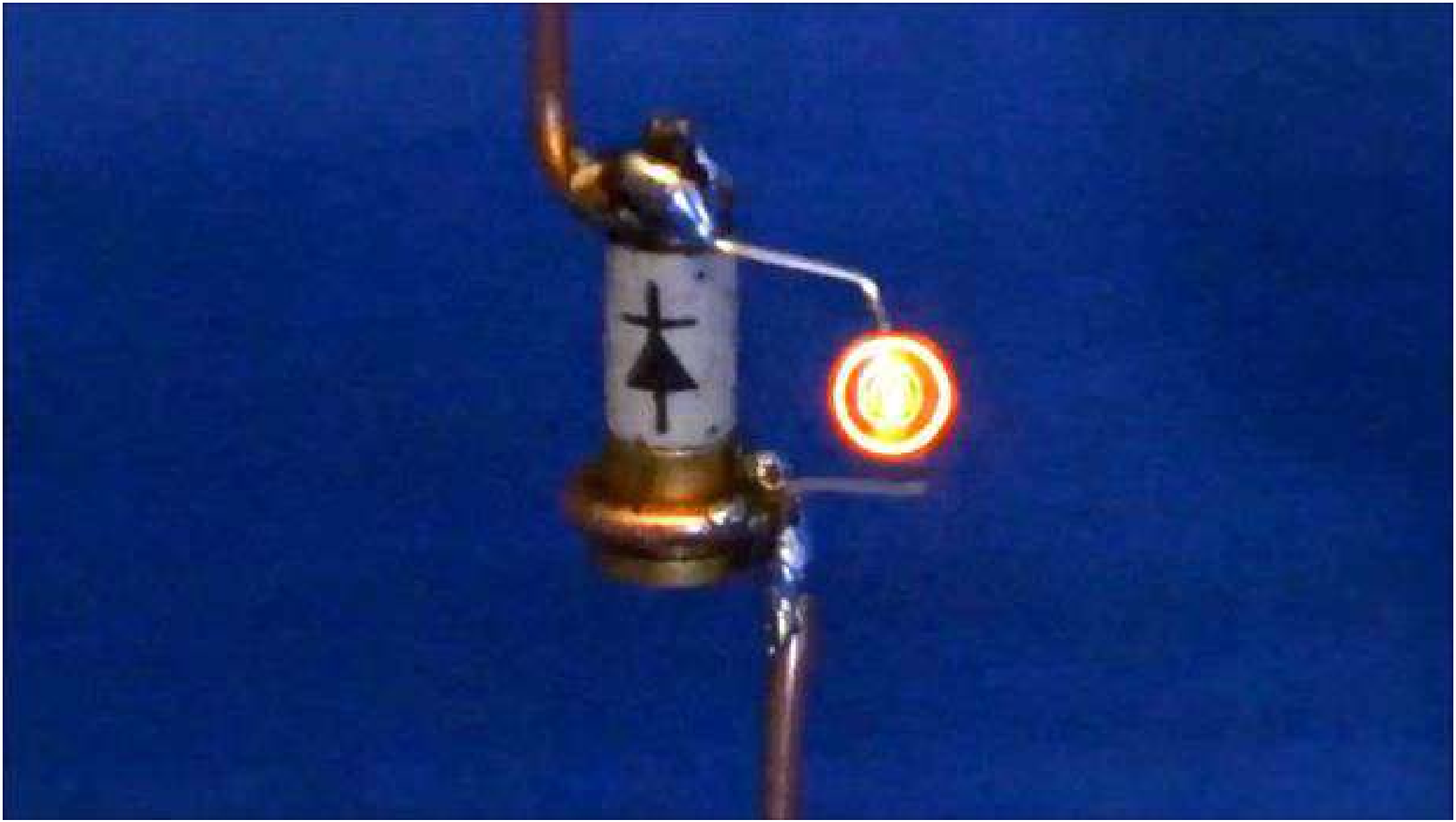
Step 2: RF Diode+ LED+ Wires

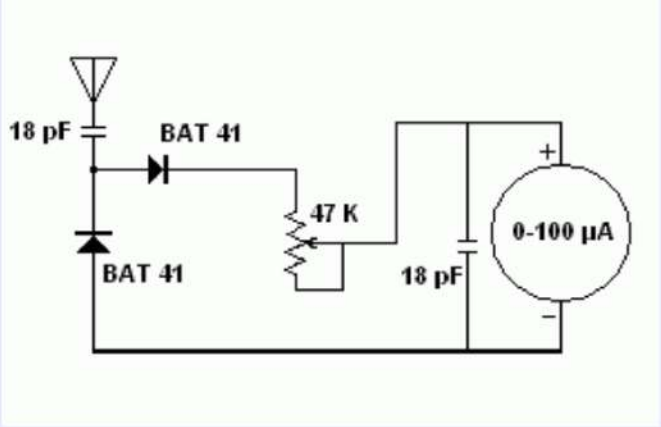


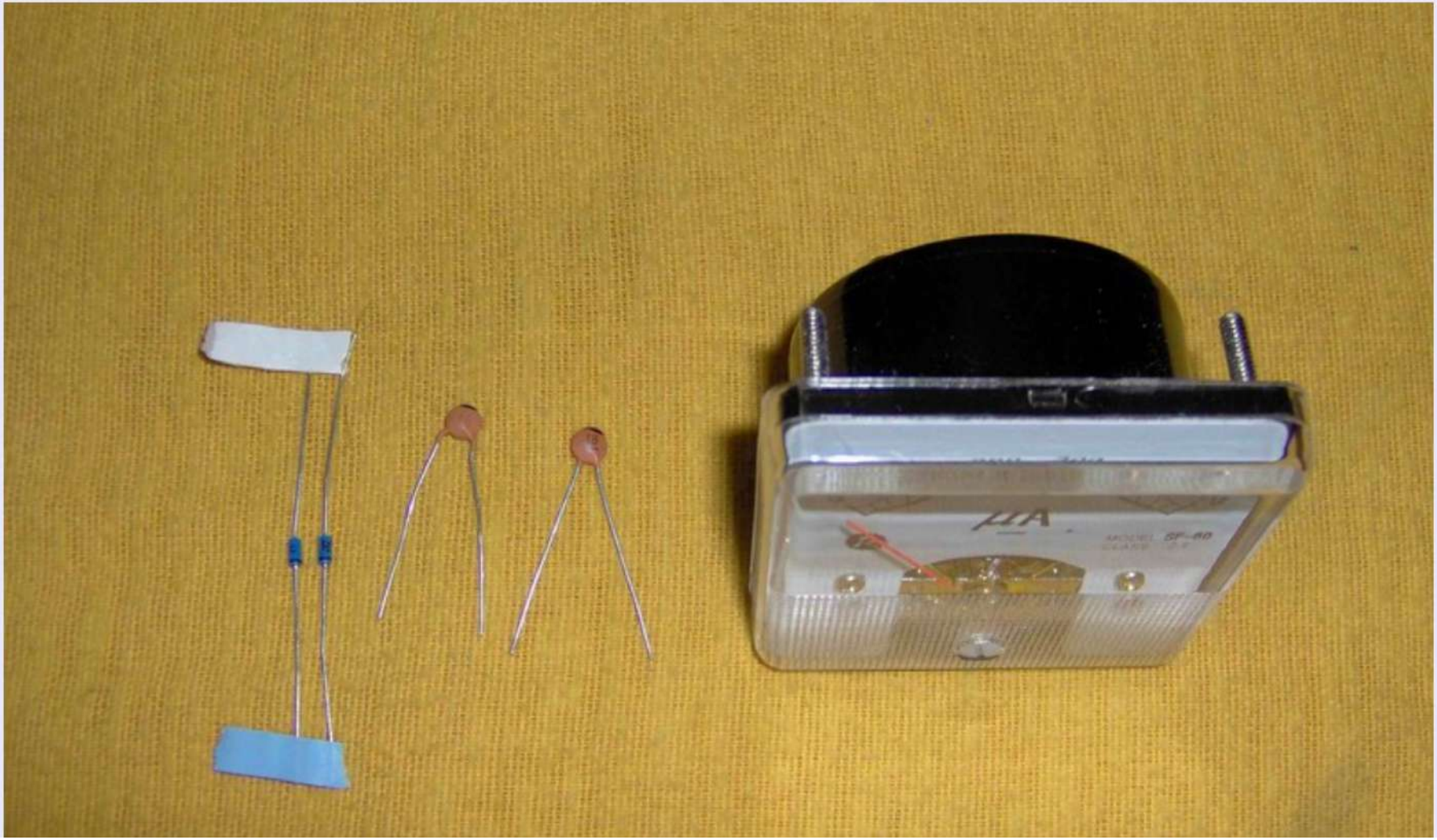

ANODE
CATHODE

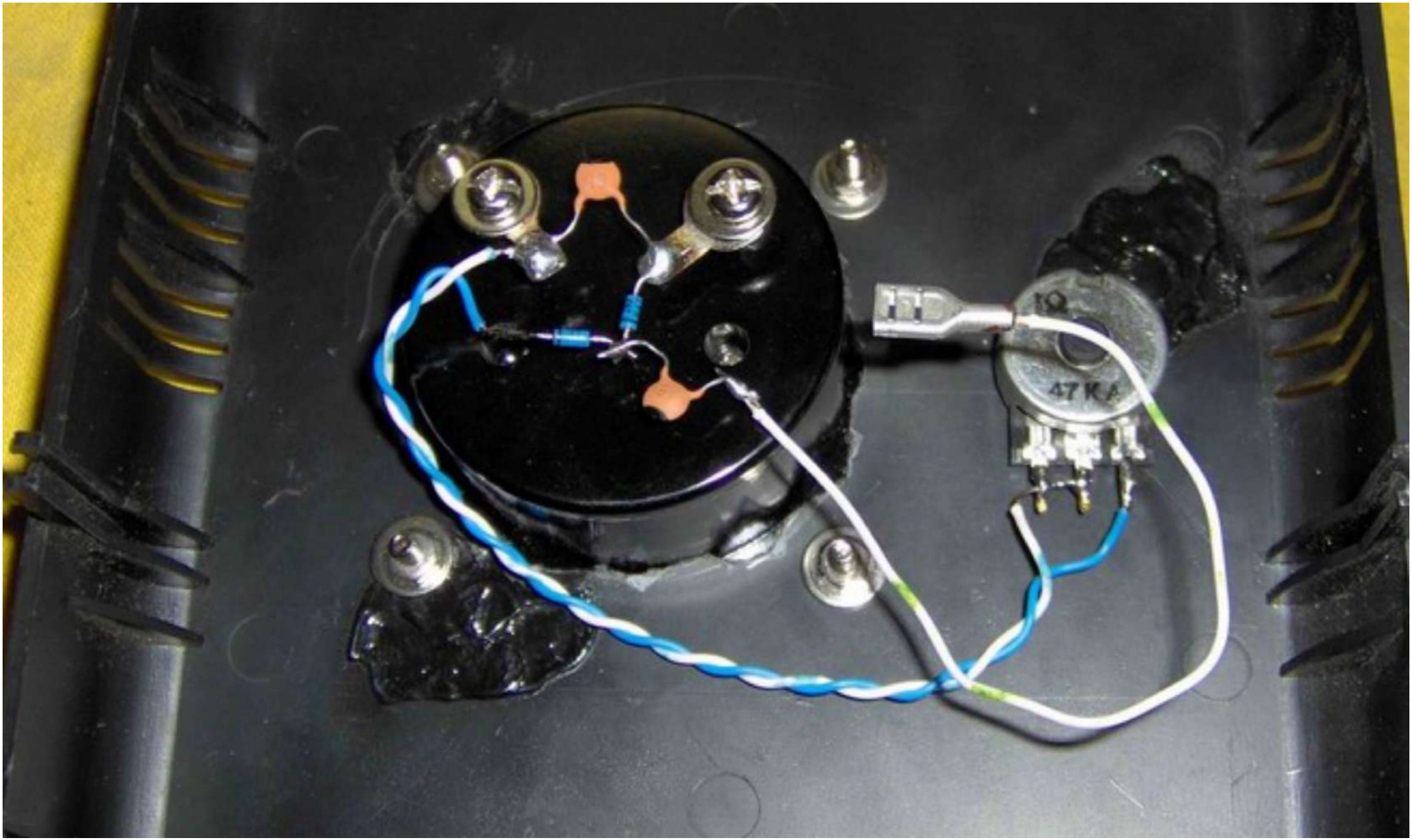







18 pF
BAT 41
47 K
BAT 41
18 pF
0-100 µA
+
-




47 K A

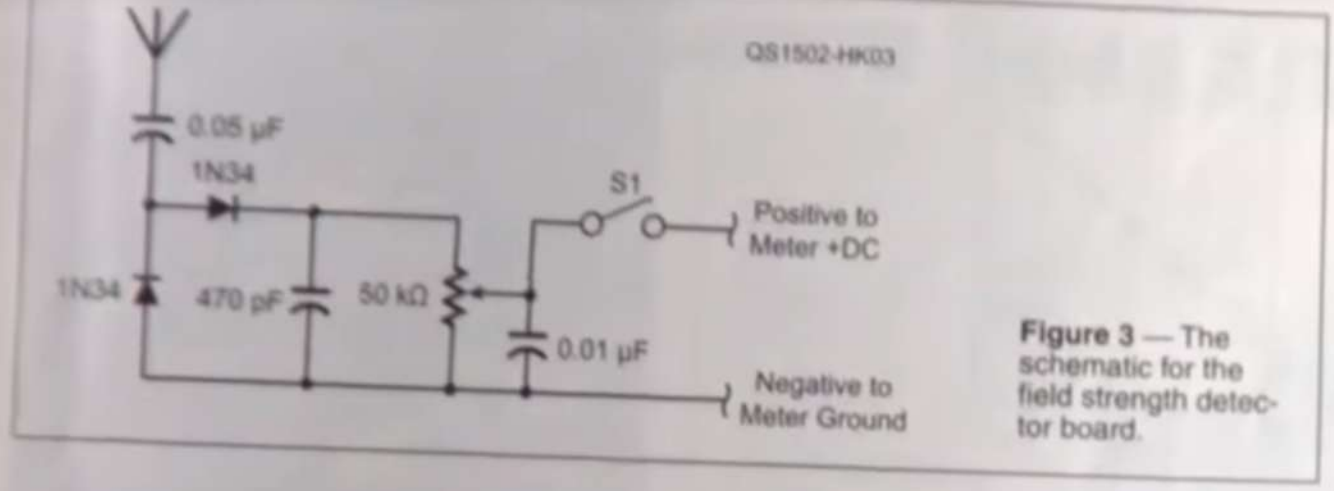
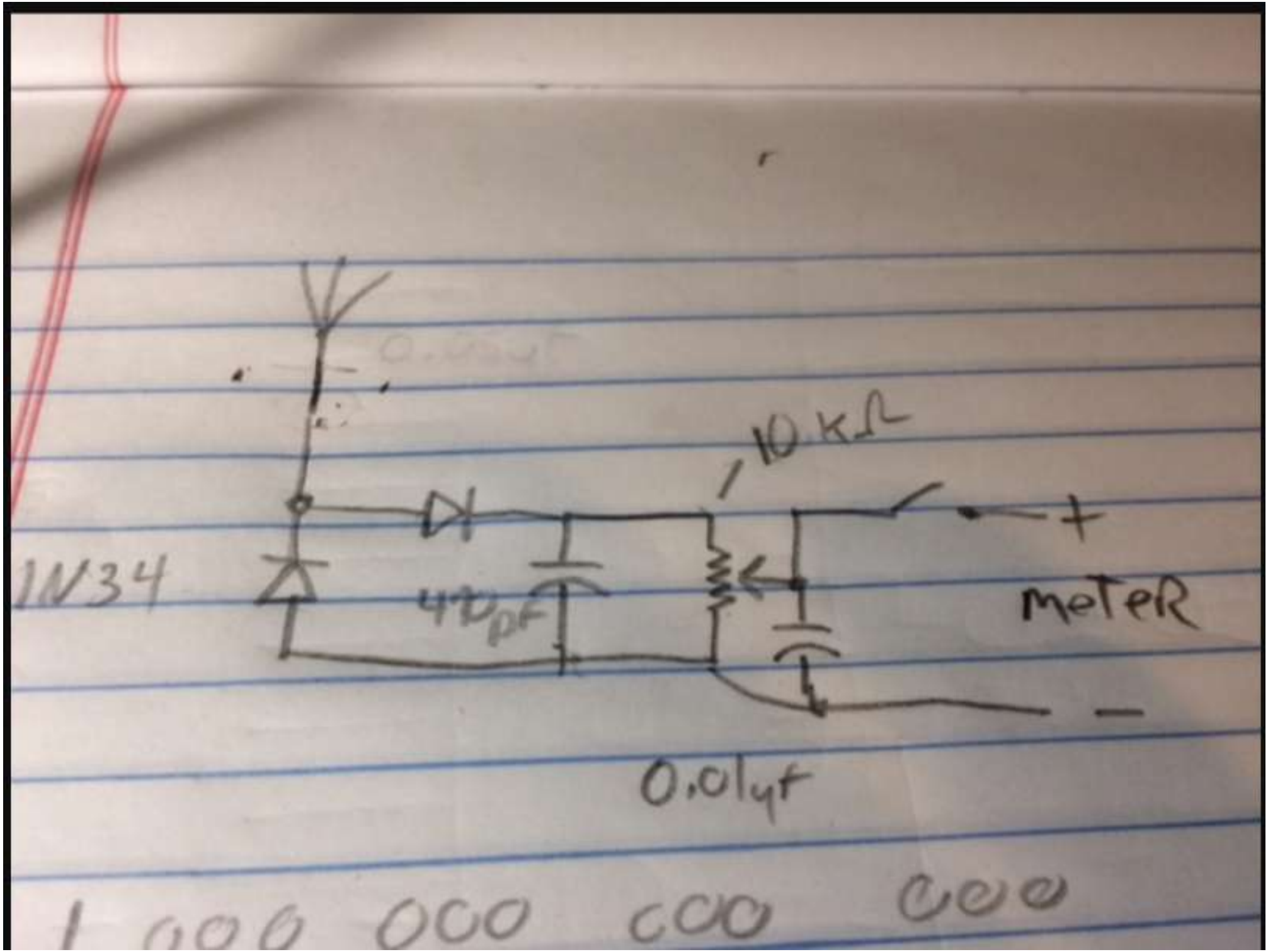


Figure 3 — The schematic for the field strength detector board.





Figure 5 — The original multimeter and its up-

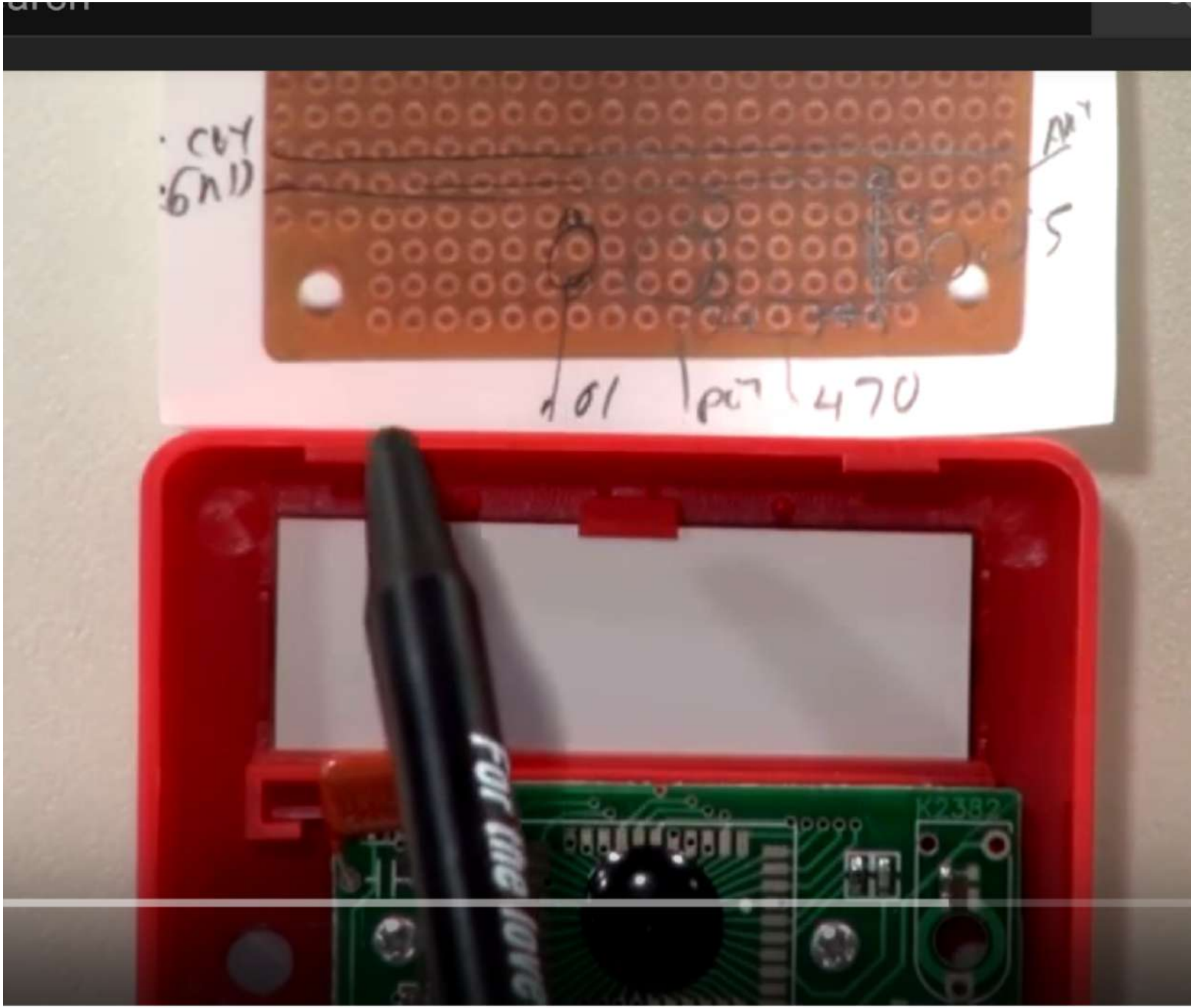

10 KΩ
+
1N34
470 pF
meter
—
0.01 μf

Specifications

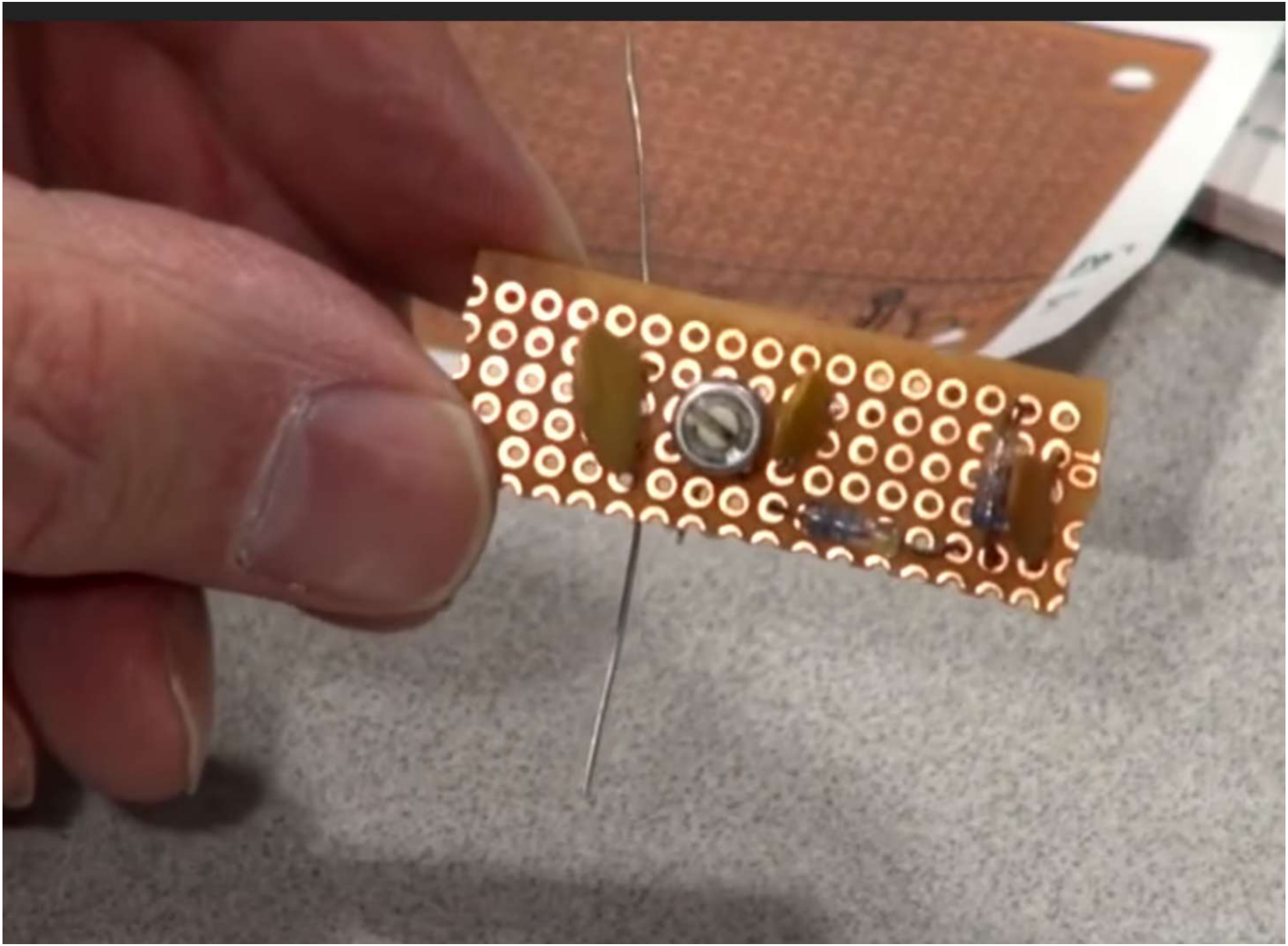
Frequency	45-450 Hz
DC Amps	Ranges: 200µA/2000µA 20mA/200mA, 10A
Accuracy	(@200µA-200mA) 1.2%±2D, (@10A) 3%±2D
DC Voltage	Ranges: 200mV/2000mV/2V/20/200/1000V
Accuracy	(@200mV) 0.5%±1D, (@2000mV-200V) 1.0%±1D, (@1000V) 1.0%±2D
AC Voltage	Ranges: 200/750V
Accuracy	(45-450 Hz) 1.2%±10D
Resistance	Ranges: 200/2000/20K/200K/2000K Ohm
Accuracy	(@200-200K Ohm) 0.8%±2D, (@2000K Ohm) 1.0%±2D,
Sampling Rate	2.5 times/Second
Overload Protection	Fast-Acting 500mA/250V Fuse
Operating Temperature	Range: 32° - 104° F
Display	½" high 3-½-digit LCD
Battery	One 9 V (included)
Weight	.45 lb.
Features	29-1/2" Test Leads, Transistor (NPN and PNP) Testing Function, Battery Testing Function, and Automatic Polarity and Zero Adjust

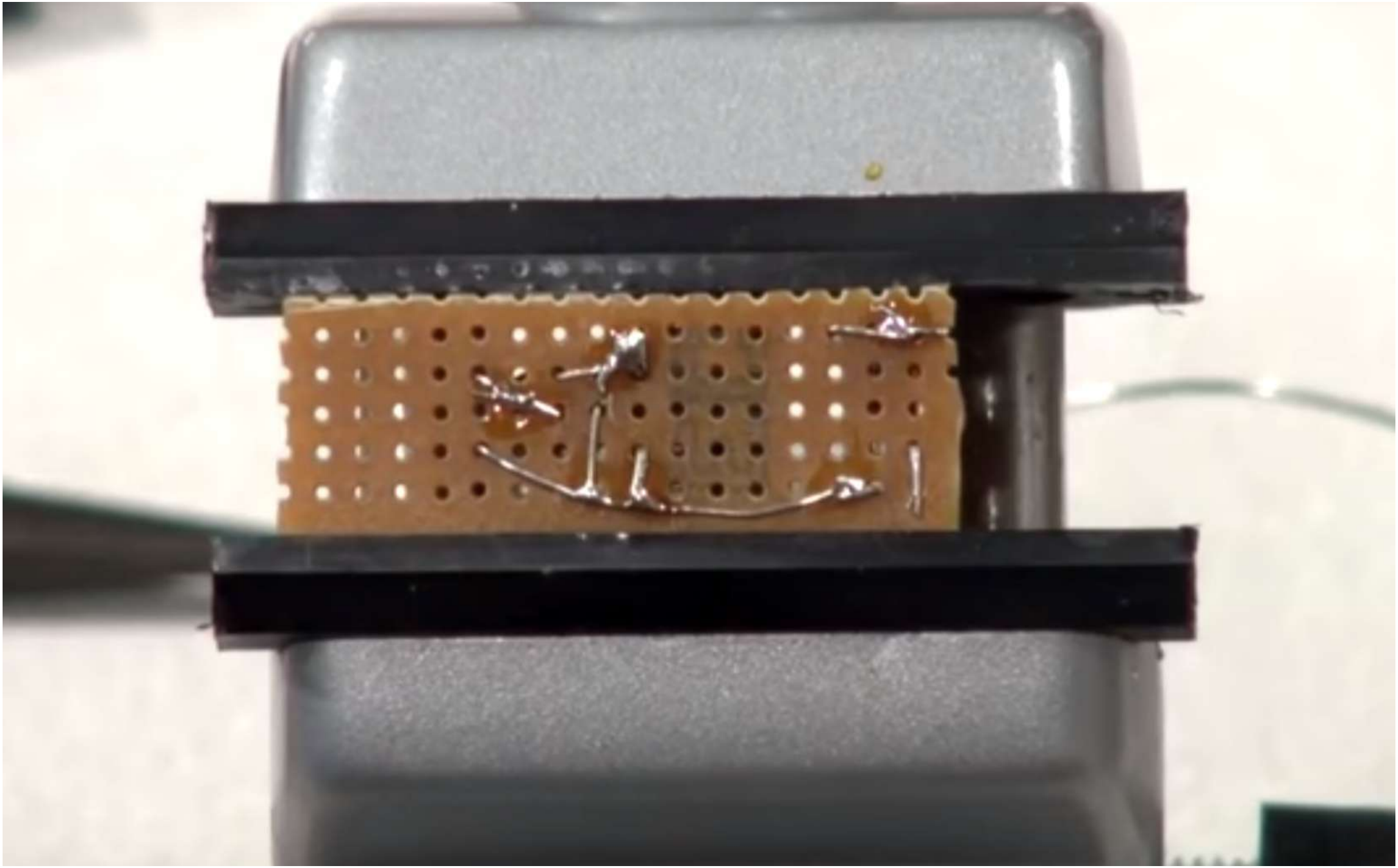
5:16 CC

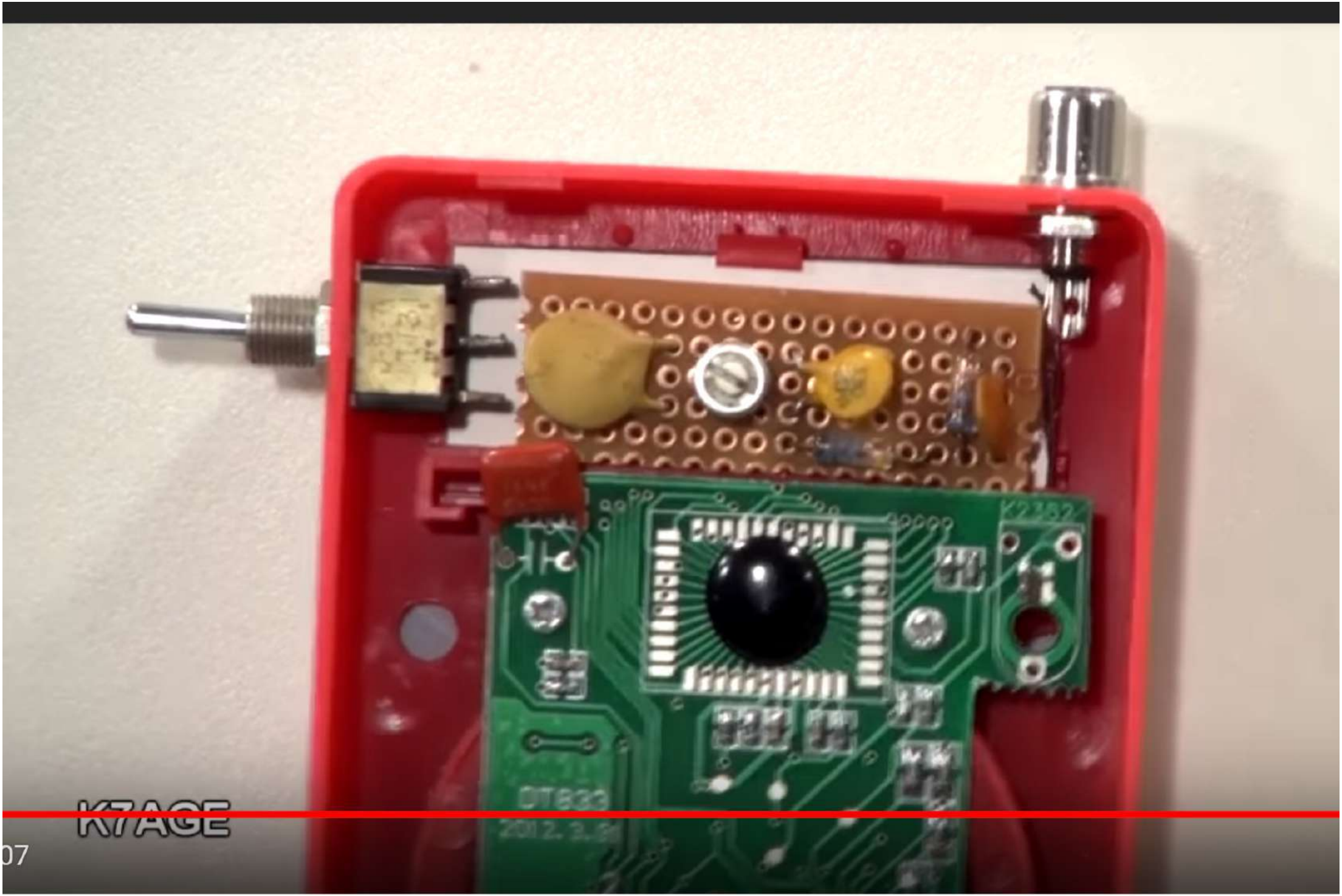

CEN-TECH
7 FUNCTION
DIGITAL
MULTIMETER
CEN-TECH

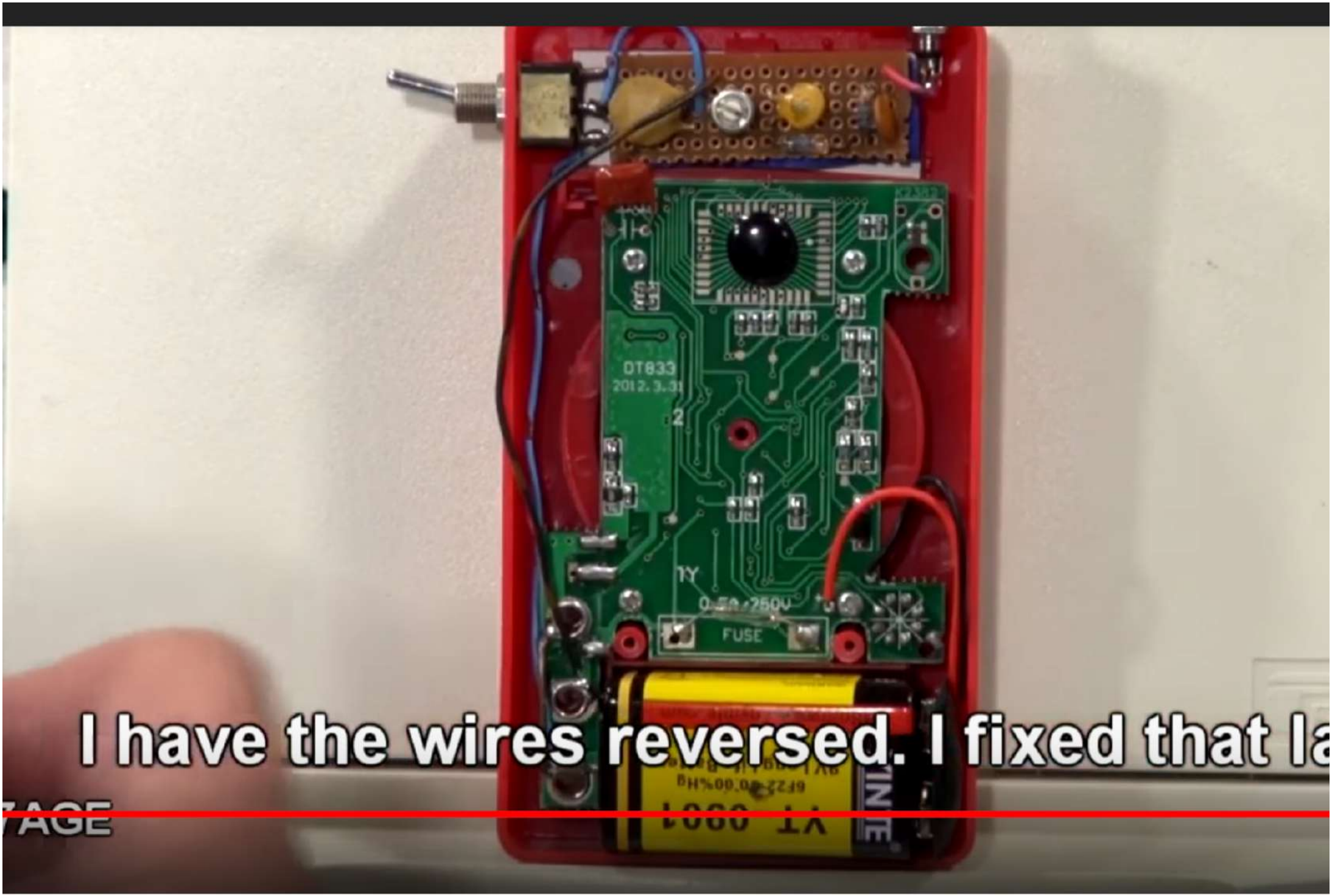


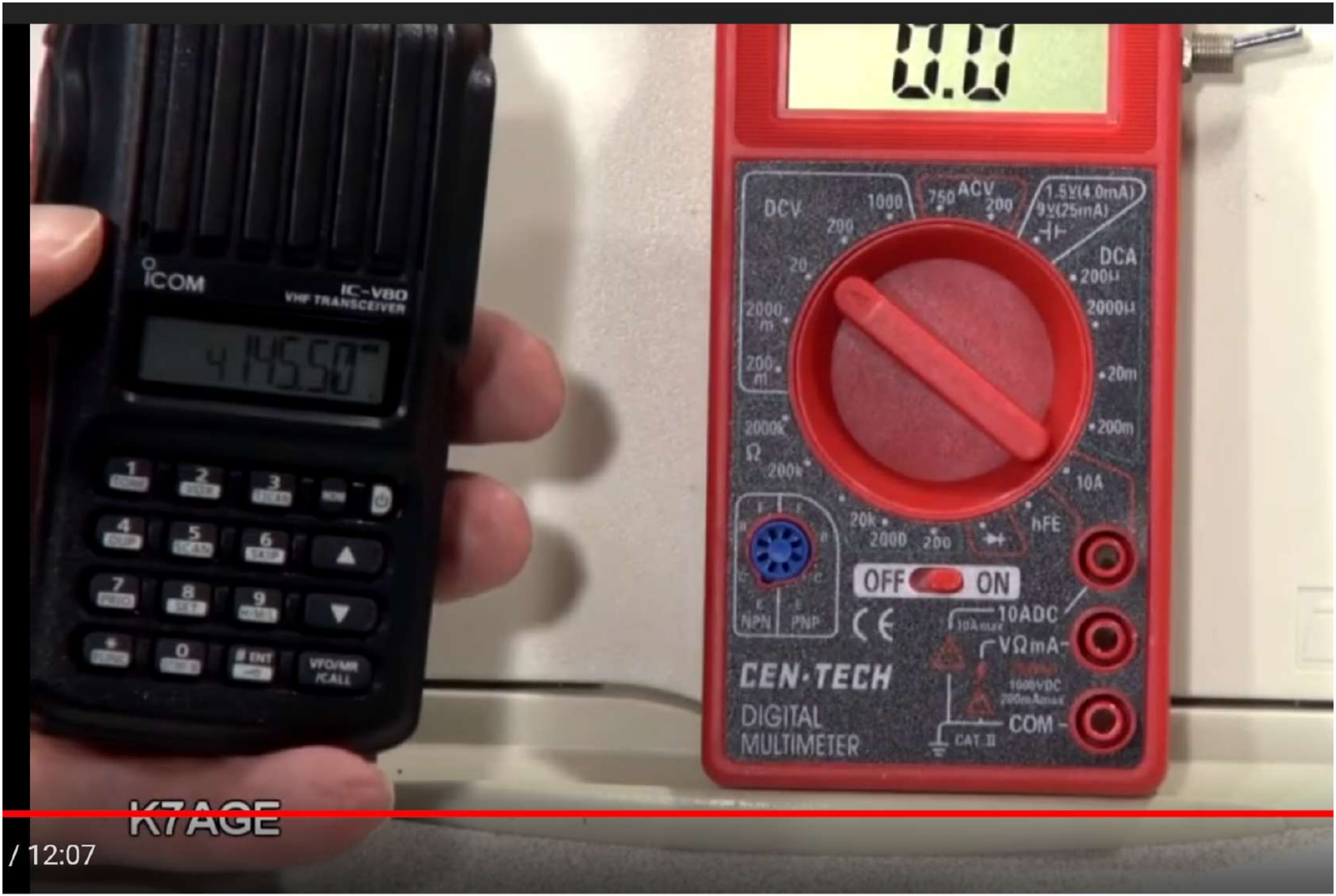
Up next



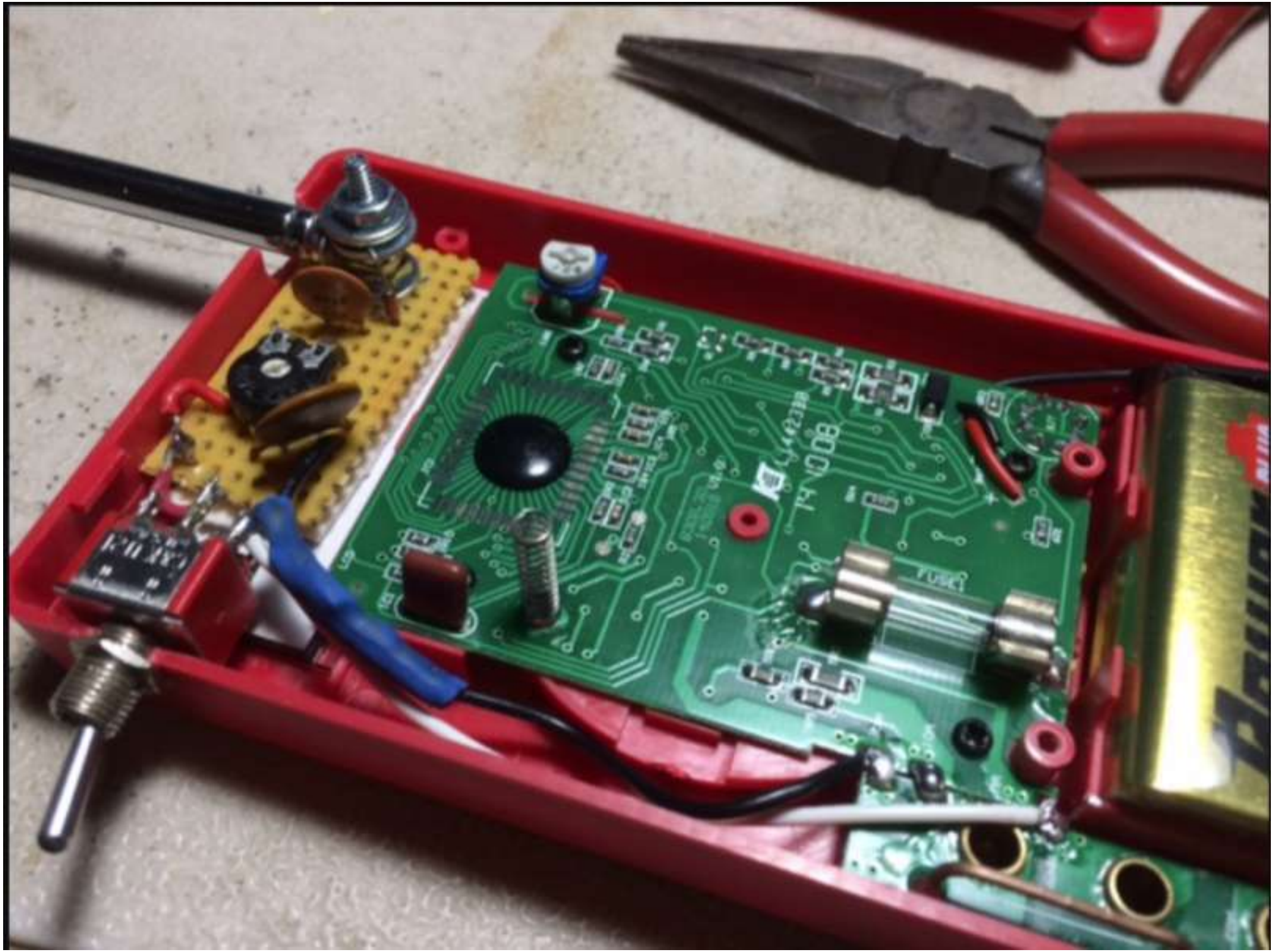


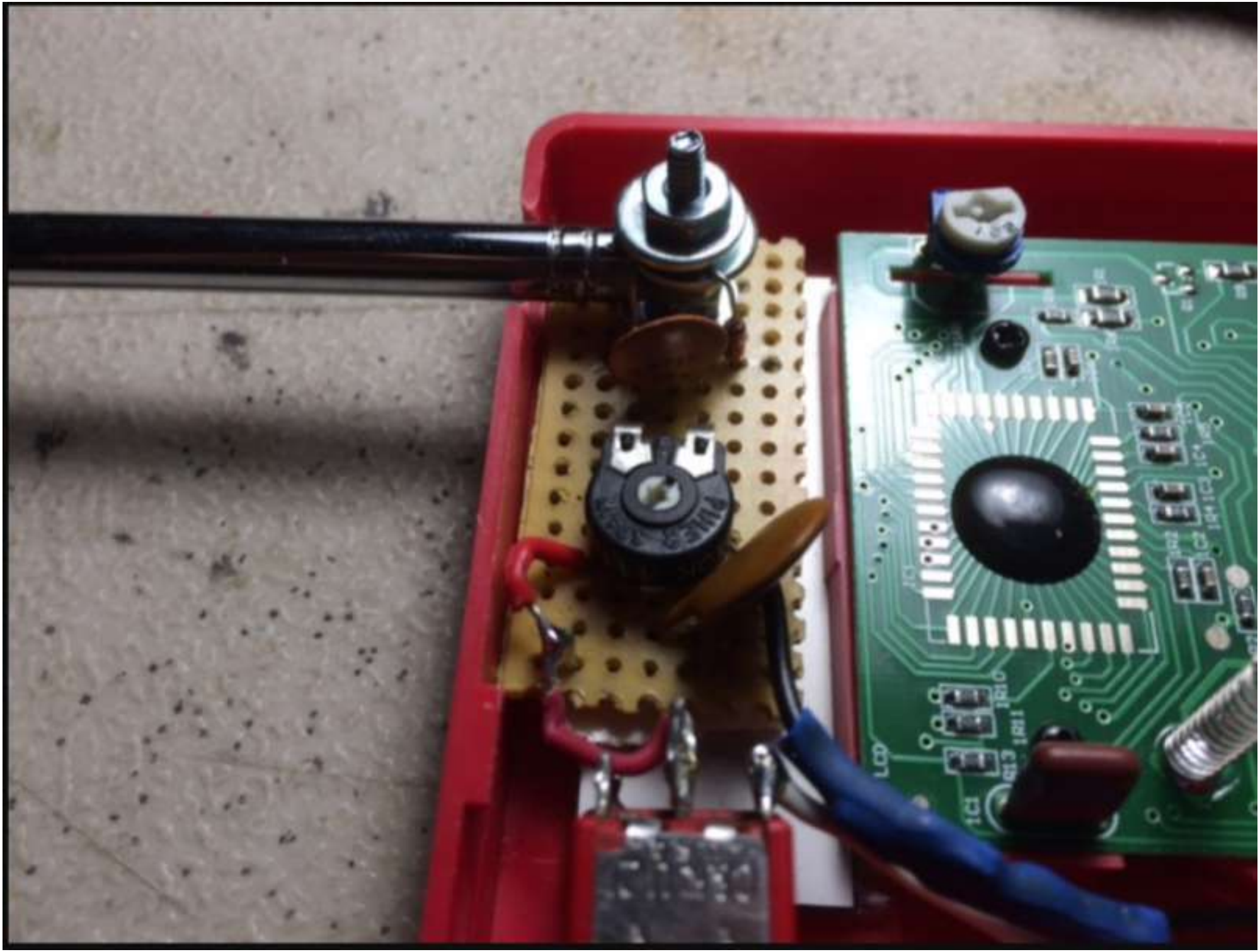

K7AGE
07

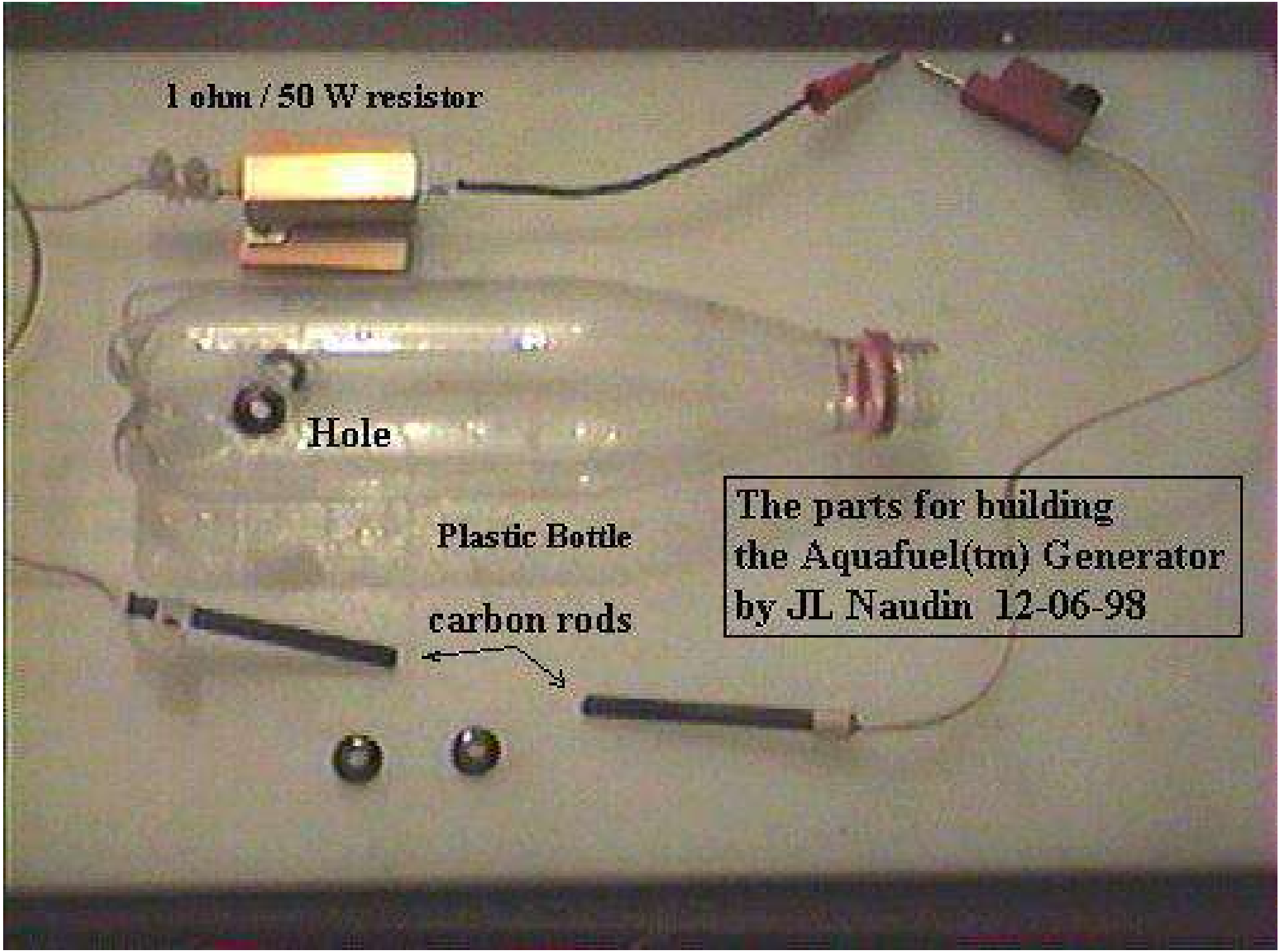

DT833
FUSE
I have the wires reversed. I fixed that la
AGE

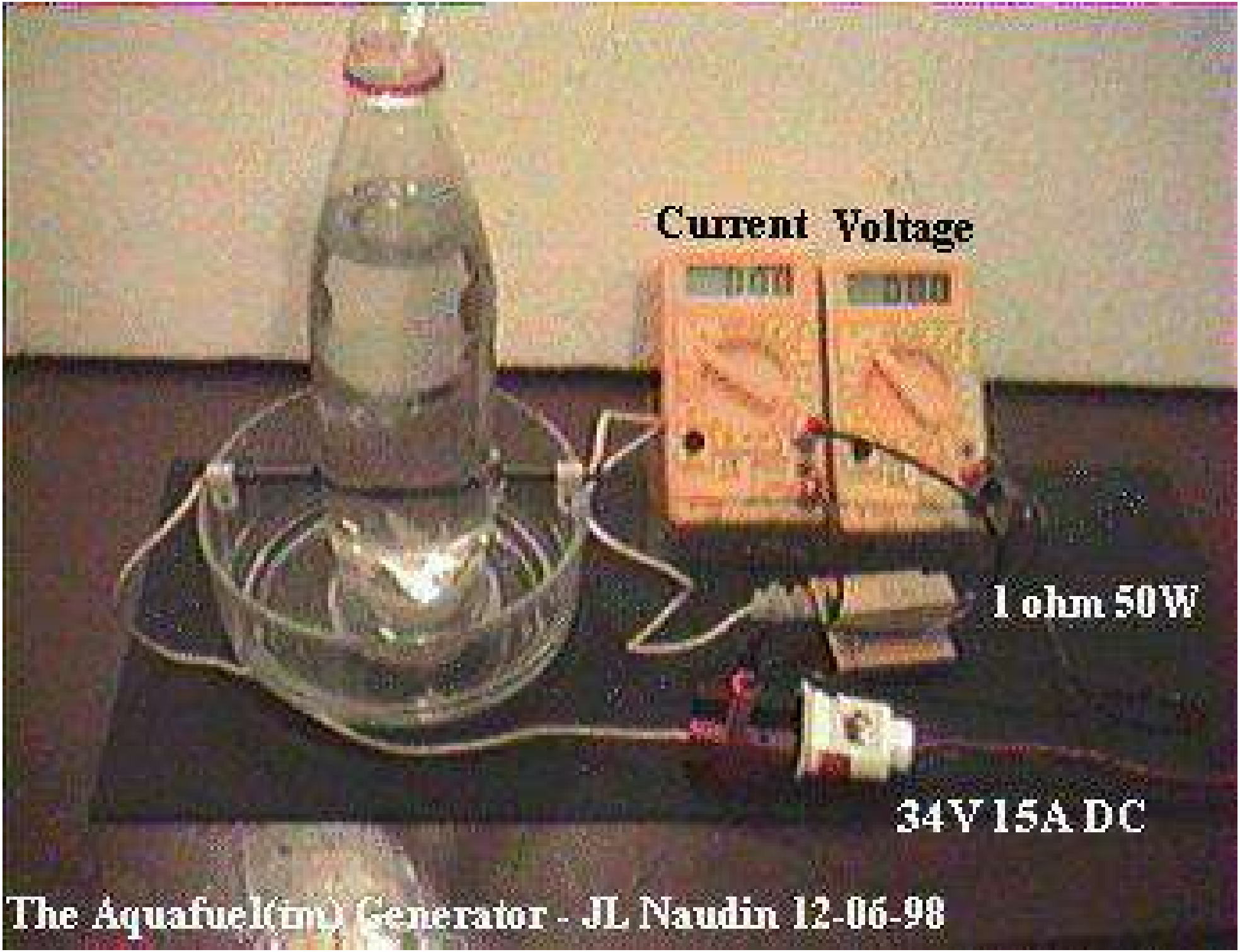

ICOM
IC-V80
VHF TRANSCEIVER
DCV
ACV
DCA
OFF
ON
10ADC
CEN-TECH
DIGITAL
MULTIMETER
COM
K7AGE

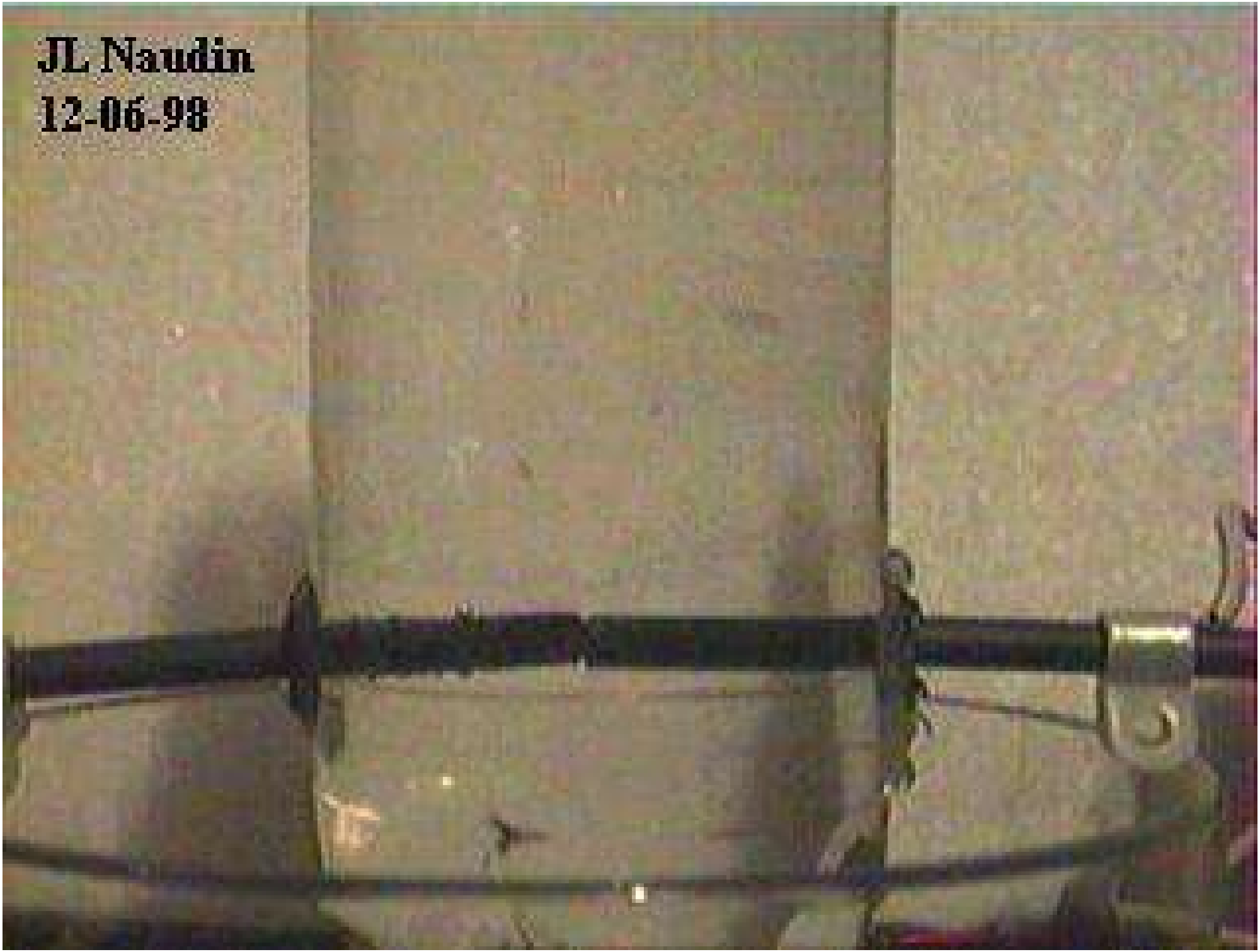
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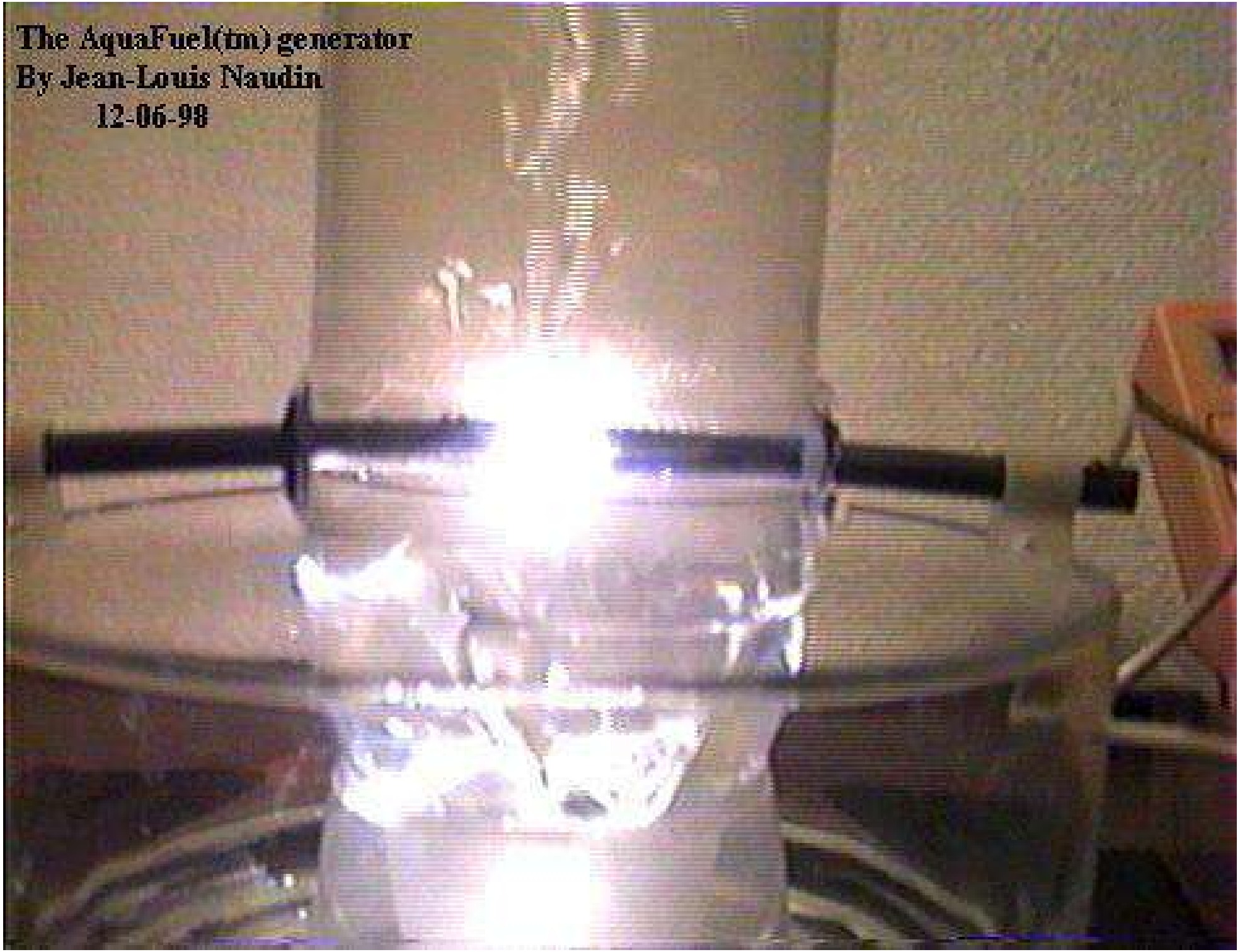


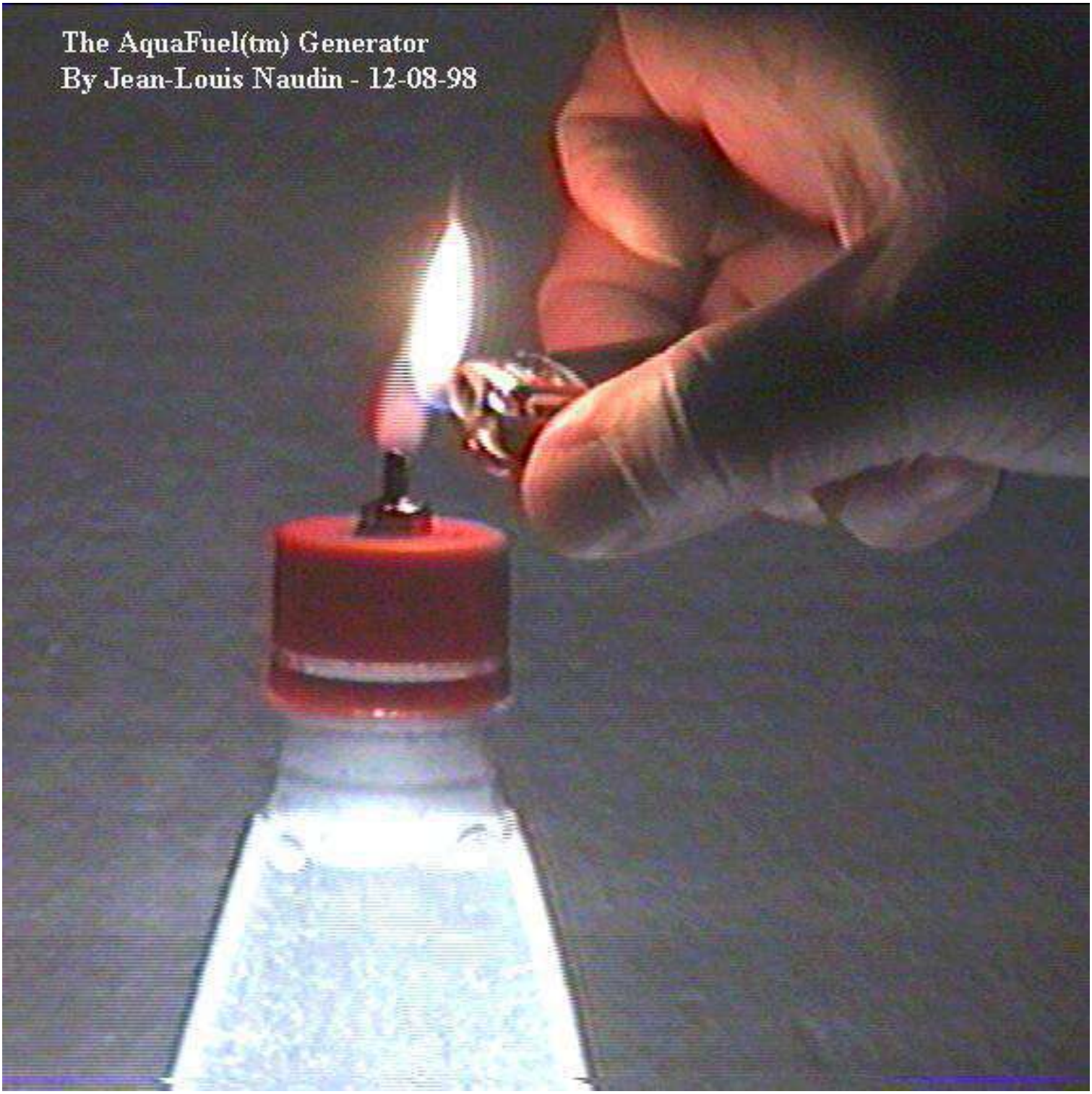



1 ohm / 50 W resistor
Hole
Plastic Bottle
carbon rods
The parts for building
the Aquafuel(tm) Generator
by JL Naudin 12-06-98


Current Voltage
1 ohm 50W
34V 15A DC
The Aquafuel(tm) Generator - JL Naudin 12-06-98

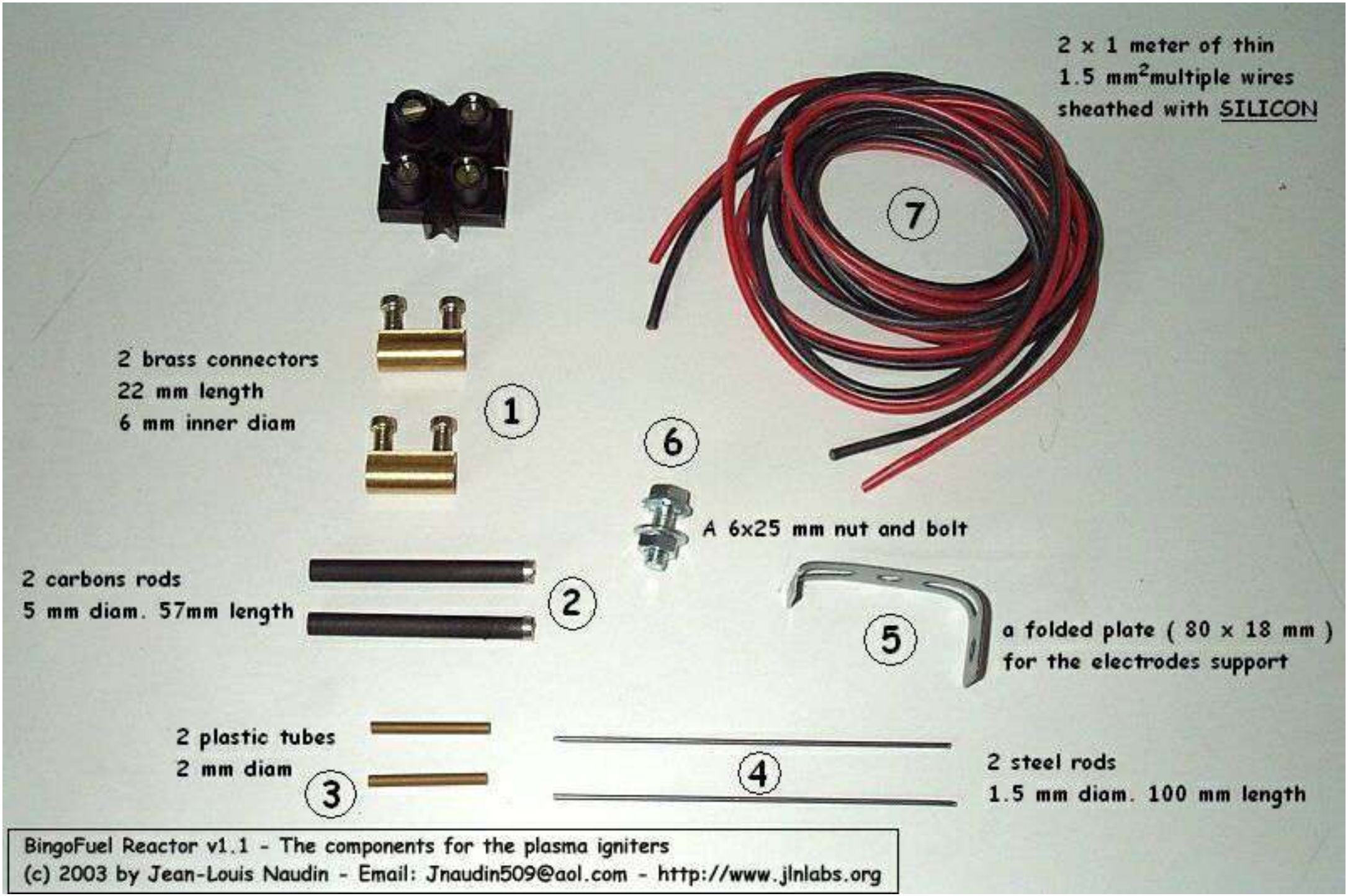

JL Naudin
12-06-98


The AquaFuel(tm) generator
By Jean-Louis Naudin
12-06-98


The AquaFuel(tm) Generator
By Jean-Louis Naudin - 12-08-98

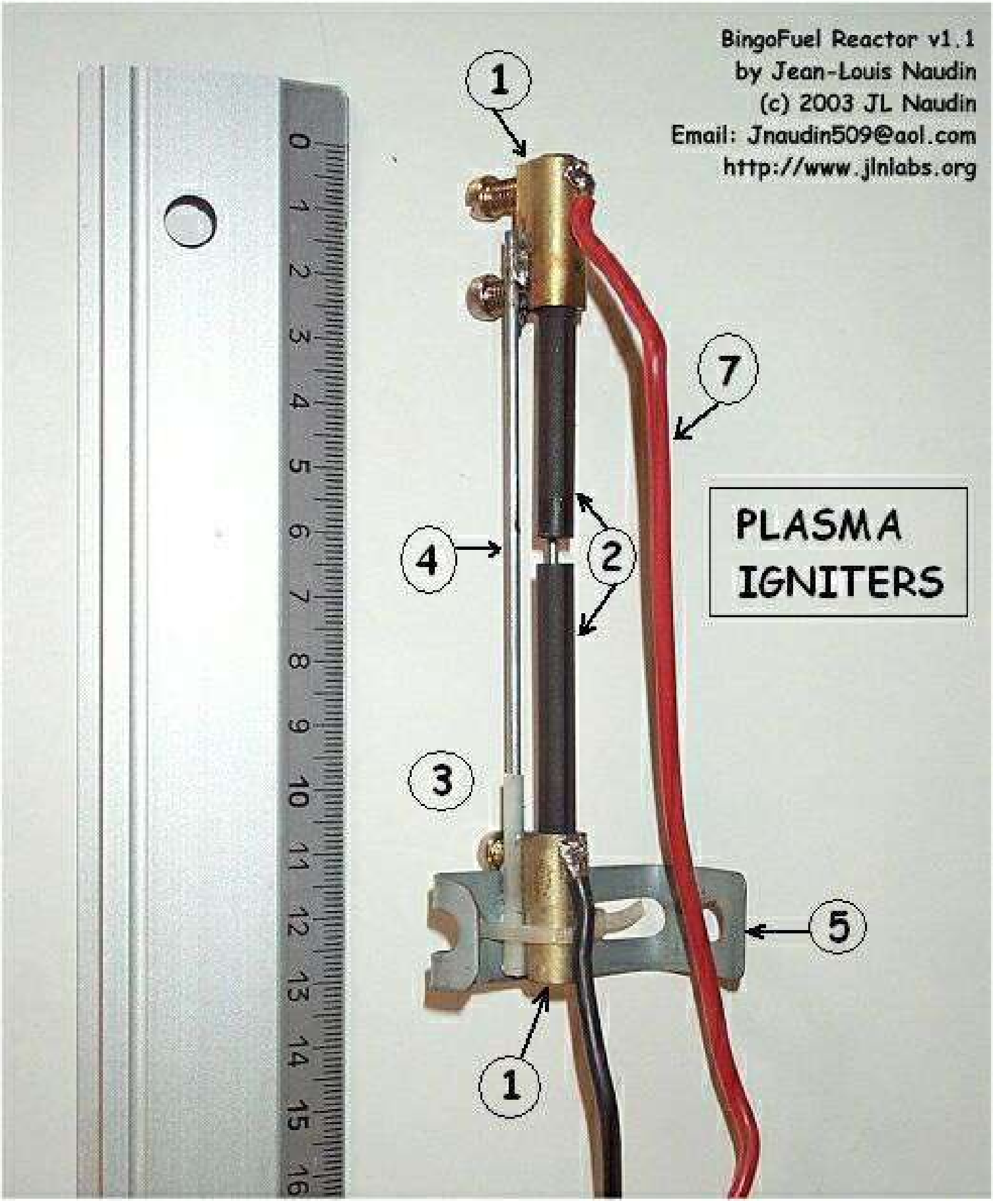


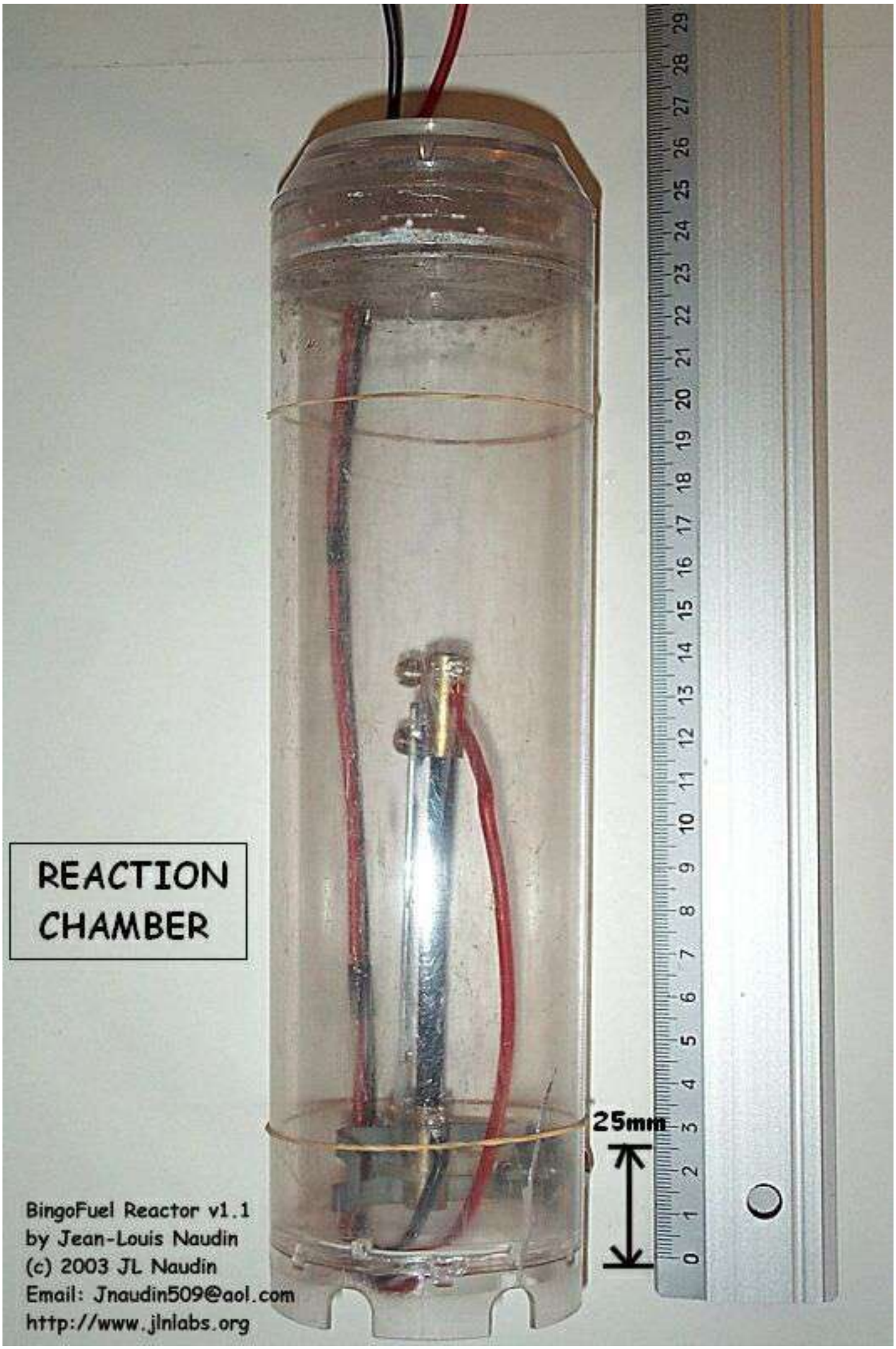
BingoFuel Reactor v1.1 - The components for the reactor and and reaction chamber
(c) 2003 by Jean-Louis Naudin - Email: Jnaudin509@aol.com - http://www.jlnlabs.org


2 x 1 meter of thin
1.5 mm² multiple wires
sheathed with SILICON
7
2 brass connectors
22 mm length
6 mm inner diam
1
6
A 6x25 mm nut and bolt
2 carbons rods
5 mm diam. 57mm length
2
5
a folded plate (80 x 18 mm)
for the electrodes support
2 plastic tubes
2 mm diam
3
4
2 steel rods
1.5 mm diam. 100 mm length
BingoFuel Reactor v1.1 - The components for the plasma igniters
(c) 2003 by Jean-Louis Naudin - Email: Jnaudin509@aol.com - http://www.jlnlabs.org

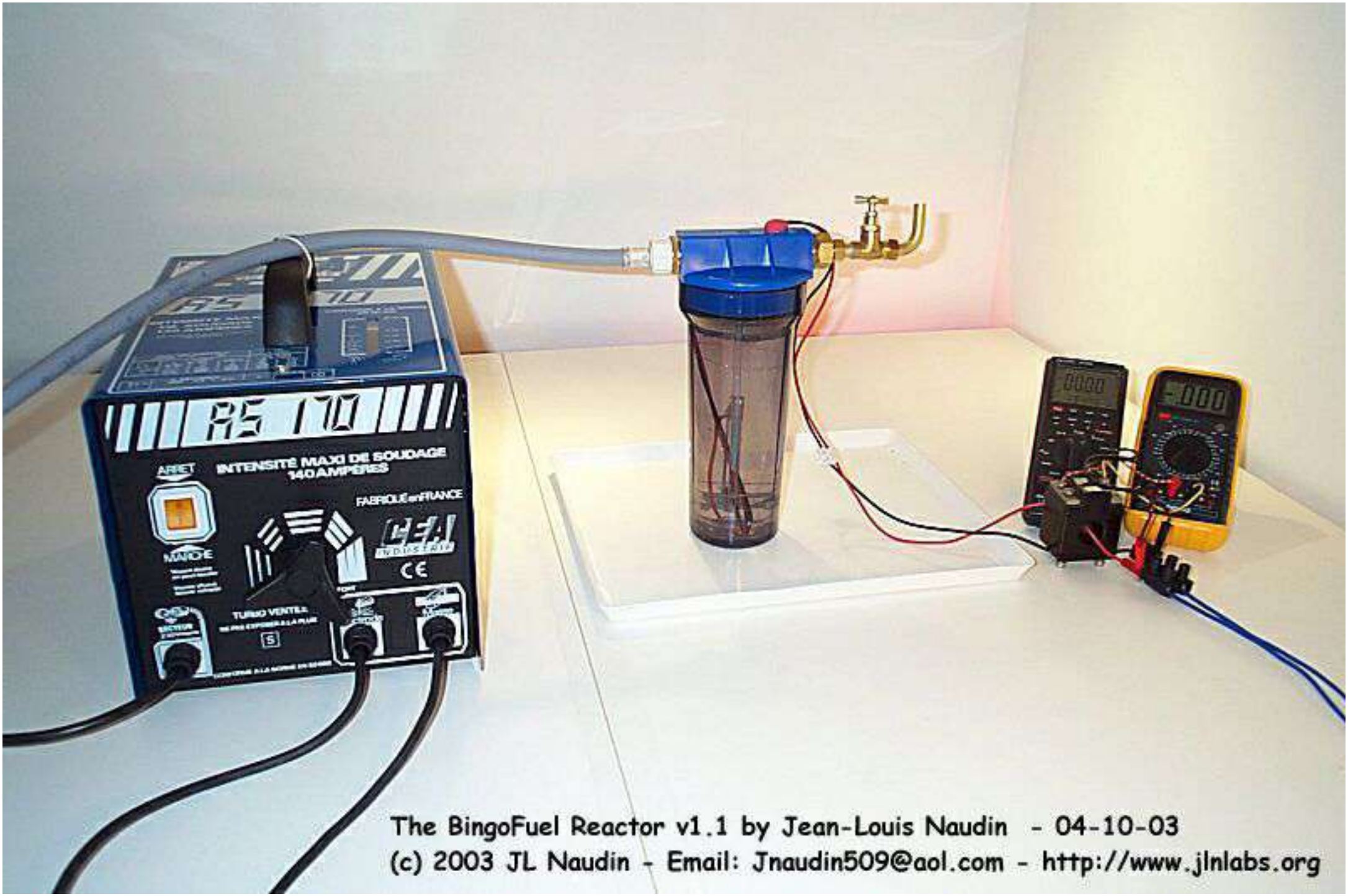


4.5V Zinc Carbon Battery


BingoFuel Reactor v1.1
by Jean-Louis Naudin
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PLASMA
IGNITERS
1
2
3
4
5
7
1


REACTION
CHAMBER
25mm
BingoFuel Reactor v1.1
by Jean-Louis Naudin
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BingoFuel Reactor v1.1 - (c) 2003 by Jean-Louis Naudin
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RS 170
ARRET
INTENSITÉ MAXI DE SOUDAGE
140 AMPERES
FABRIQUÉ en FRANCE
MARCHE
TURBO VENTILÉ
The BingoFuel Reactor v1.1 by Jean-Louis Naudin - 04-10-03
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OUTPUT = 180 L/h
of synthetic gas
OUTPUT = 900 L/h of fuel mixture
V=30.8V AC I = 81.6 A
The BingoFuel Reactor v1.1 by Jean-Louis Naudin - 04-10-03
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GROUPES ÉLECTROGÈNES MONOPHASÉS

50 hz			Moteur							Alternateur				Options				
Type	Puissance max 230V		Marque	Type	Sécurité huile	Démarrage électrique	HP 3600 tr/mn	Autonomie	Réservoir	230V Disjoncteur	Niveau sonore CEE		Dimensions L x l x h cm	Poids	Kit brouette	Disjoncteur	Quick lock	Com. à distance	Coffret démarrage auto
	kW ISO 8528	kVA Cosφ 0,8									Lwa	dB(A) @ 7 m		Kg					
RANGER™ 2500	2,1	2,6	Honda OHC	GC 160	•	x	5	2,2	2	•	**98**	75	58x46x44	30	x	x	x	x	x


A 5 HP Electrical Generator powered by the BingoFuel Reactor v1.1 - test by Jean-Louis Naudin
April 15th, 2003 - (c) 2003 JL Naudin - Email: Jnaudin509@aol.com - http://www.jlnlabs.org



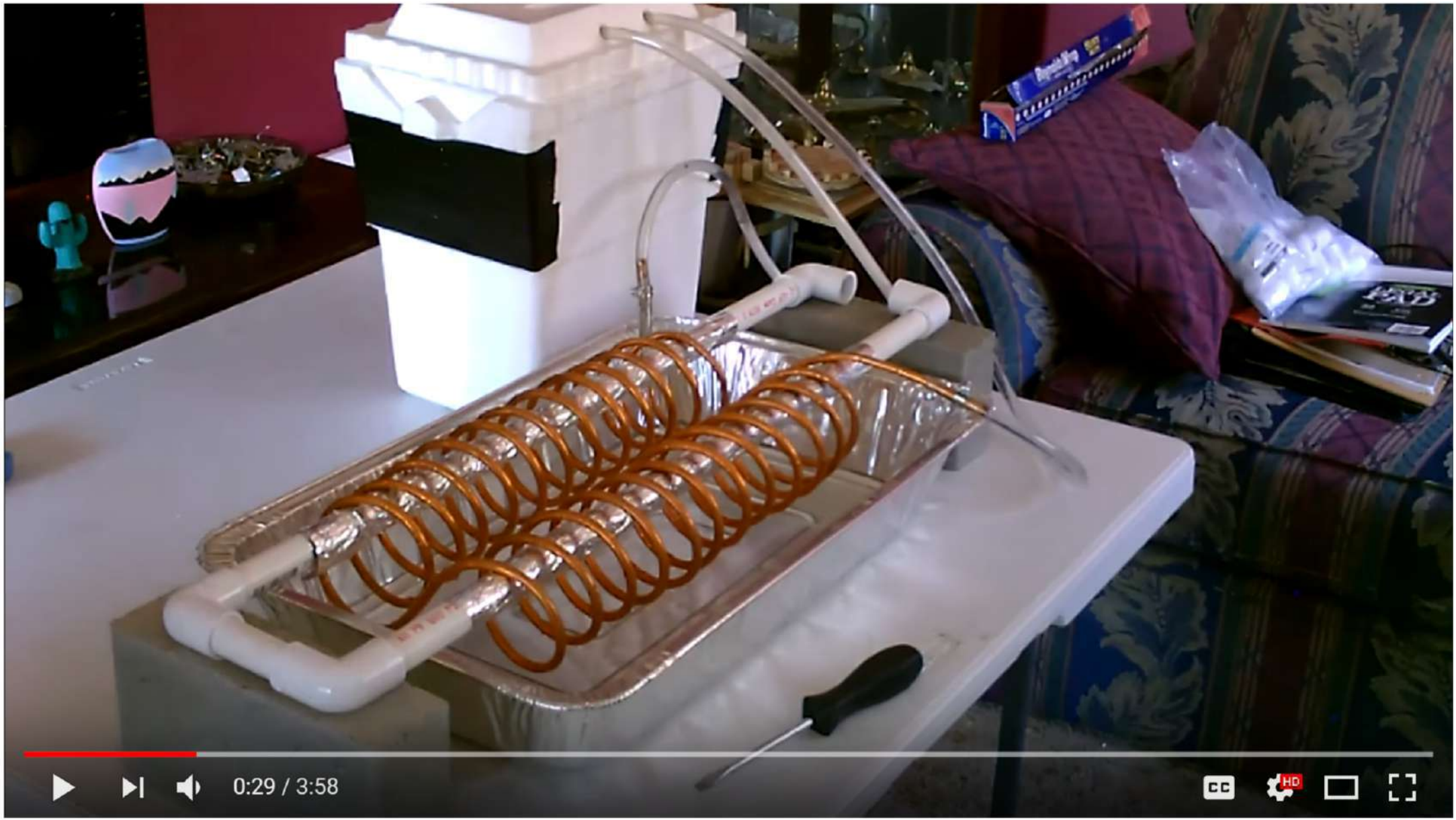
A 5 HP Electrical Generator powered by the BingoFuel Reactor v1.1 - test by Jean-Louis Naudin
April 15th, 2003 - (c) 2003 JL Naudin - Email: Jnaudin509@aol.com - http://www.jlnlabs.org



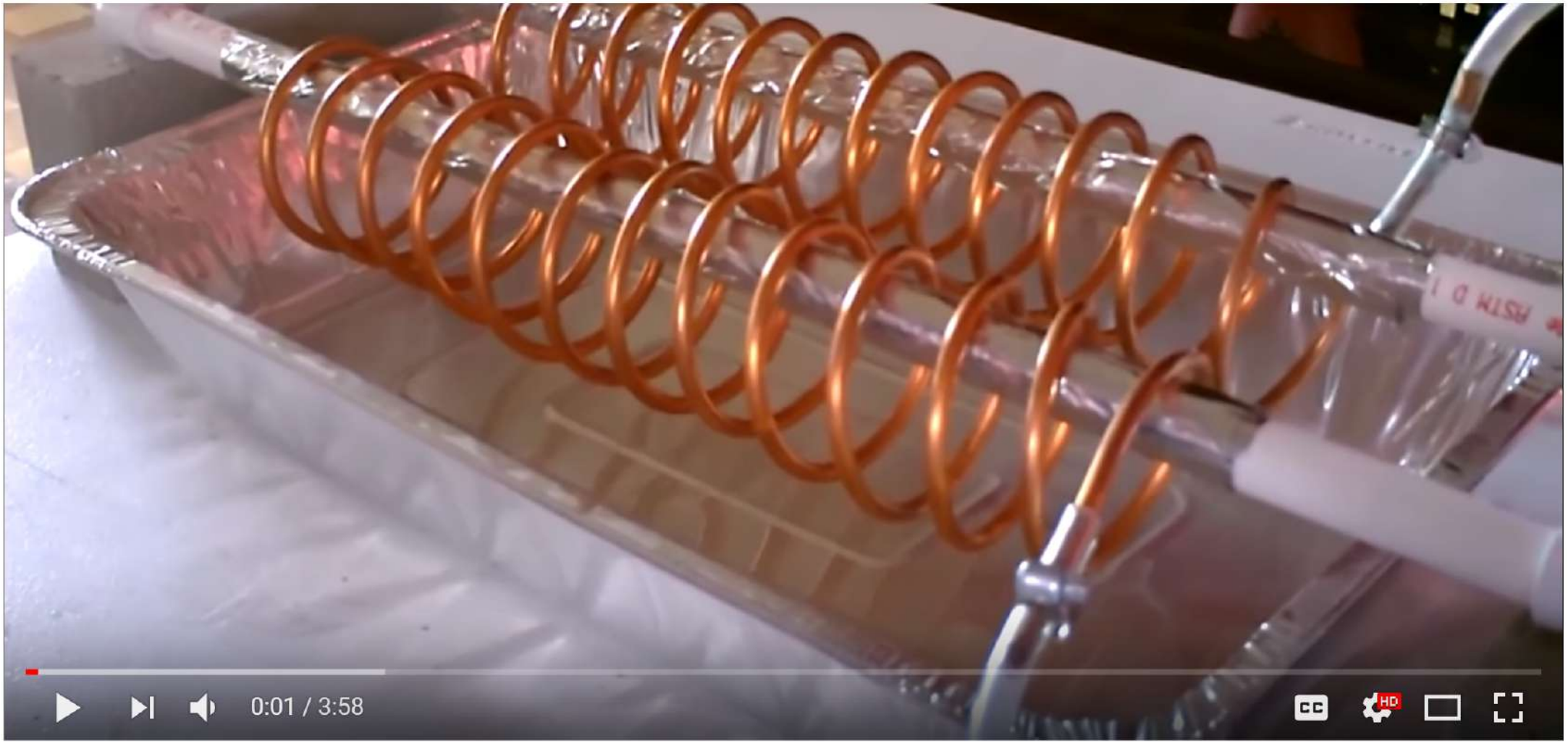
A 5 HP Electrical Generator powered by the BingoFuel Reactor v1.1 - test by Jean-Louis Naudin
April 15th, 2003 - (c) 2003 JL Naudin - Email: Jnaudin509@aol.com - http://www.jlnlabs.org



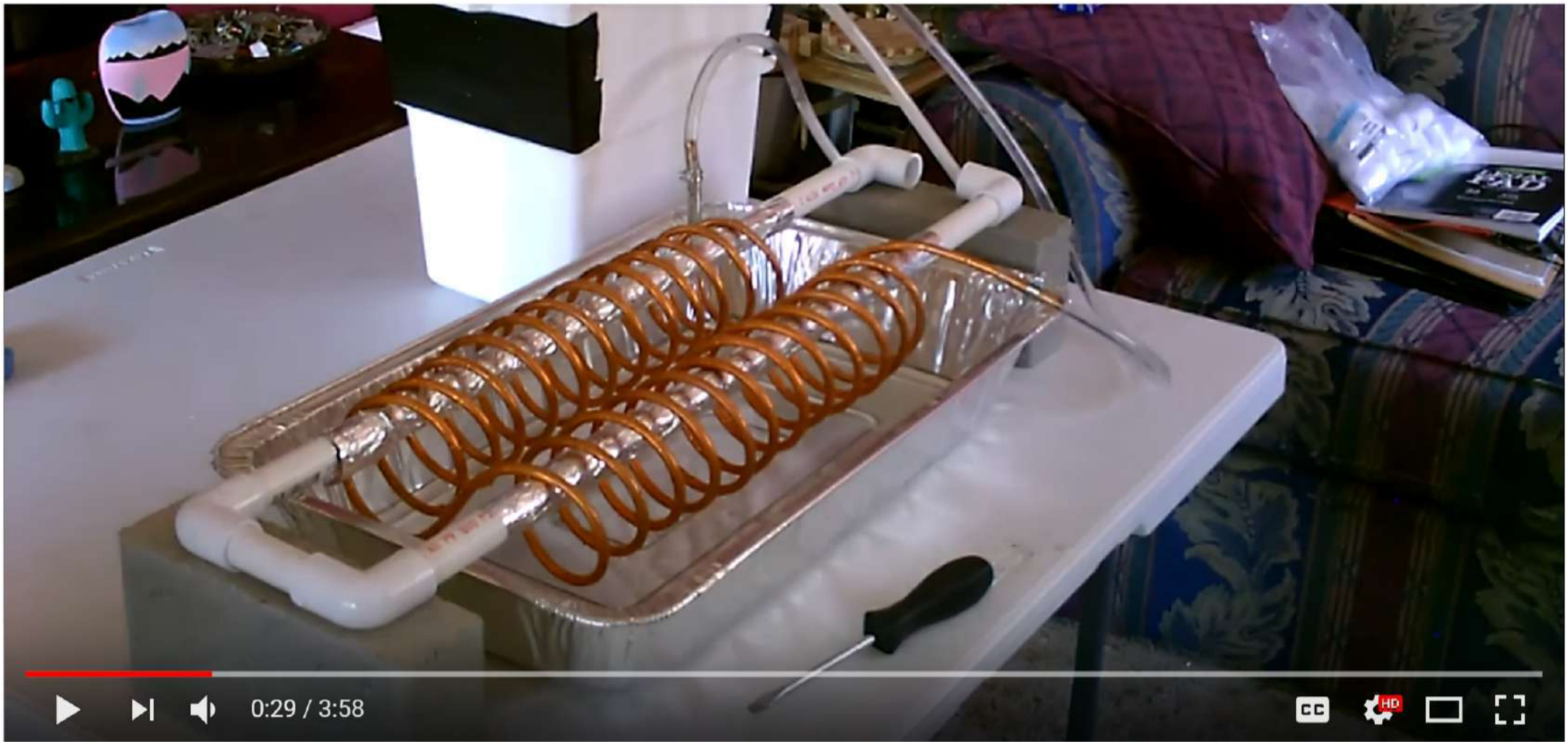
A 5 HP Electrical Generator powered by the BingoFuel Reactor v1.1 - test by Jean-Louis Naudin
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DIY Atmospheric Water Generator! - Produces/Extracts Distilled Water from the air! - DIY distiller

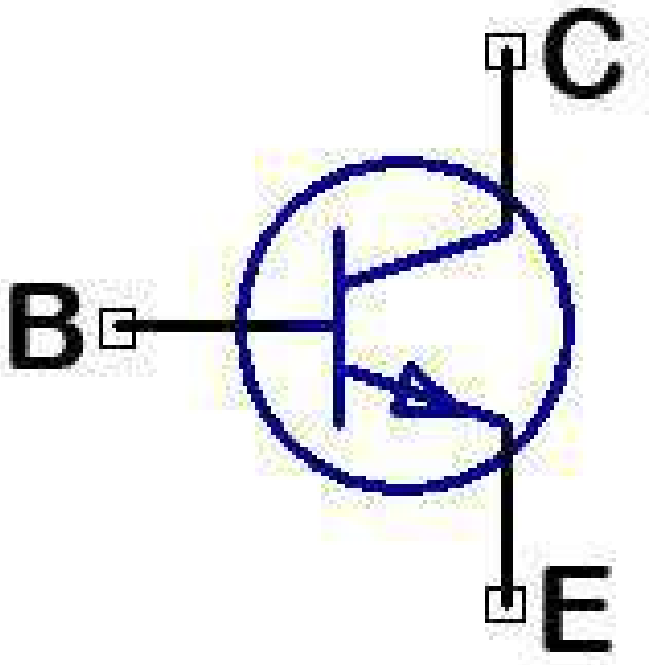

0:01 / 3:58


0:23 / 3:58
CC
HD


0:29 / 3:58


www.electronicecircuits.com

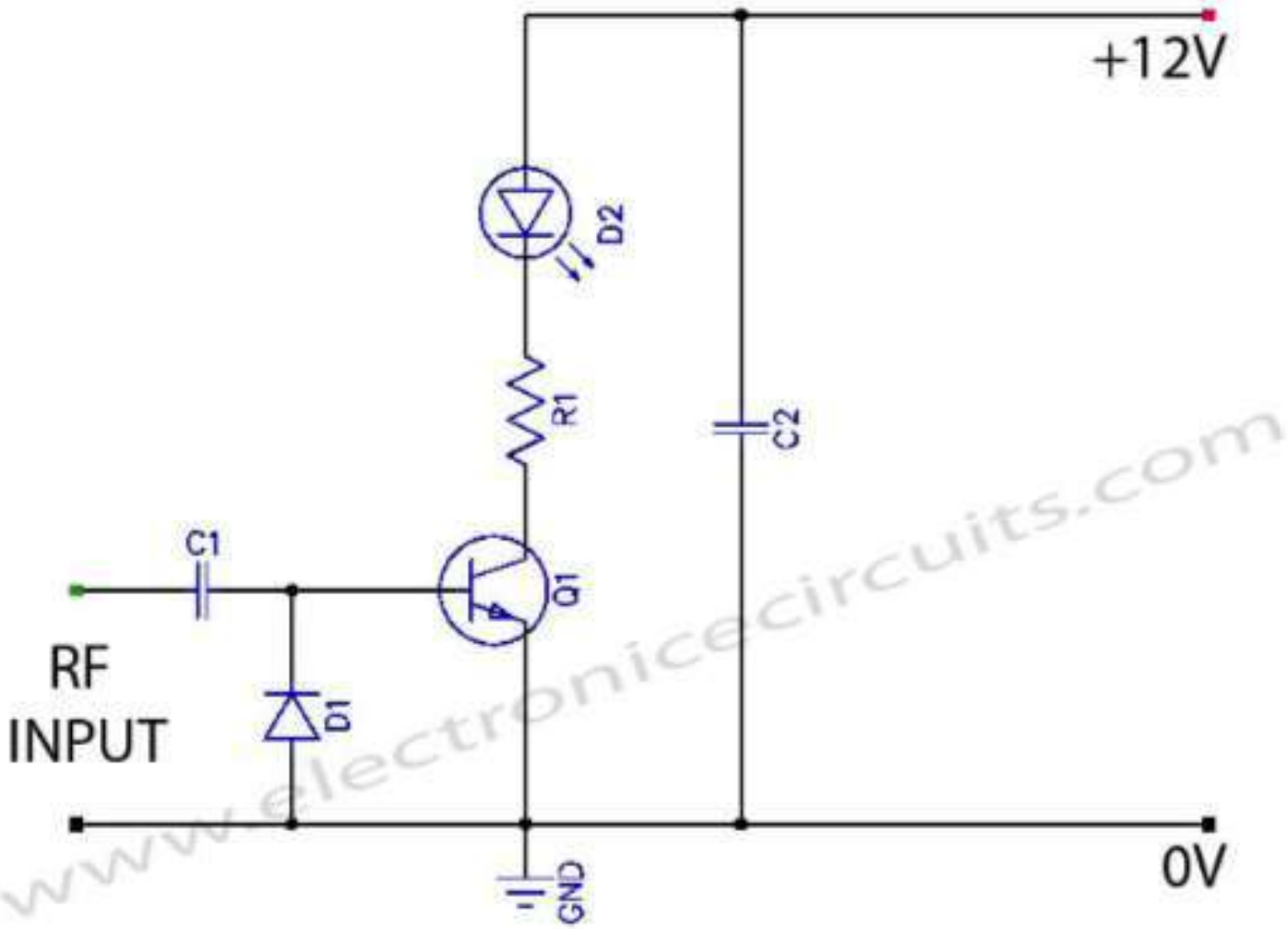
2N3904
NPN General Purpose Amplifier





E = EMITTER
C = COLLECTOR
B = BASE

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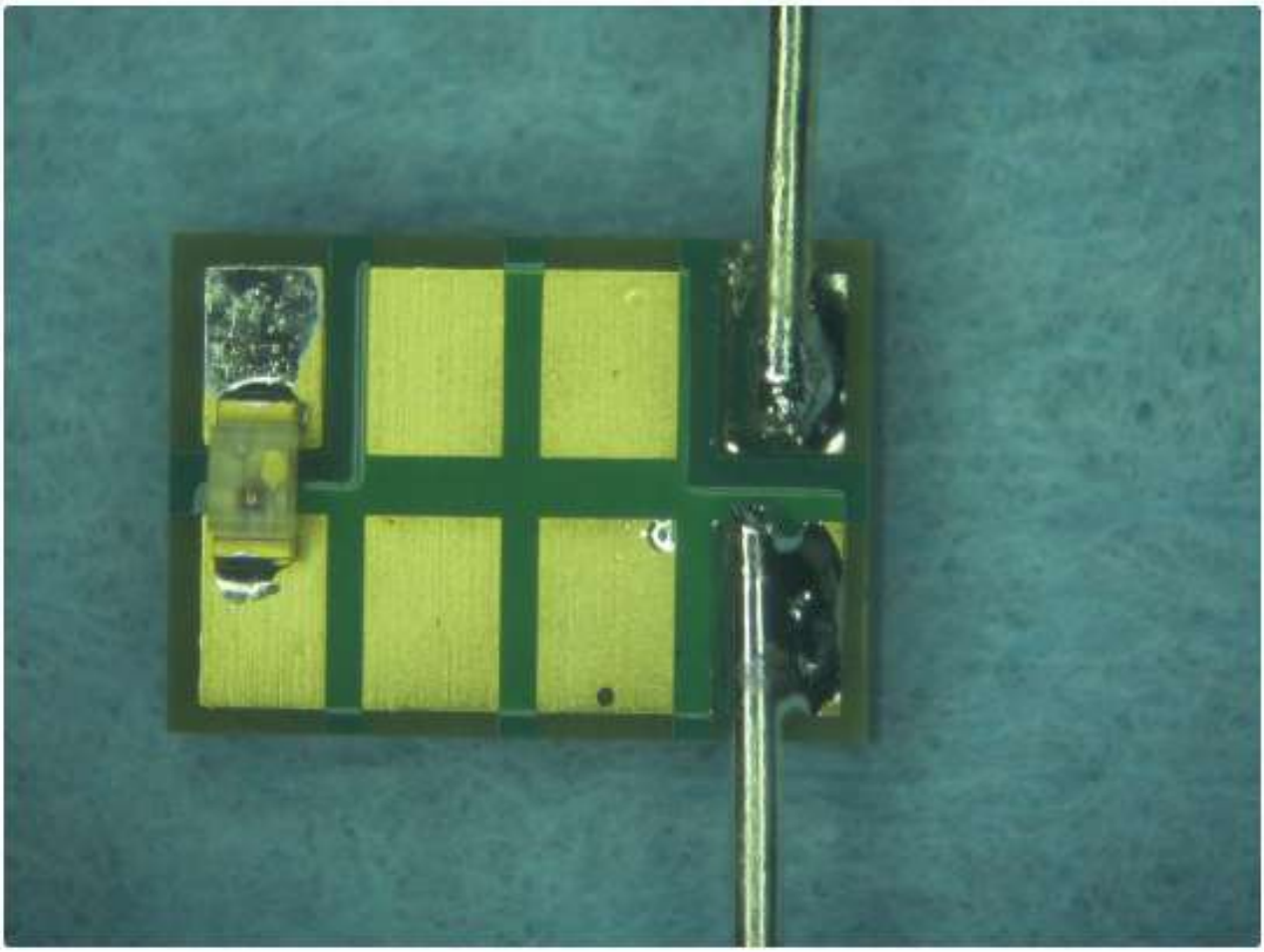


PARTS LIST	
R1	560Ω
C1	330pF
C2	0.1µF
D1	1N34 or 1N60 or ECG-109 or NET-109
D2	LED
Q1	2N3904



previous next image 1 of 2 Radio frequency LED Output Indicator Circuit close

Step 1: Assembly Instructions



Cut the resistor wires off next to the resistor. These are just the right size at 1 1/8" long for a 2.5GHz dipole. Throw away the resistor and keep the wires.

Put solder paste on the module at pins 1 & 8 and at pins 4 and 5.Place the wires on pins 4 and 5 and solder carefully using tweezers to hold the wires (it will burn you otherwise). Solder at the lowest soldering temperature possible to avoid damaging the module. If the iron is too hot then you may damage the internal connections inside the module. Use a minimum of time for soldering (<10secs). The wires work as a dipole antenna to collect the 2.5GHz energy into the RF (Radio Frequency) Input of the module.

Place the LED with the anode (positive side) onto pin 1 and the cathode (negative side) on pin 8 and solder carefully. For those not familiar with LEDs, the triangle symbol of the diode should point to the ground pin of the module (pin 8). Your final microwave harvester should look like figure 2

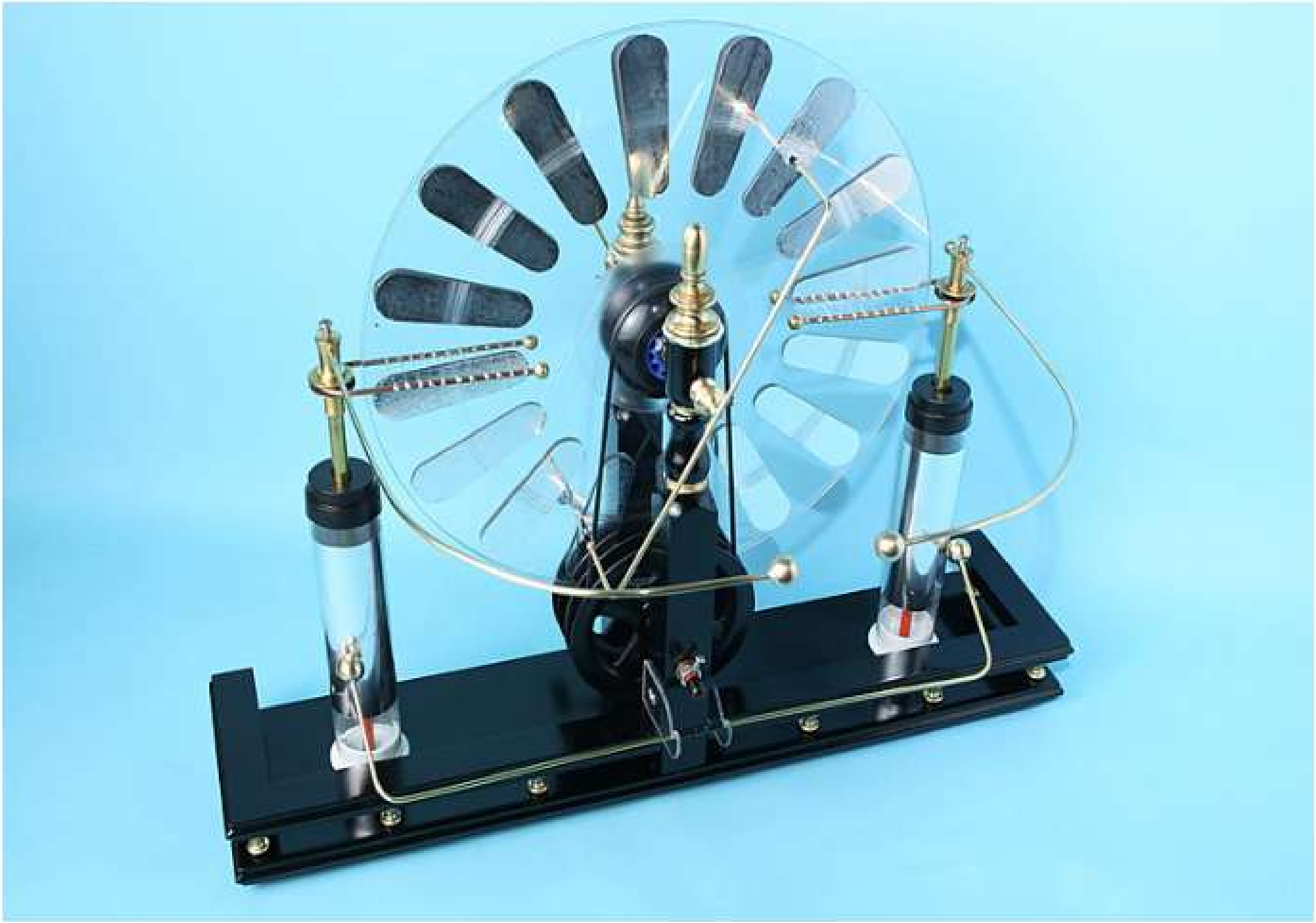


SIZE The device is 11 millimeters long and about 1 mm in diameter, comparable to a grain of rice.

TISSUE-BONDING CAP
A cap made from a special plastic covers a hermetically sealed glass capsule containing the RFID circuitry. The plastic is designed to bond with human tissue and prevent the capsule from moving around once it has been implanted.

ANTENNA The coils of the antenna turn the reader's varying magnetic field into current to power the chip. The coil is coupled to a capacitor to form a circuit that resonates at 134 kilohertz.

ID CHIP The chip modulates the amplitude of the current going through the antenna to continuously repeat a 128-bit signal. The bits are represented by a change in amplitude—low to high or high to low. An analysis by Jonathan Westhues, of Cambridge, Mass., indicated that only 32 of the bits varied between any two VeriChips. The rest of the bits probably tell the reader when the loop starts and may also contain some error-checking or correction data.



Materials:



1. Fluorescent Lamp Protector Sleeve – used to make the two Leyden jars.

2. Staircase Balusters – these will be the supports for the rotating disks.

3. 1/8" Bronze Brazing Rod – will be used to fabricate all of the conductors. If you can't find this at your local hardware store look for a welding supply shop, they are sold by the pound and are incredibly useful for many things even if you don't own an oxyacetylene torch.

4. Fiberglass Driveway Marker Rod – Make sure it's round and 5/16" in diameter; these will be the shafts and insulated supports.

5. 3/8" OD Thin Wall Brass Tubing – one 3' section.

6. Knick-Knack Shelf Kit – approximately 24" by 6". You can use any ¾" board you desire, the shelf included has a nice rail that will add to the overall look of the project.

7. Inline Skate Replacement Wheels – Quantity 2.

8. Lamp Parts – You will need a selection of lamp parts which may vary depending on what is available at your particular store. Pictured here are pull chains, finials, and ball nuts used to make parts of the charge collector combs and discharge electrodes. Also pictured are cabinet knobs which were not used in this project but would make good alternatives. See the charge collector construction step for details.

9. 1" Copper Pipe Hangers – These you'll find in the plumbing section, they are copper plated steel.

10. Solder wick (not pictured) – for the neutralizing brushes, you might have to visit Radio Shack for this.

11. Rubber feet – Quantity 6.

12. Clothes Line Pulleys – must be plastic.

13. 3/16" Acrylic Glazing – enough to cut (2) 14" circles from. Polycarbonate will work too and is easier to work with but costs more than twice as much.

14. Aluminum tape (not pictured) – found with the duct tape and HVAC supplies, get the kind with the peel off paper backing.

15. Rubber O-ring belts (not pictured) – available from McMaster-Carr, part number: 9411SK259 about $15 for a package of eight.

The total cost of purchasing the materials new is about $100. However, these are all relatively common items

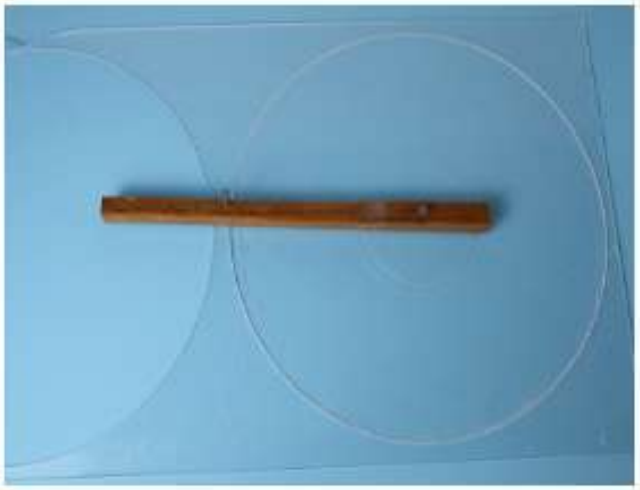
Disks and Drive Components:



wimshurst-circle-cutter-inset.jpg

Make the cutting tool:

1. To cut the two 14" acrylic circles we will first need to make a tool. Cut a 12" length of wood ¾" square. Pine will work but hardwood is preferable.
2. Drill a pilot hole near one end and press or drive a #6 penny nail through the stick so the point sticks out about ¼".
3. Drill a second hole exactly 7" from the first and insert another #6 penny nail into it.
4. Use a fine metalworking file to shape the point of the second nail as shown. You want to make a chisel point with a slight undercut on the leading face.



wimshurst-circle-cutter.jpg

Cut the acrylic disks:

1. Lay out your circles with a compass to be sure they will both fit on your sheet of acrylic.
2. Drill a 1/8" hole in the center of your circle. Be gentle when drilling acrylic, it cracks easily. Polycarbonate is quite a bit tougher.
3. Working on a carpeted floor, insert the unmodified nail in the center and begin scoring your circle. Cut about a quarter of the way with each stroke and work your way around the circumference.
4. If the cutter sticks, lift it out and move to a different spot.
5. When you think you've gone about halfway through, flip the acrylic sheet over and cut from the other side. You may end up flipping the sheet several times before the circle pops free.
6. Clean up the edge of the circle with some 400 grit sand paper and set them aside.

Cut belt grooves in the skate wheels:



wimshurst-skate-wheel-groove.jpg

1. Gently clamp or strap your drill to a workbench as pictured.
2. Assemble a mandrel from a 5/16" bolt and some large (fender) washers, when assembled the entire wheel must spin, not just the bearings.
3. Chuck the assembly into the drill. The wheel should turn toward you and the speed should be fairly fast.
4. With a crosscut bastard file make a ¼" wide flat on the wheel and then switch to a rat-tail file to cut the grove. Apply light and even pressure to the file.



wimshurst-skate-wheel-mount.jpg

Attach the skate wheels to the disks:

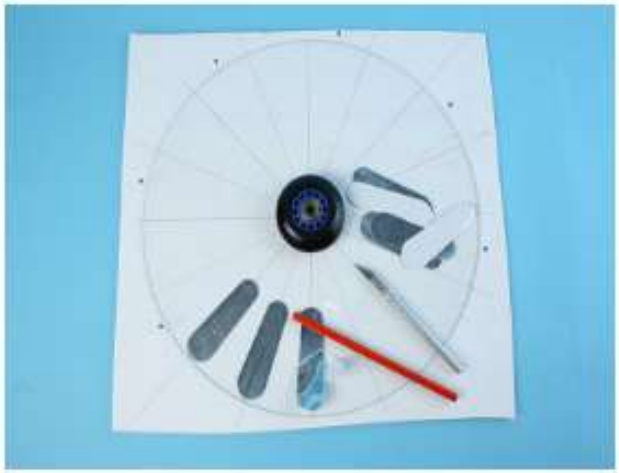
1. Use a step drill bit like the one pictured to increase the size of the hole in the acrylic disk to 5/16". Remember, be gentle and go slowly because acrylic is easily cracked.
2. Remove the washers from the wheel and use the 5/16" bolt to center the wheel against the disk.
3. Drill (4) 1/8" holes through the disk, don't drill into the wheel.
4. Switch to a 3/32" bit and drill partway into the wheel in 4 places.
5. Finish the holes with a counter sink.
6. Now remove the 5/16" bolt and drill the center hole out to ½" or 5/8" using a step drill, you want the edges of the hole completely clear of the rotating parts of the wheel bearing.
7. Install (4) small counter sunken screws, tighten these so they *just* touch the disk, the disk must remain as flat as possible.



wimshurst-sector-cutting.jpg

Cut the sectors:

1. Decide how many sectors you are willing to cut. I'm rather lazy and opted for fewer sectors, 16 per disk. If you decide to make 24 or even 32 sectors you'll have to make them smaller but you will be rewarded with longer sparks.
2. The sectors are cut from aluminum tape. Make a template from a piece of plastic milk jug and trace each sector. Cut them individually, don't be tempted to stack multiple layers of tape; the cut will end up ragged and will bleed charge away into the air.
3. Tip: I found it easiest to use an X-acto knife and straight edge to cut the long sides and then switch to scissors for the curved ends.



wimshurst-affix-sectors.jpg

Attach the sectors:

1. Lay out a circle on a piece of foam board.
2. Draw radial lines to correspond with the number of sectors you've chosen
3. Place your template centered at 6 o'clock and trace it. The large end should face out and be about ¼" from the edge of the disk.
4. Set the disk on the foam board and insert push pins around the circumference so it turns in place.
5. Carefully peel and stick the sector in place. It's a good idea to make some extra sectors and practice this operation first. A length of fiberglass rod makes an excellent burnishing tool.
6. Turn the disk one line to the left and repeat. Always index the line to the first sector you stuck down, this will help make the spacing as even as possible.



wimshurst-drill-pulley.jpg

Prepare the drive pulleys:

1. Remove the pulleys from their cages by drilling out the rivets.
2. Use the step drill to enlarge the holes to 5/16". Drill from one side, then the other to enlarge the full depth of the hole in the pulley. Note: The use of the step drill is especially important here because of its self-centering characteristics.
3. Cut (2) 7" lengths of fiberglass rod, slightly bevel the ends with a file to prevent chip out. Be careful of the glass fibers, they can be really irritating!
4. Drill the splines out of the window crack bore with a regular 5/16" drill bit. Clamp the crank in a vise and go slowly; making sure the bit is in line with the axis.



wimshurst-drill-upright.jpg

Cut and drill the supports:

1. Cut 12" off of each of the staircase balusters. Choose the end that you think looks best. On my prototype machine I used both ends of the same baluster and thus had two different style supports.

2. Clamp the two supports together as shown and drill 5/16" holes 3 ¼" inches from the bottom (square end) and 11" inches from the bottom.

3. The lower hole will need to be reamed out so that the fiberglass axle turns freely in it. Use a slightly larger drill or rat-tail file for that. You can also drill it larger and insert plastic bushings for smoother operation. Alternatively you can bore it out with a step drill to match the diameter of a pair of skate bearings – this works exceptionally smoothly and is what I ultimately did to my own machine.



wimshurst-screw-uprights.jpg

Attach the supports to the base:

1. Draw a line parallel to the back of the base 2 ½" in, this is not quite to the center. Draw a second line perpendicular to the first on the center of the base.

2. Cut a 1 ¼" gap in the rail on the center line, as pictured.

3. Drill (2) 3/8" inch holes through the base on the center line 5/8" from the front and back edges.

4. Use 2" drywall screws and large washers to attach the supports to the base. The combination of the large washer and 3/8" hole will allow you to adjust and align the position of the rotating disk precisely.

5. Drill (2) 5/16" holes on the line parallel to the long dimension and 7 5/8" from the centerline on each side – these holes need to be straight up and down so drill carefully, use a small carpenter's square to line up the drill.

Charge Combs and Neutralizing Bars:



wimshurst-solder-balls.jpg

Prepare the charge collectors:

1. Use a hacksaw to cut off the nail ends of the pipe hanger. The overall length should be 5".

2. You'll find small brass ball cap nuts in the electrical section at the hardware store; they are most commonly used to secure the top of brass outdoor lighting fixtures.

3. Place the small brass ball nuts on the ends of the hanger, heat them with a small torch and apply just enough solder to fill the joint. Note: Be careful not to overheat the pipe hanger, it is copper plated steel and it you heat it too much the solder may not adhere.

The torch pictured is a Lenk LSP-180 butane torch/soldering iron and it is a marvelous tool.



wimshurst-prongs-progression2.jpg

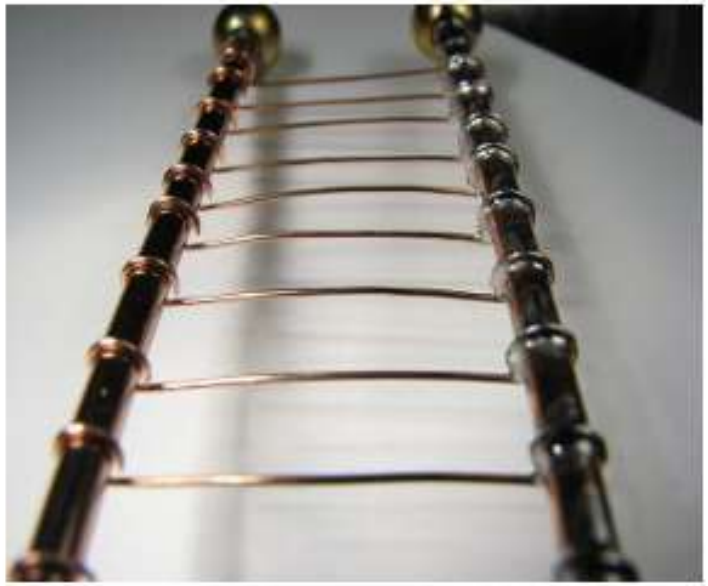
Attach the collector comb prongs:

1. You need to make 8–12 pointy prongs down each side of the collector comb. I stripped the conductors out of a 3' section of telephone wire to make them.

2. Wrap the copper wire around the pipe hanger as shown in the left-most example. I made 11 turns.

3. Cut away the center portion of the wire on one side only and bend the cut ends around the pipe hangers.

4. Spread the prongs out evenly along the portion of the charge collector that will be opposite the sector.



wimshurst-solder-prongs.jpg

Solder the prongs:

1. Crimp the ends tightly around the pipe hanger.

2. Use a large soldering iron to solder each joint. Apply sufficient solder so that when you take the soldering iron away solder flows down to fill the gap at the end of each length of wire. We want to avoid any points other then the prongs themselves.

3. Once you've soldered all of the joints cut down the center of the wires but don't trim them to length until it's time to install the combs.



wimshurst-collector-assembly.jpg

Charge collector mount:

I made a couple of different collector mounts using various lamp parts and cabinet knobs. This was the simplest, but you may have to improvise if you can't find these particular lamp parts at your local hardware store.

Pictured here right to left:

- 3/8" OD thin wall brass tubing 6" long
- 3/8" threaded collar
- 3/8" lamp "nipple" 1" long
- Lamp washer nut (threaded)
- Rubber flat washer
- 3/8" brass washer
- 3/8" threaded lamp finial
- #8-32 screw

Prepare the collector mount:

1. Using the step drill, bore out one half of the threaded collar.
2. Screw the nipple halfway into the collar and insert the brass tubing into the opposite end and solder it in place.
3. Drill one hole straight down into the top of the finial and thread with a #6-32 tap. Use the drill size written on the tap.
4. Drill a 1/8" hole through the body of the finial as pictured, this is for the discharge electrode.
5. Cut a ½" length from the extra you trimmed off of the pipe hanger earlier and solder it to the brass washer, this will allow the assembly to clamp and hold the charge collector perpendicular to the support.
6. Test assemble the mount and then disassemble and set aside.



wimshurst-discharge-assembly.jpg

Prepare the discharge electrodes:

1. Cut two 15" lengths of brazing rod and bend them as shown. I bent mine by hand but you could bend a 30" length around a five gallon pail and then cut it in the center for a neater appearance.



2. The balls for the discharge electrodes come from some more lamp finials, cut them off just below the ball with a hacksaw. These balls are about ½" in diameter.

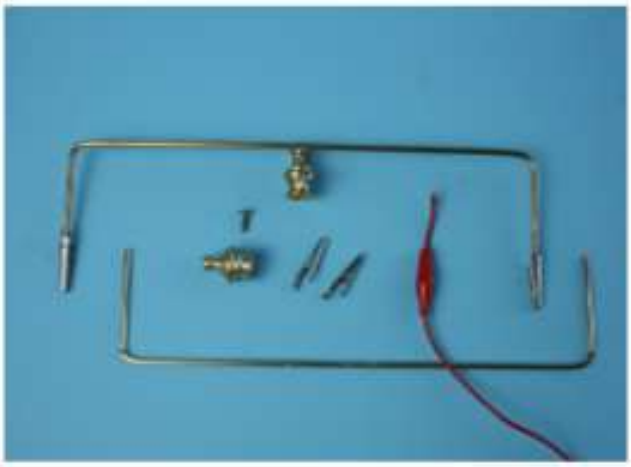
wimshurst-discharge-ball-cut.jpg



3. Solder the discharge balls to the electrodes; fill the hole with solder so it makes a smooth transition to the rod.

wimshurst-discharge-ball-solder-prep.jpg

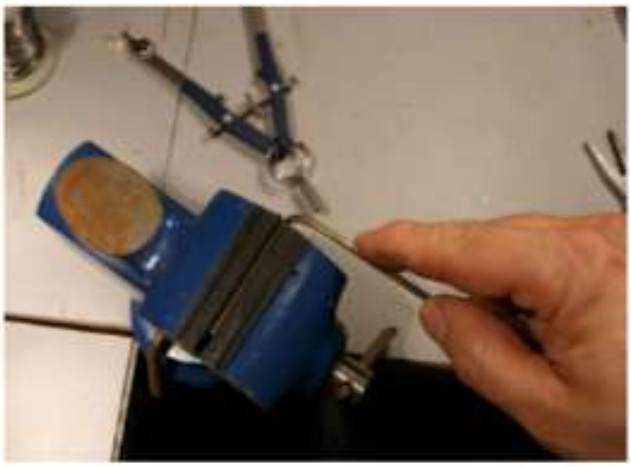
Note: do not solder the small ball nuts in place!



wimshurst-neutralizer-bar-parts.jpg

Fabricate the neutralizing brushes:

The neutralizing brushes are made with more brazing rod, alligator clips salvaged from a pair of clip-leads, and yet another type of lamp finial.



wimshurst-neutralizer-bend.jpg

Bend the brush support:

1. Cut a length of brazing rod 14" long and mark it 2" from either end.
2. Make (2) 90 degree bends in the rod at the 2" marks.



wimshurst-neutralizer-hub.jpg

Solder the brush support to the brush boss:

1. Drill a hole for a set screw in the base of the finial and tap with the #6-32 tap.

2. File a groove in the top of the lamp finials, these particular finals have a 3/8" threaded hole in the bottom and a small hole in the top. I think they are made for ceiling fixtures that have a center pull string.

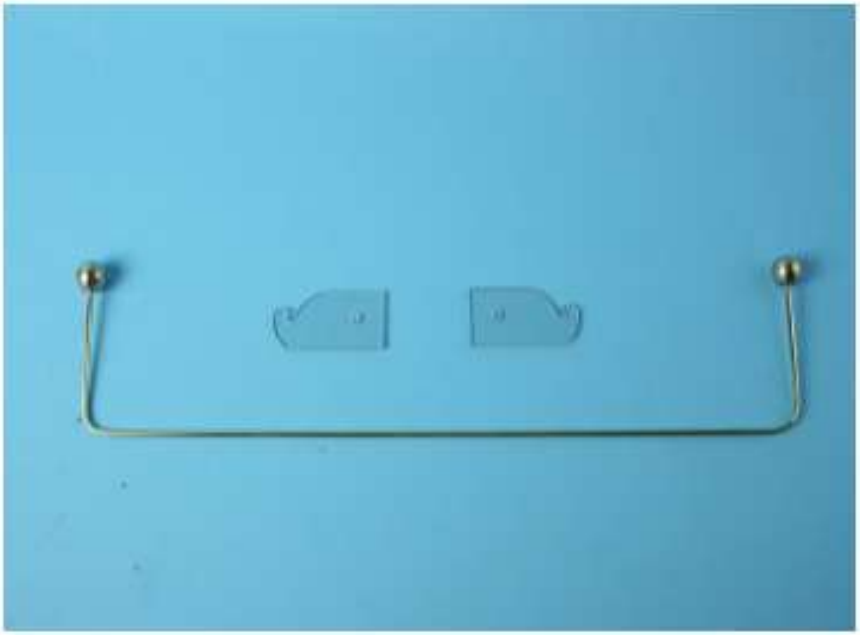
3. Center the neutralizer bar on the finial and prop it so its parallel to the workbench top and solder it in place.



wimshurst-neutralizer-clip.jpg

Attach the brush clips to the support:

1. Crimp the alligator clips on to the ends of the neutralizer bar and solder.



wimshurst-layden-shunt.jpg

Fabricate the Leyden jar shunt:

1. Cut a 22" length of brazing rod.

2. Make 90-degree bends, 3 ½" in from each end.

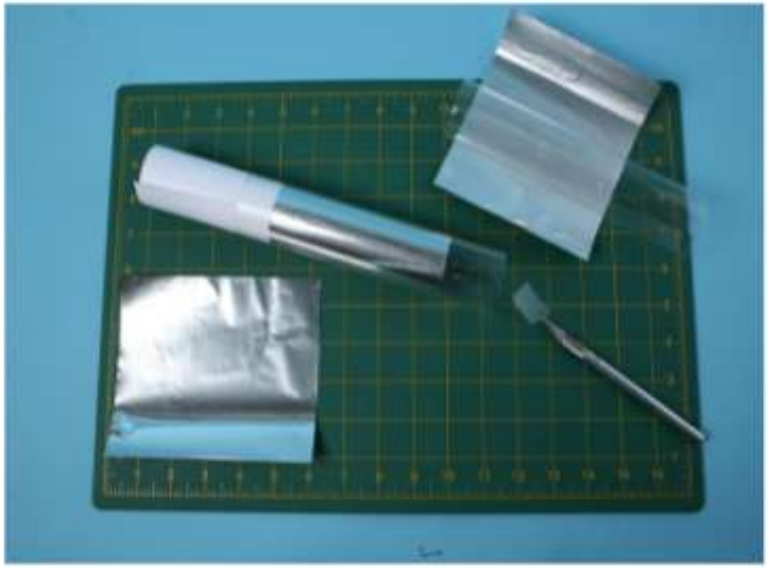
3. Solder two brass balls to the end. These are the large brass lamp chain pull balls, smaller finial balls or cabinet knobs would work here, too. If you use knobs be sure to remove any lacquer finish.



wimshurst-layden-cut-tube.jpg

Cut the Leyden jar body:

1. Using the miter box and fine tooth hacksaw, cut two 7 1/2" lengths from the fluorescent lamp protector sleeve.



wimshurst-layden-plate-inner.jpg

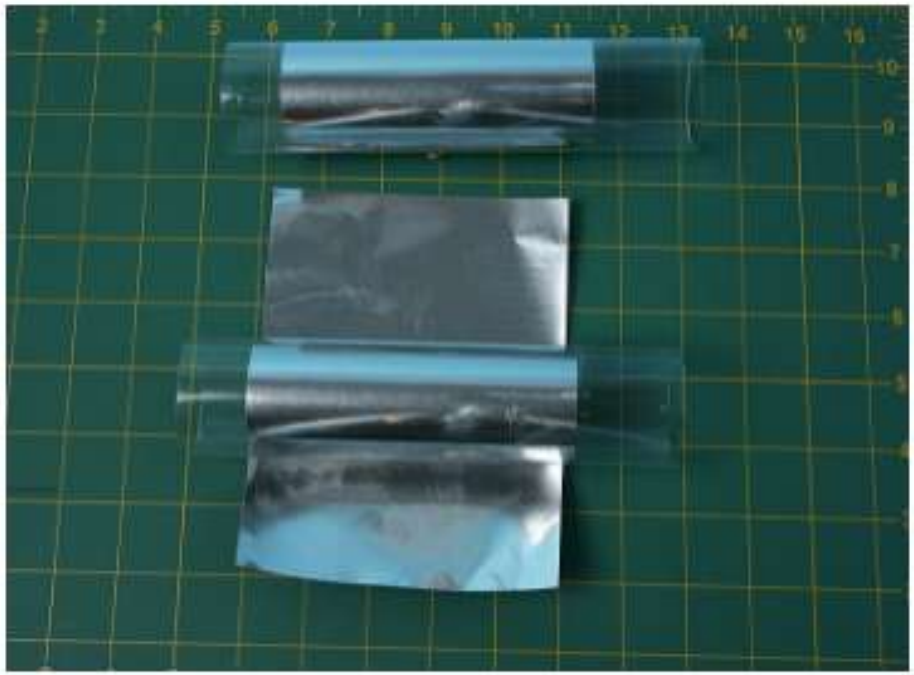
Cut and affix the inner plate:

1. Cut (4) 5" by 6" sheets of heavy duty aluminum foil.

2. Form one sheet by wrapping it around the tube and then rolling it so it can be inserted. Roll along the 6" axis so the foil cylinder ends up being 5" high.

3. Insert the foil into the tube so that it is 1" from one end. Use a couple of rolled up sheets of paper to hold the foil firmly against the inside of the tube while you tape it in place. The tighter you can make it to the inside of the tube the better.

Affix the outer plate:



wimshurst-layden-plate-outer.jpg

1. Wrap another piece of aluminum foil around the outside and tape it in place. Again, the tighter the better, but don't wrinkle the foil.



wimshurst-layden-plate-bottom.jpg

Make the bases:

1. Snap the tube ends onto the opening that is 1" from the foil

2. Make the Leyden jar bases from a pair of plastic closet pole mounts. Drill out the center hole to 5/16".

Note: These are Stanley brand and I had to trim some reinforcing ribs off with an X-acto knife to make them slide into the tubes.



wimshurst-axle-collars.jpg

Mount the disks and drive line:

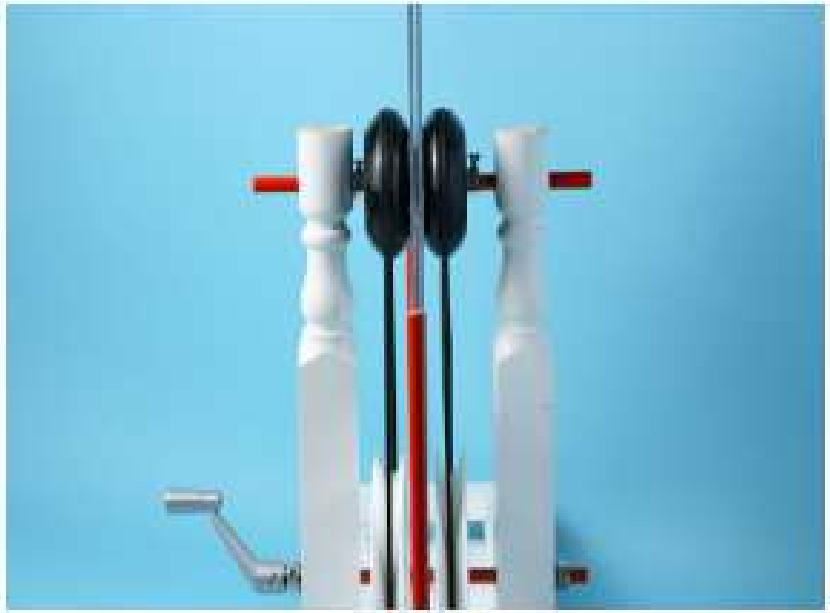
1. Slide the disk axle into a support and put on a 5/16" set screw collar, an O-ring belt, the two disks, the other belt, and another collar.

2. Attach the casement window crank to the drive shaft, insert the bushings in the supports if you are using them and slide the shaft through the pulleys. The pulleys should be a tight fit and you will have to twist the shaft back and forth to get it through. Don't forget about the belts hanging from the top shaft, one will need a twist so that the disks rotate in opposite directions. A collar goes on either end of the drive shaft.

3. Once both shafts are in place, stretch the belt around the pulleys. (In the picture, the belt with the twist is hidden behind the disk. What you are seeing is a reflection of the untwisted belt.)

Note: 5/16" set screw collars can be found at the hardware store but I made my own by drilling out a 5/16" nut and threading a #6-32 screw into the side.

Note: I found that my machine became difficult to turn once it was fully charged due to the electrostatic attraction of the disks. I cut a 2 ½" washer from a plastic milk jug and placed it on the shaft between the disks to remedy this problem.



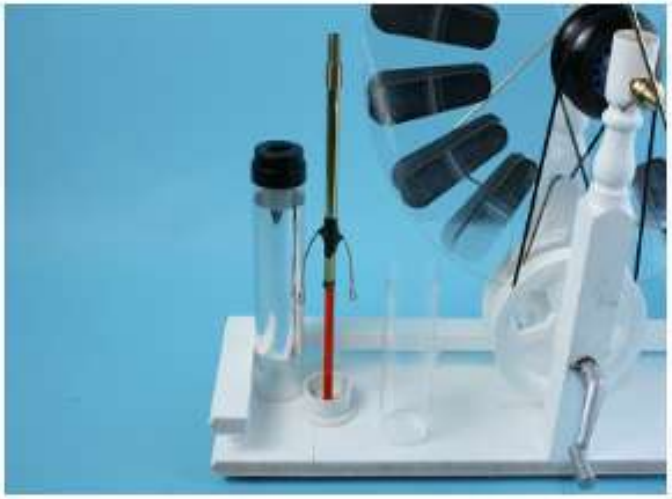
wimshurst-lineup-collectors.jpg

Align the disk and collector supports:

1. Cut two 11" lengths of fiberglass rod and press them into the holes made earlier in the base.

2. Loosen the screws that hold the two supports to the base and slide them around to adjust the disks so they line up with the charge collector supports.

3. Re-tighten the supports.



wimshurst-layden-contact-inner.jpg

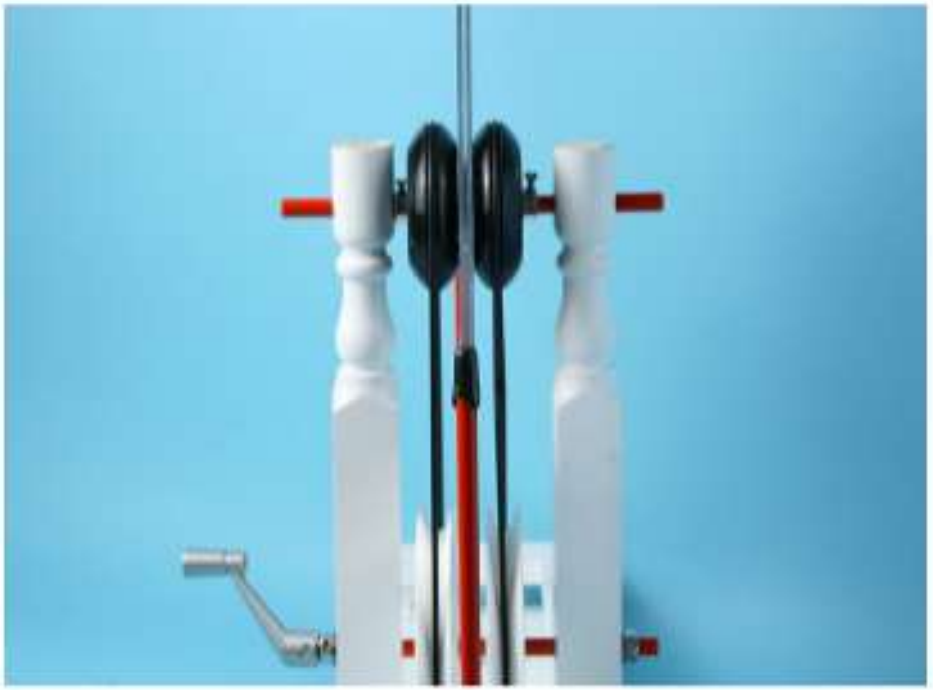
Install the Leyden jar base and inner plate contact:

1. Slide the Leyden jar bases onto the fiberglass charge collector supports.

2. Slide the charge collector assembly over the fiberglass supports.

3. Using about 6" of 14 AWG solid copper wire, form the inner plate contact. Wrap it once around the brass tube and form two loops in the ends.

4. Using a scrap of the plastic tube as a guide, adjust the inner plate contacts so they apply even and gentle pressure. You want good contact with the foil but you don't want to rip the foil when you install the Leyden jars.



wimshurst-collector-epoxy.jpg

Epoxy the charge collector assembly in place:

1. Apply epoxy to the end of the rod and slide the brass charge collector assembly down onto the fiber glass support rod.

2. Set aside while the epoxy cures.



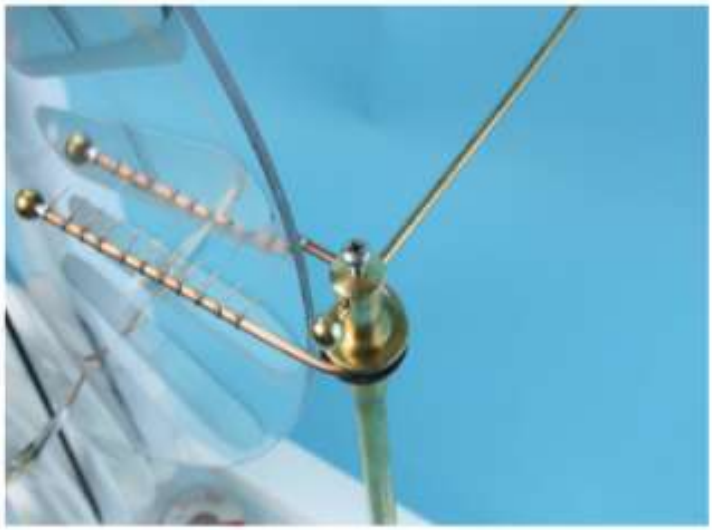
wimshurst-layden-complete.jpg

Install Leyden jar and assemble collector:

1. Slide the Leyden jar onto its base, being careful not to tear the foil as makes contact.

2. Line up the charge collector comb and trim the prongs. Test spin the disks to see if there is any wobble and trim the prongs to come as close as possible to the disks without touching.

3. Assemble the charge collectors.



wimshurst-collector-inplace-2.jpg

Install discharge electrode:

1. Insert the discharge electrodes into the lamp finial on the charge collector and tighten the screw to hold it in place.

2. The finial should be tight enough to hold the collector comb but allow the discharge electrode to move back and forth. If it's too tight, or not tight enough, the support rod can be twisted in the base to accommodate.

3. Wrap a small bit of tape around the end of the electrode and screw on one of the small ball nuts; this will prevent charge from bleeding off the sharp end.



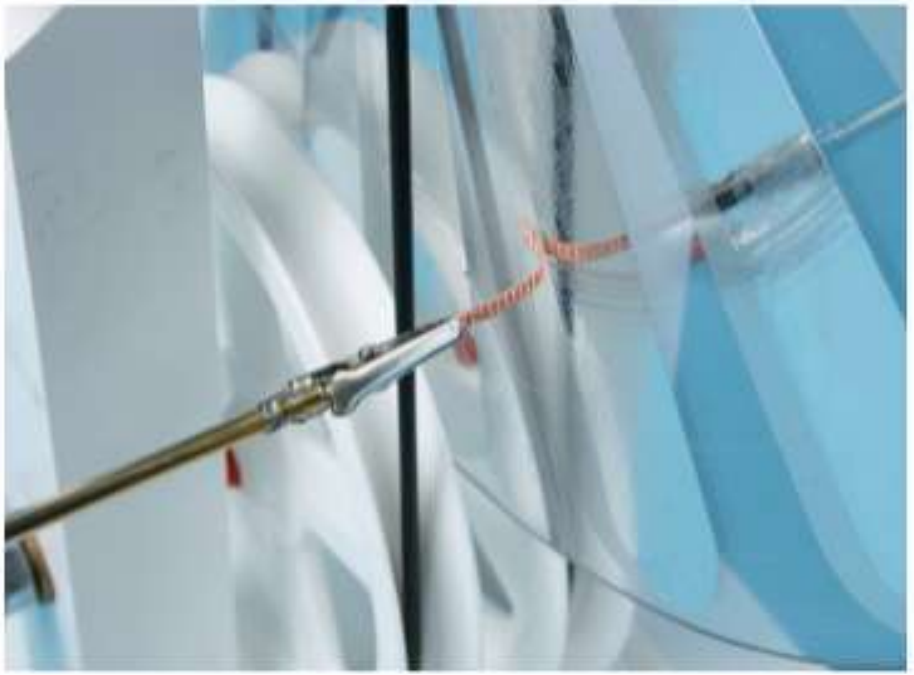
wimshurst-neutralizer.jpg

Install neutralizing brushes:

1. Slide the neutralizing bars onto the upper shaft and adjust them to be about 45 degrees from the collector combs.

2. Sectors should pass through a charge collector, encounter a neutralizing bar after about 1/6 of a rotation, and then encounter the other charge collector after a further 1/3 of a rotation.

3. Tighten the set screw to secure.



wimshurst-neutralizer-brush.jpg

Position brushes:

1. Clip (2) 1 ½" lengths of Solder Wick™ to the ends of the neutralizing rods so they make good contact with the disk.



wimshurst-complete-front.jpg

Mount the Leyden jar shunt and add optional finials:

1. Use small brass wood screws to attach the (2) acrylic brackets to the front disk support, leave them a little loose at first.

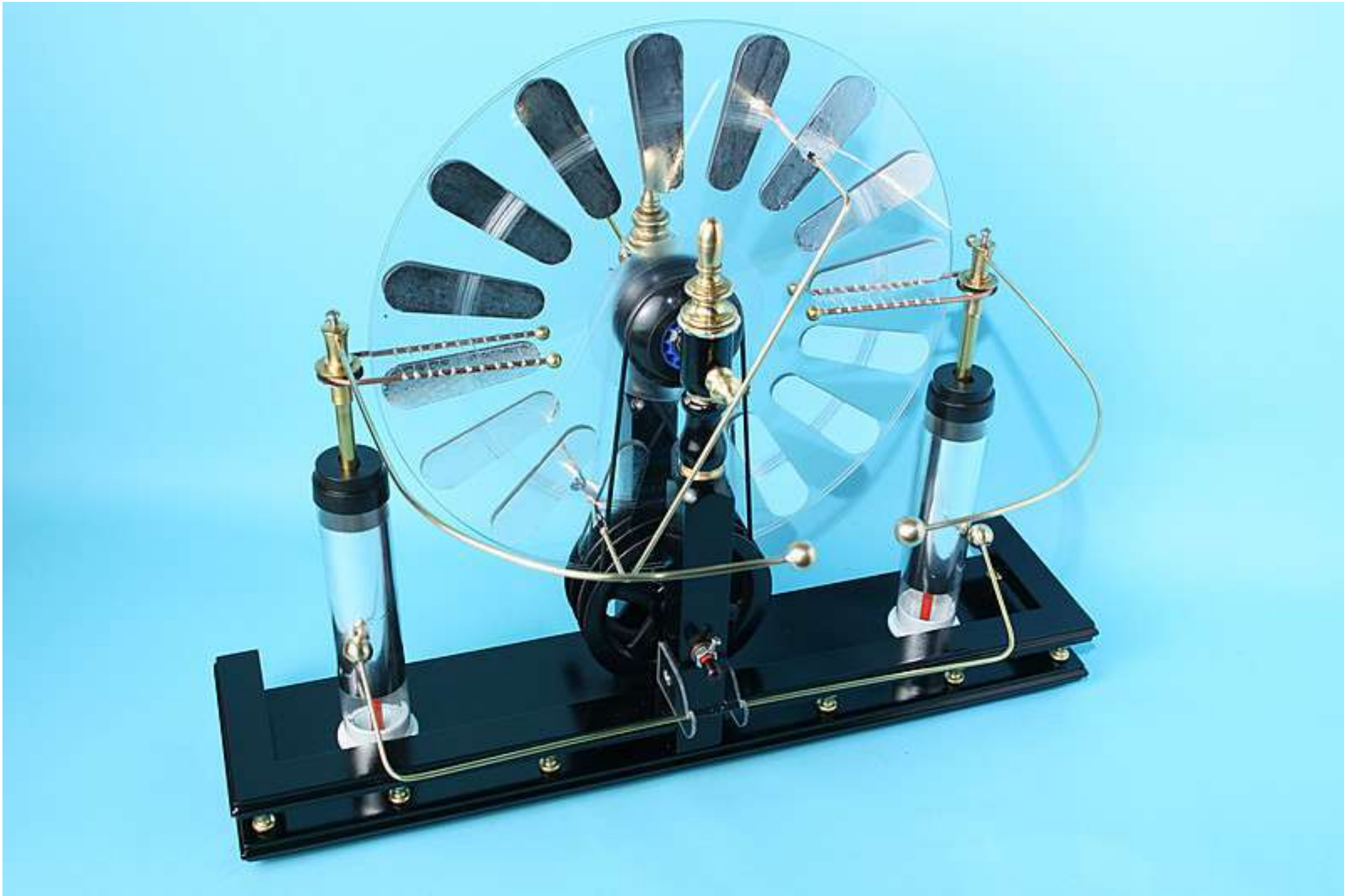
2. Place the Leyden jar shunt in the brackets and line them up so the balls on the shunt lean comfortable against the Leyden jars.

3. Tighten the brackets.

The two tops of the disk supports looked a little bare to me so I raided my junk box for more lamp parts and came up with these decorative finials. The wealth of finial and cabinet knobs at the typical home center means that there are infinite



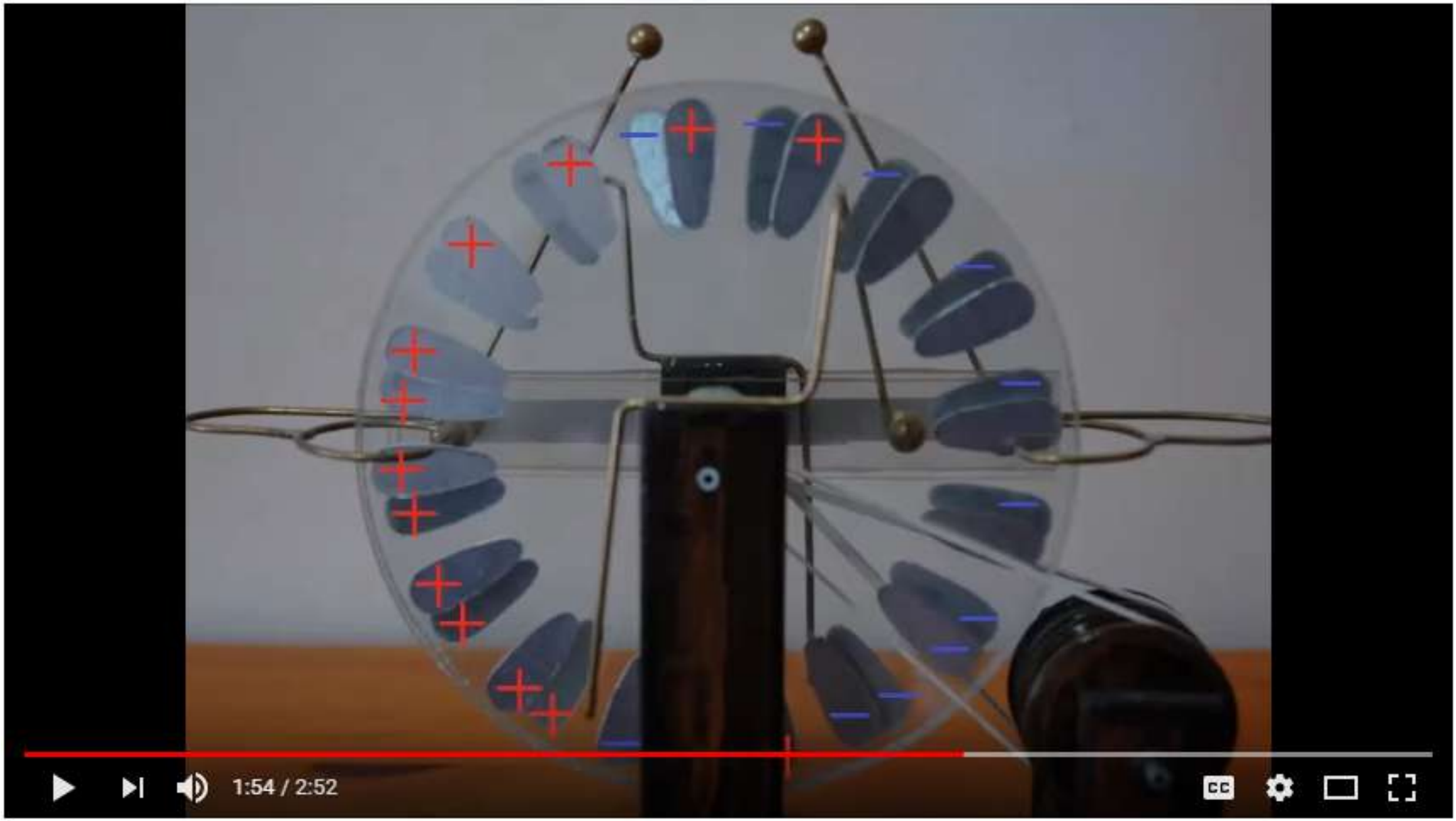




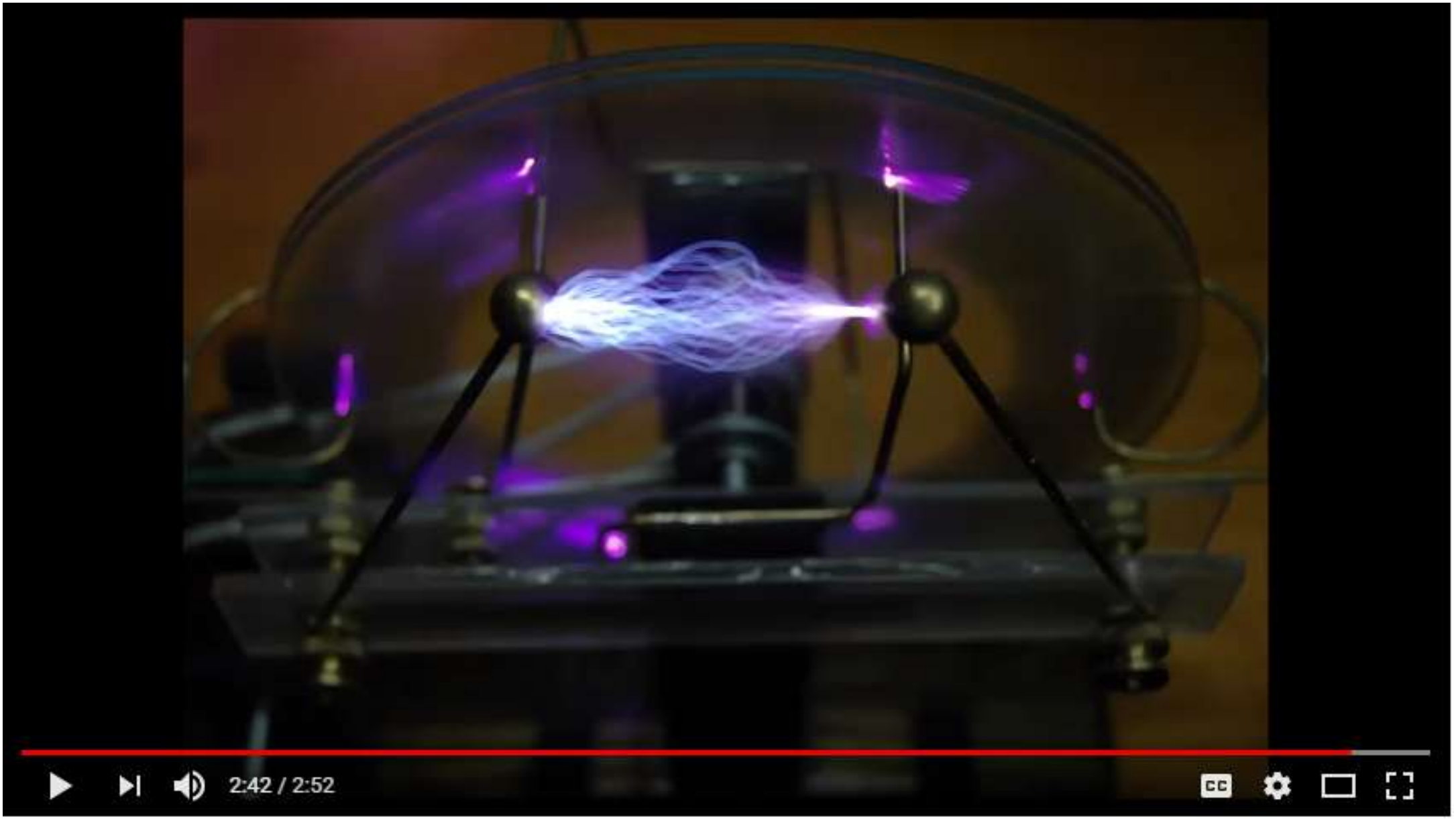




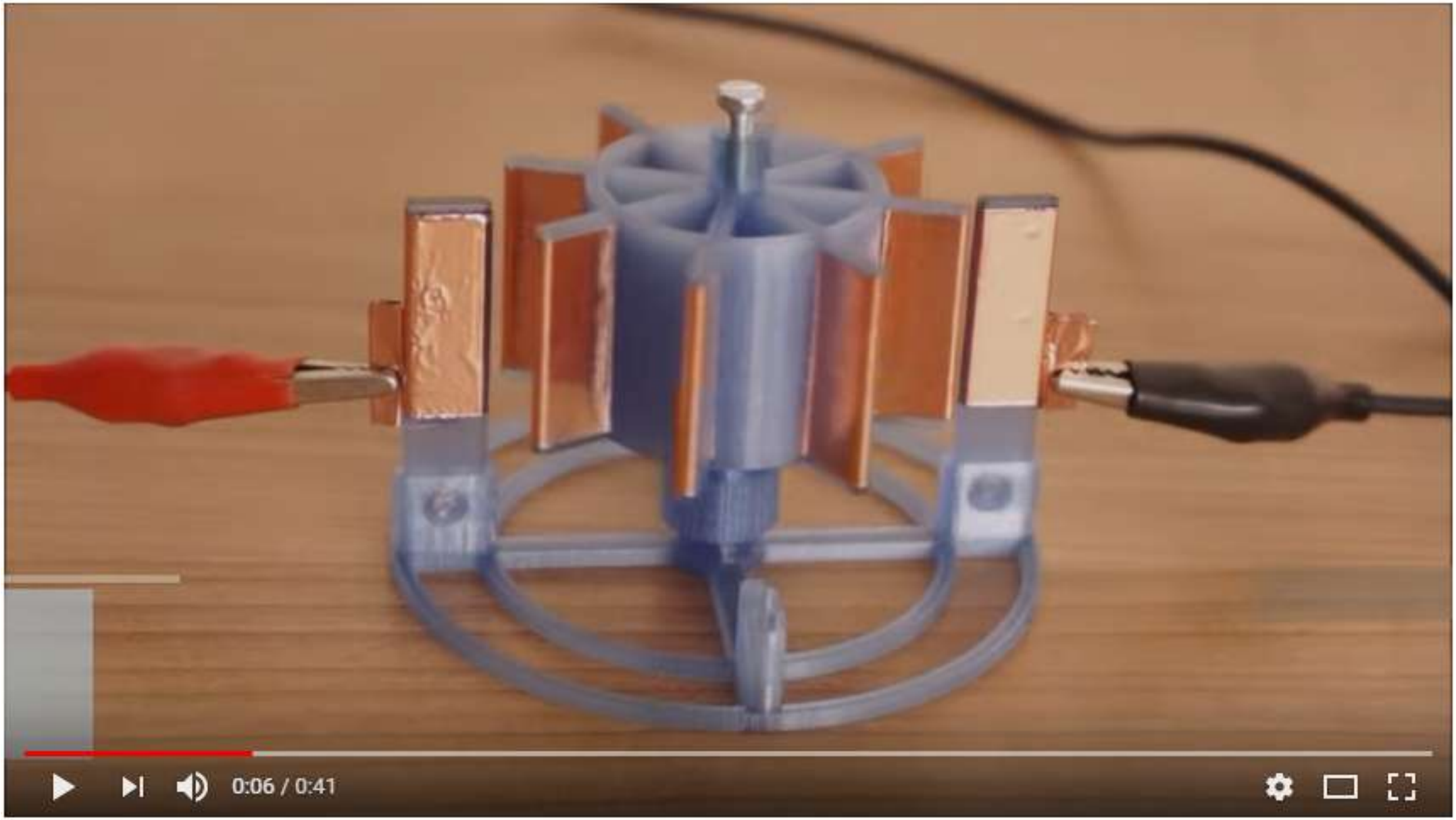
Attaching a small ball to the positive electrode will result in larger and more interesting sparks. The small ball creates a plume of ionized air that helps the spark jump the gap.



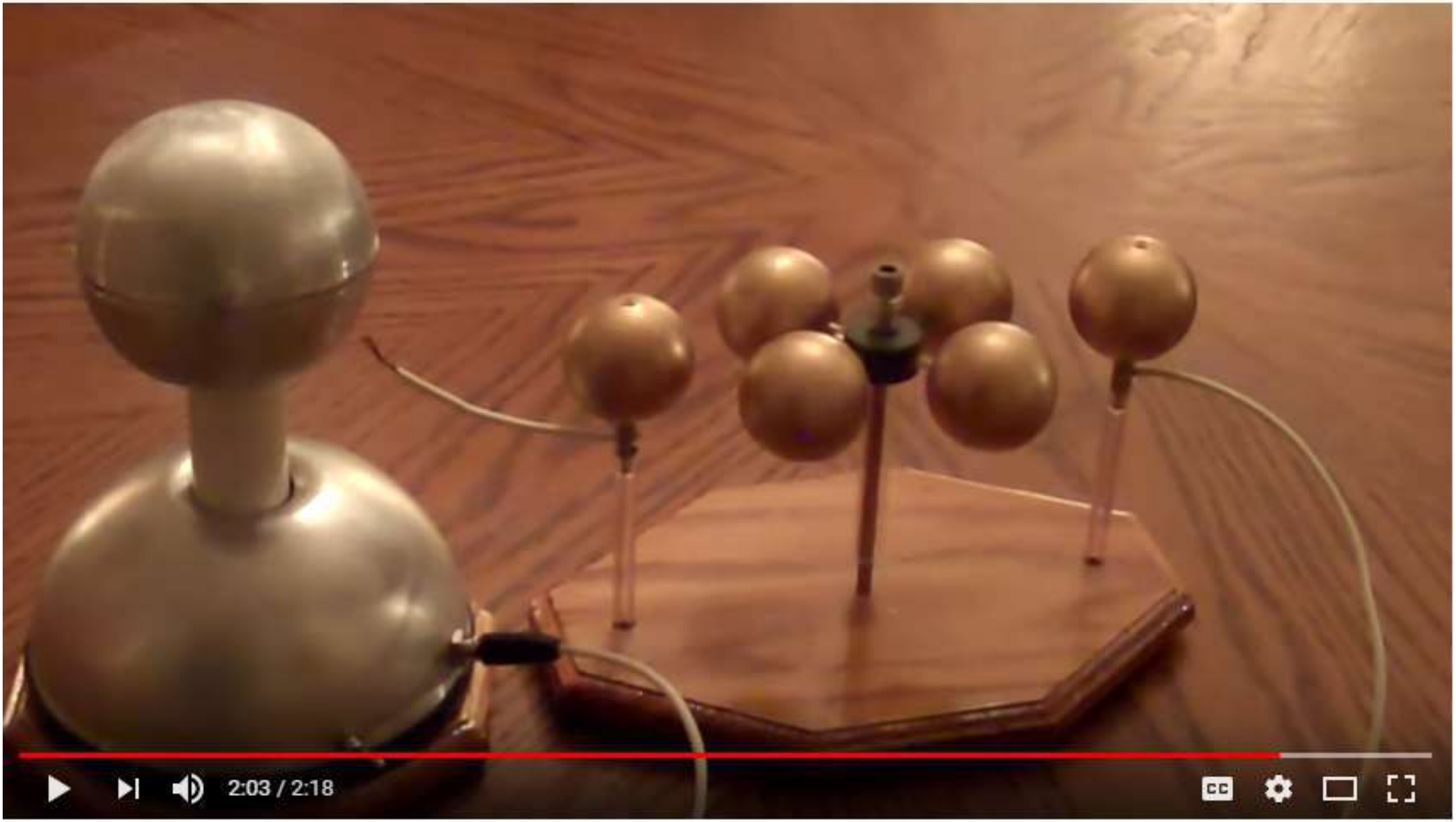
How the Wimshurst Works



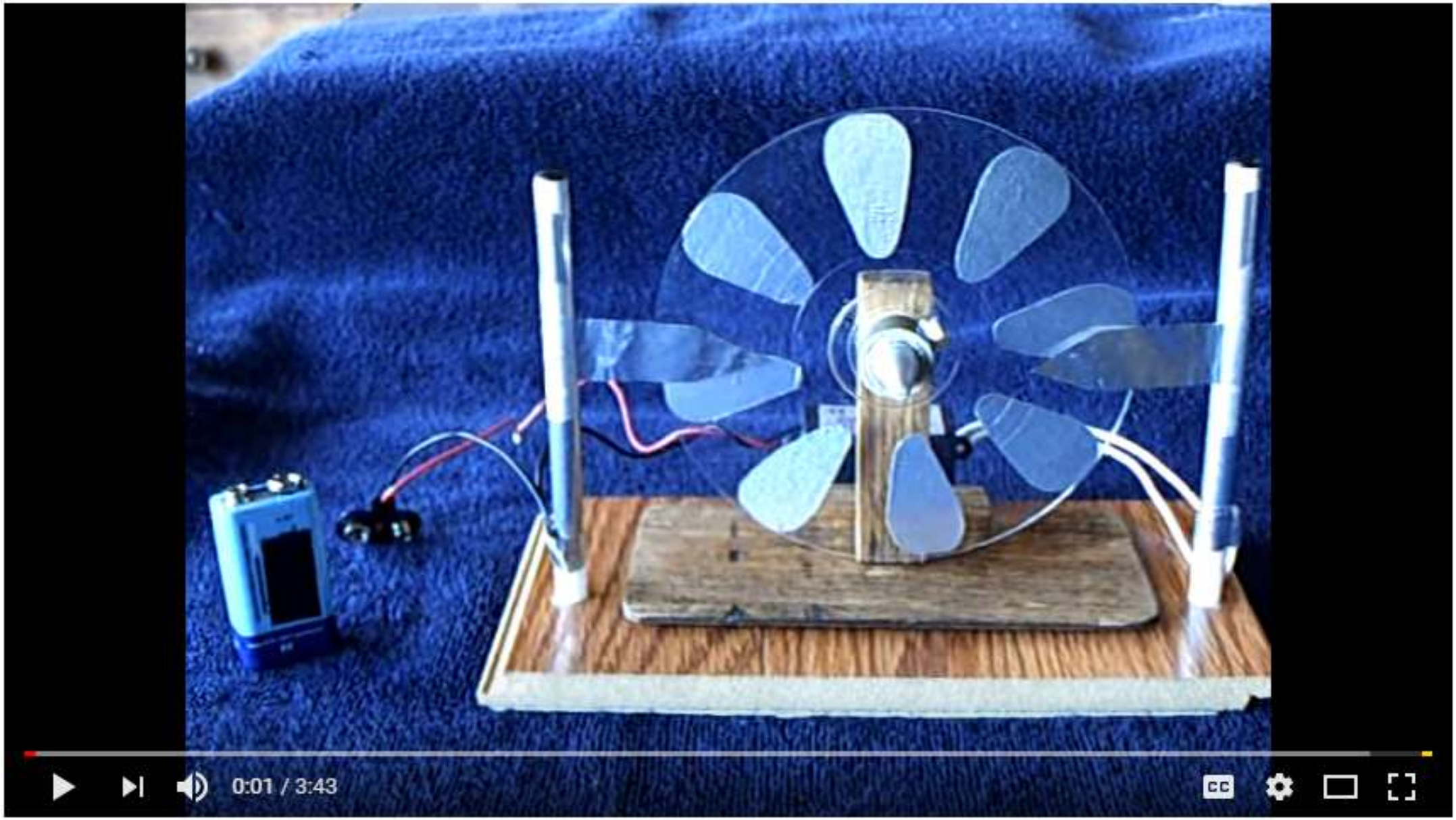
How the Wimshurst Works



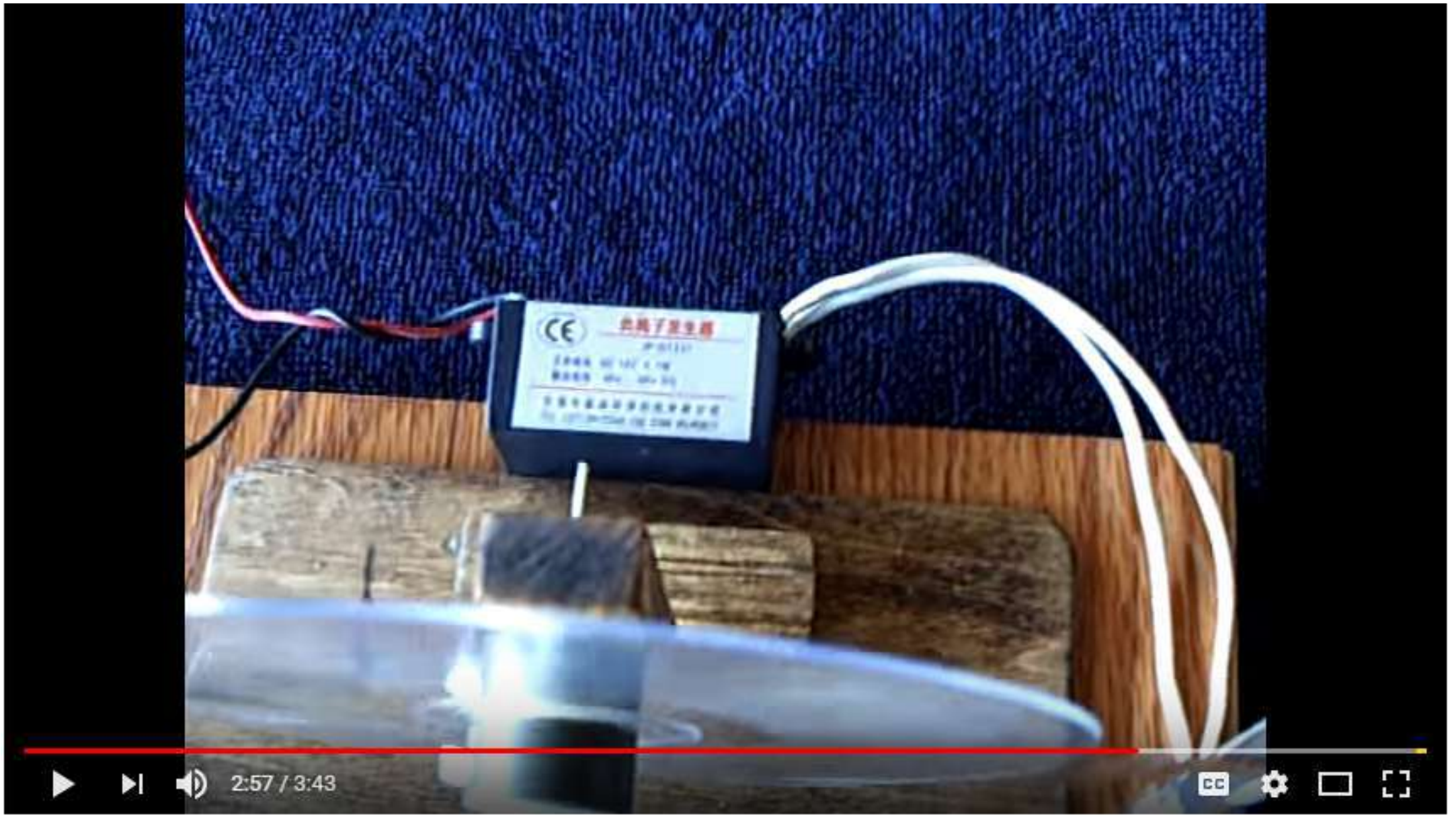
Electrostatic Motor

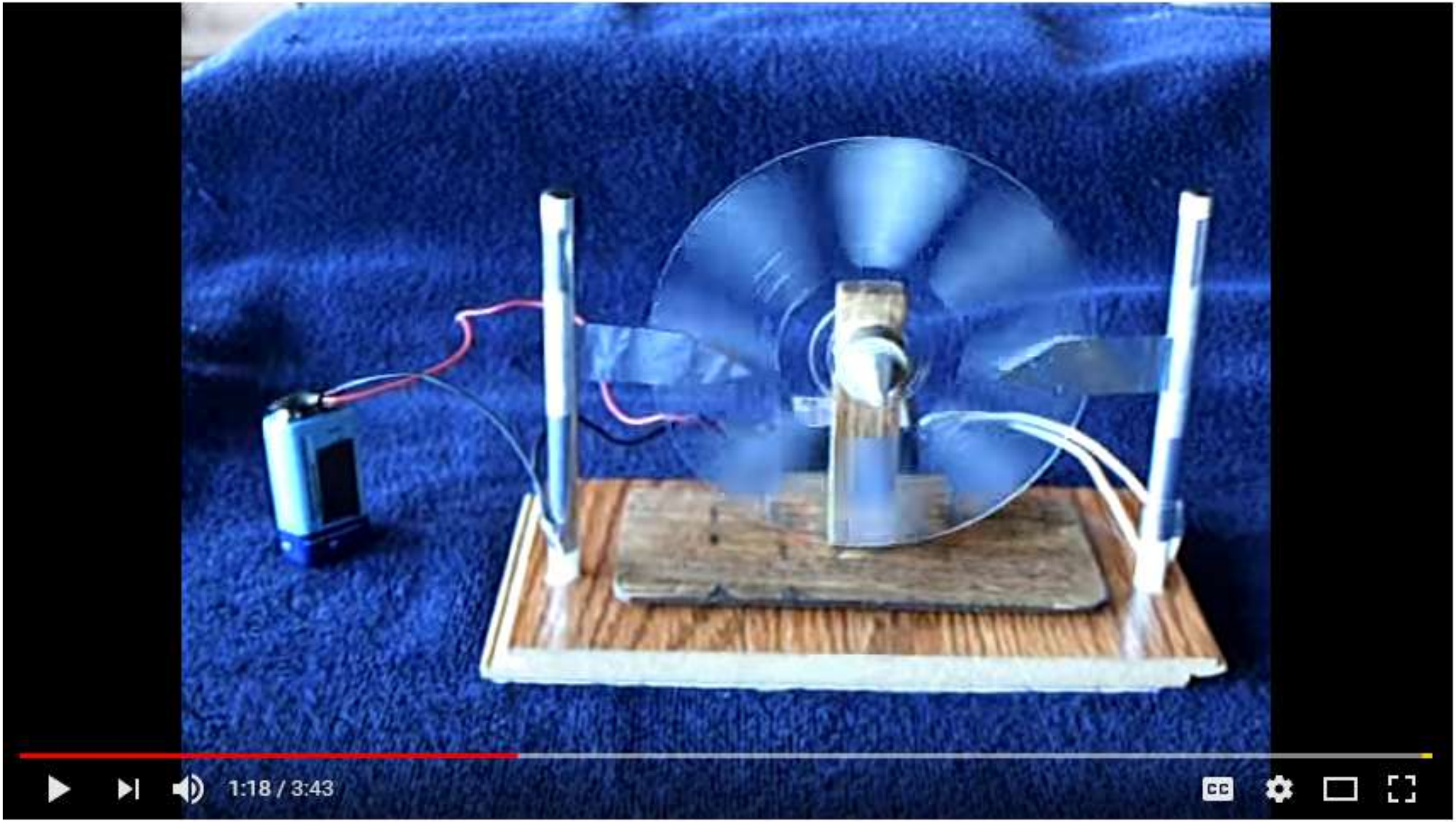


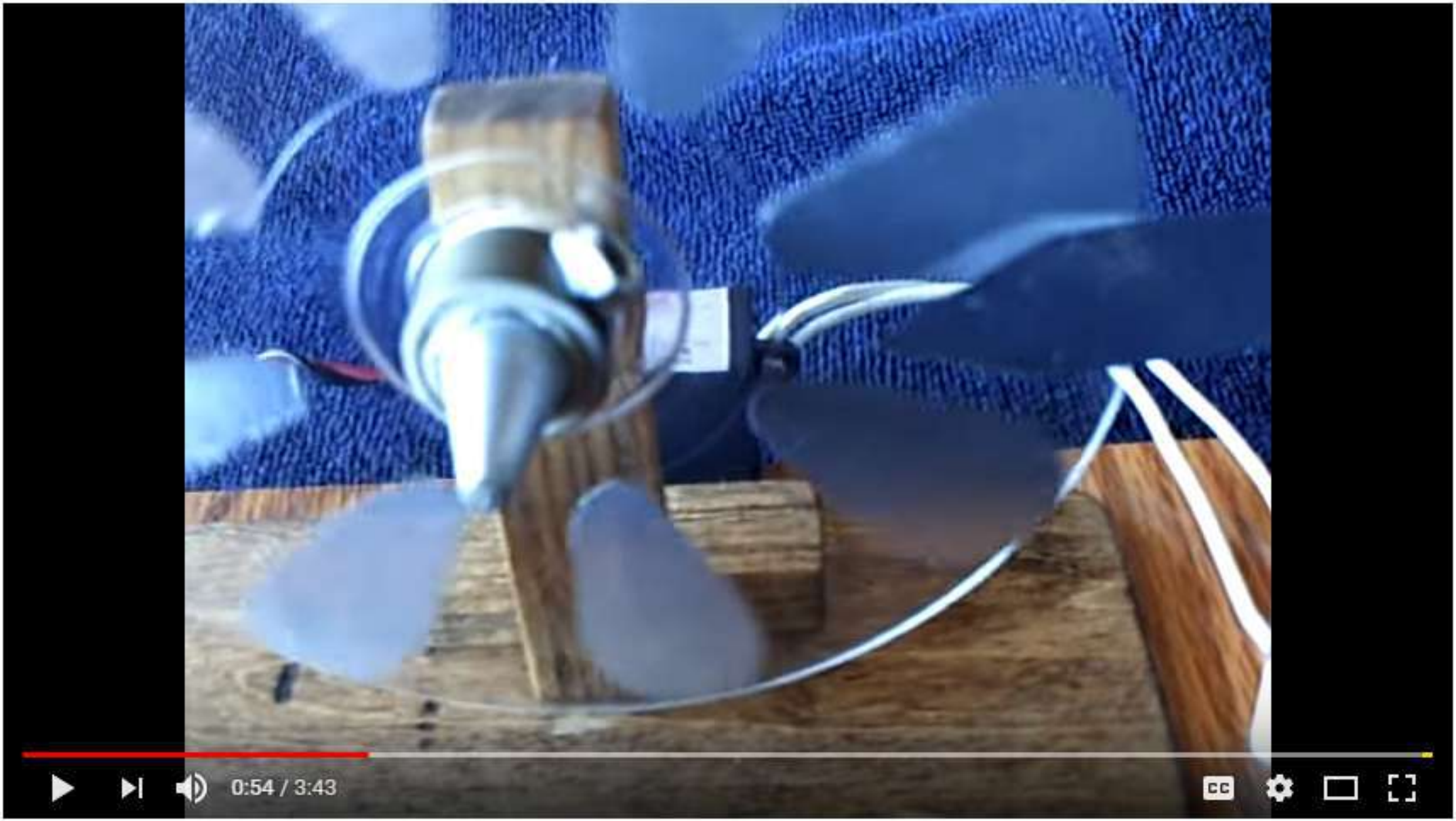
Home Made Electrostatic Motor

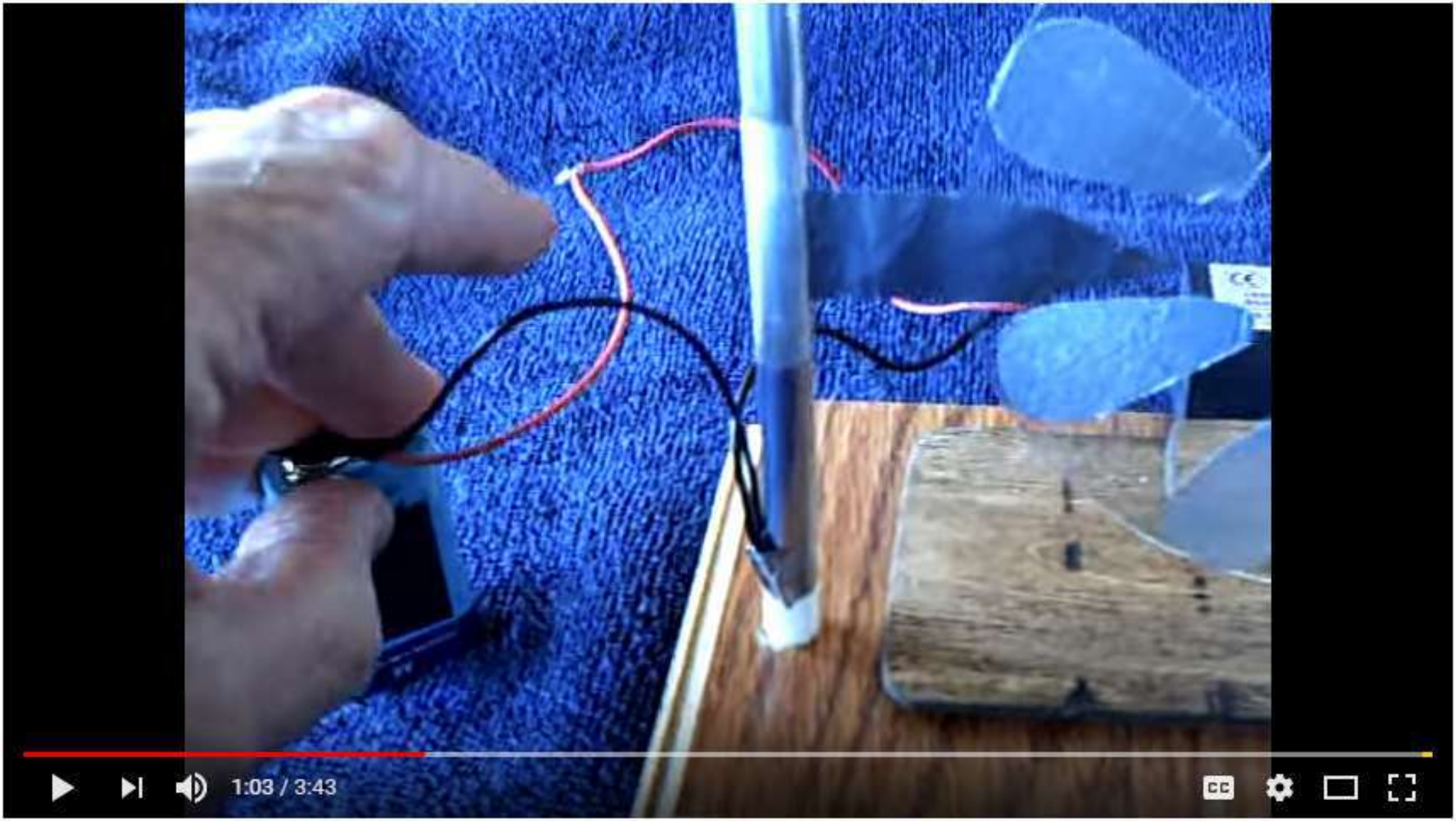


Clear Disk Electrostatic Motor

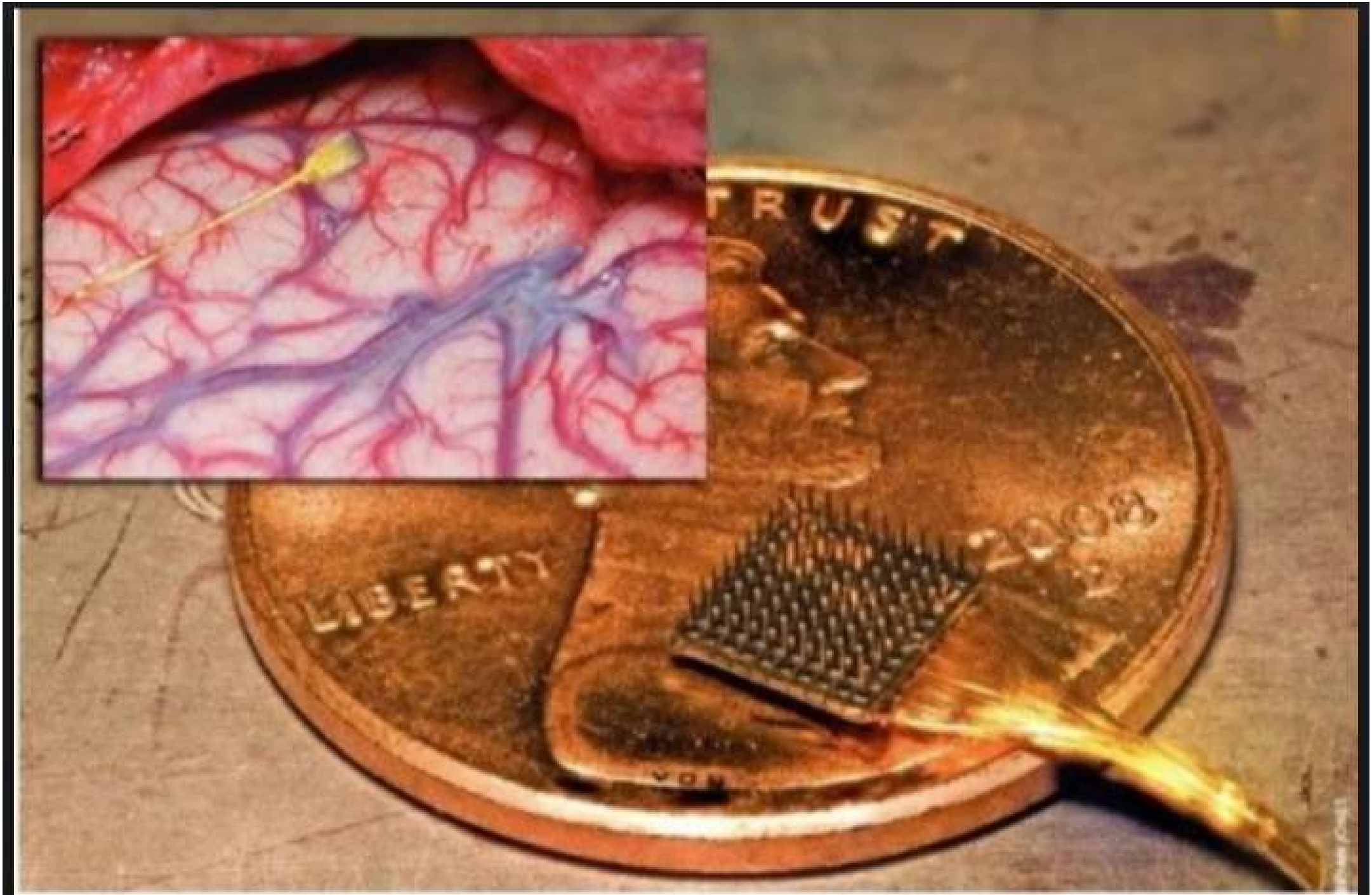

2:57 / 3:43


1:18 / 3:43
CC

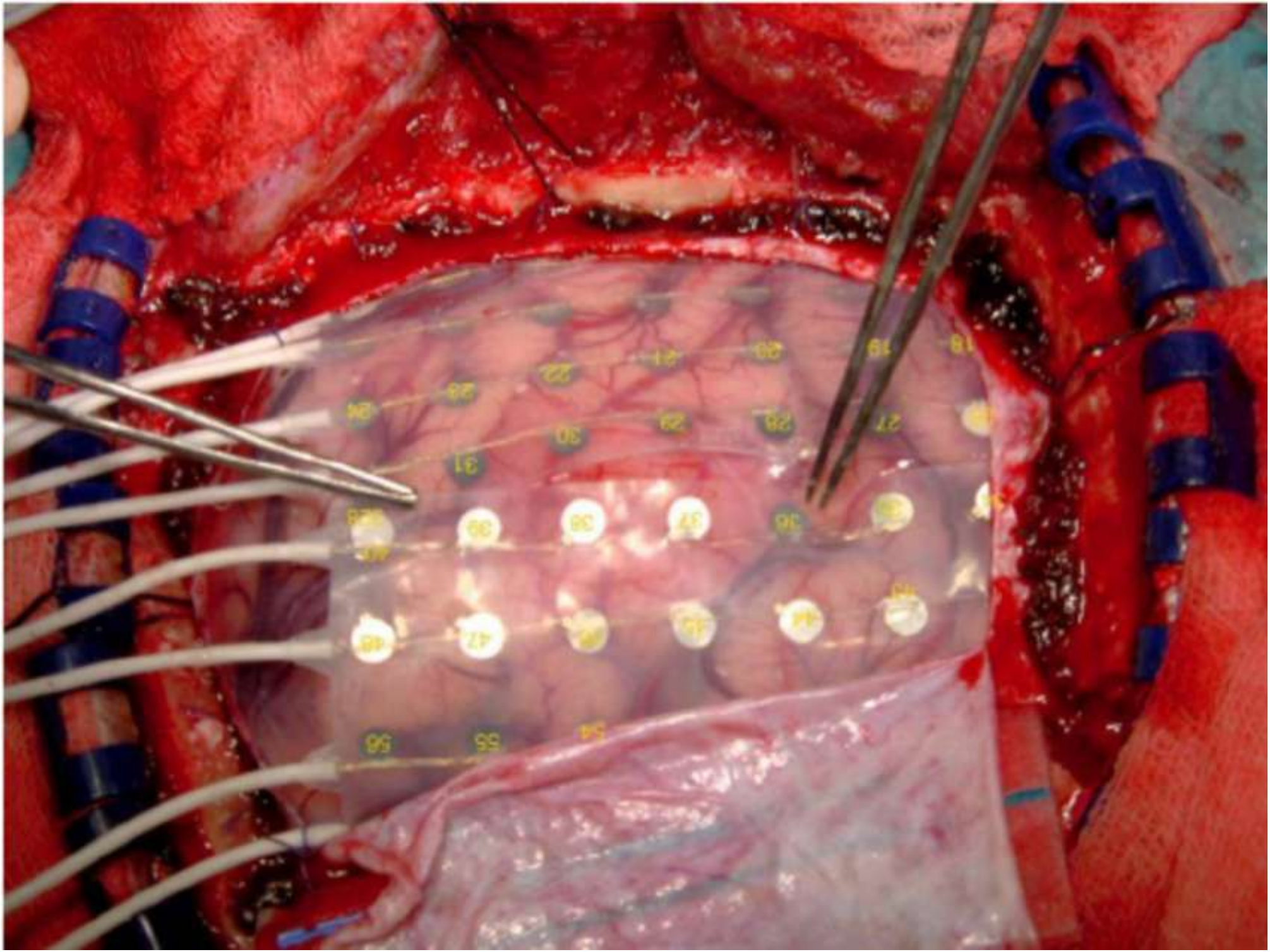

0:54 / 3:43
CC

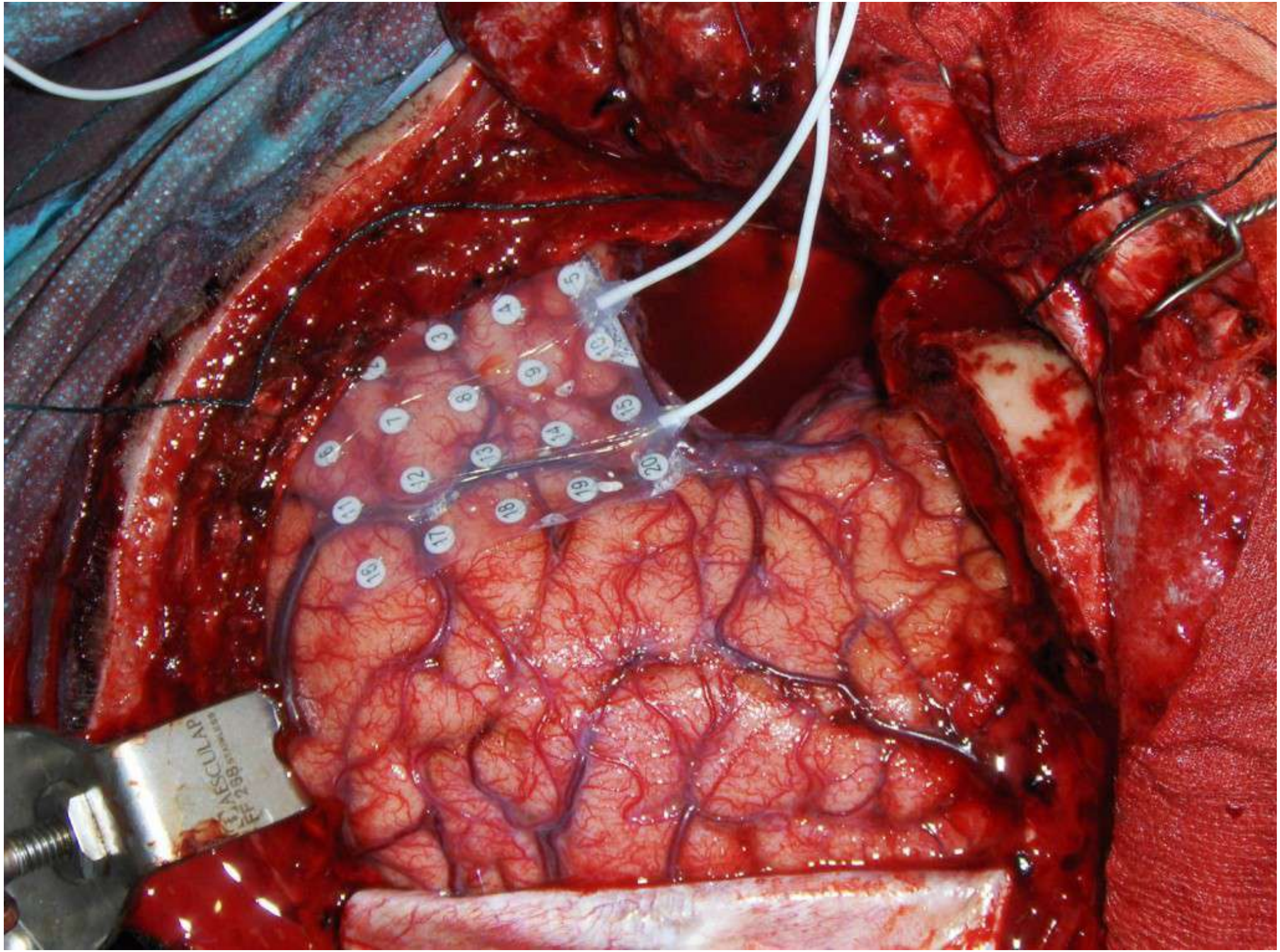

1:03 / 3:43
CC


3:37 / 3:43
CC

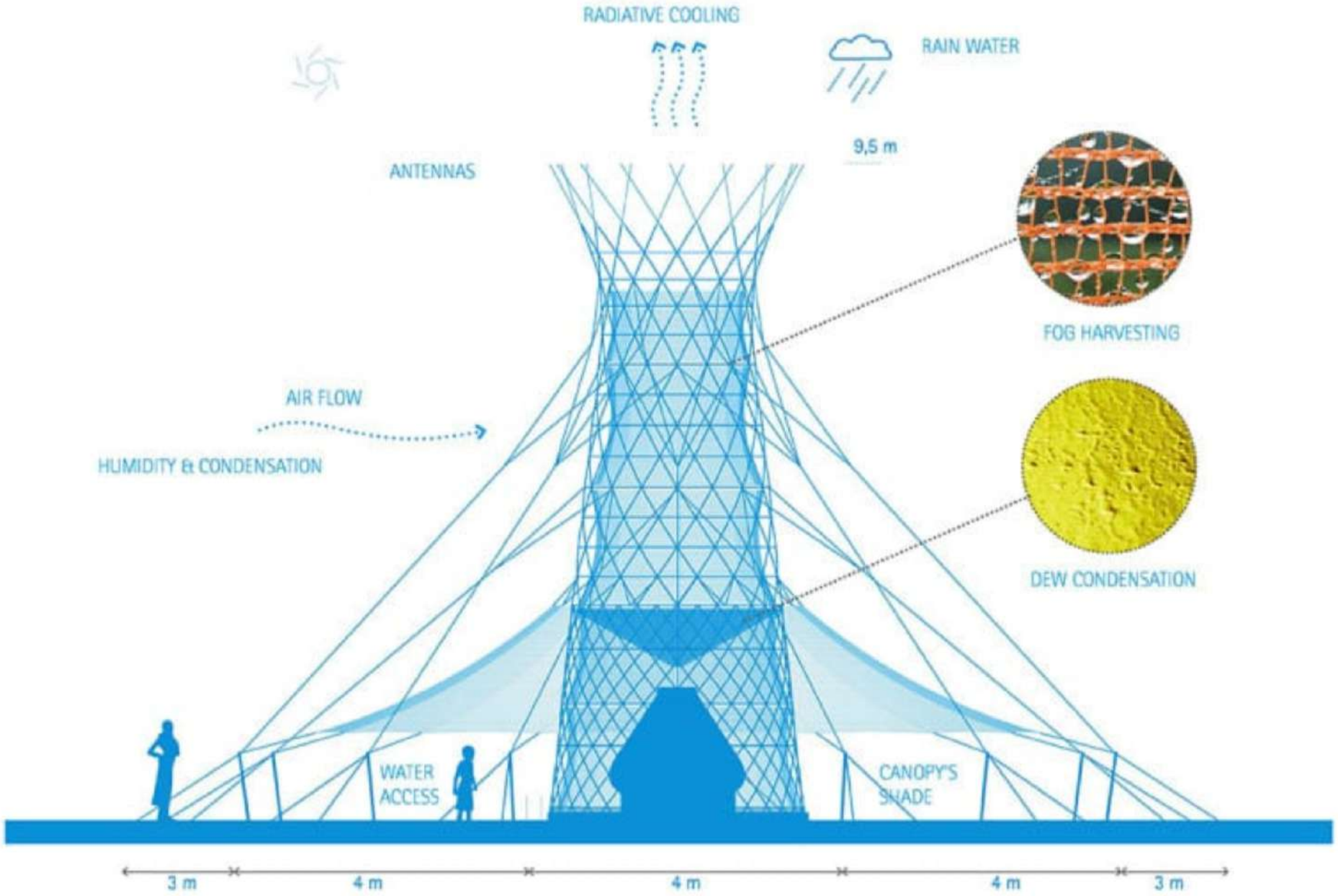


Thought control: The Utah Electrode Array can be implanted on a human brain. For a podcast and more photos, go to CityWeekly.net.




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RADIATIVE COOLING
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WATER ACCESS
CANOPY'S SHADE
3 m
4 m
4 m
4 m
3 m

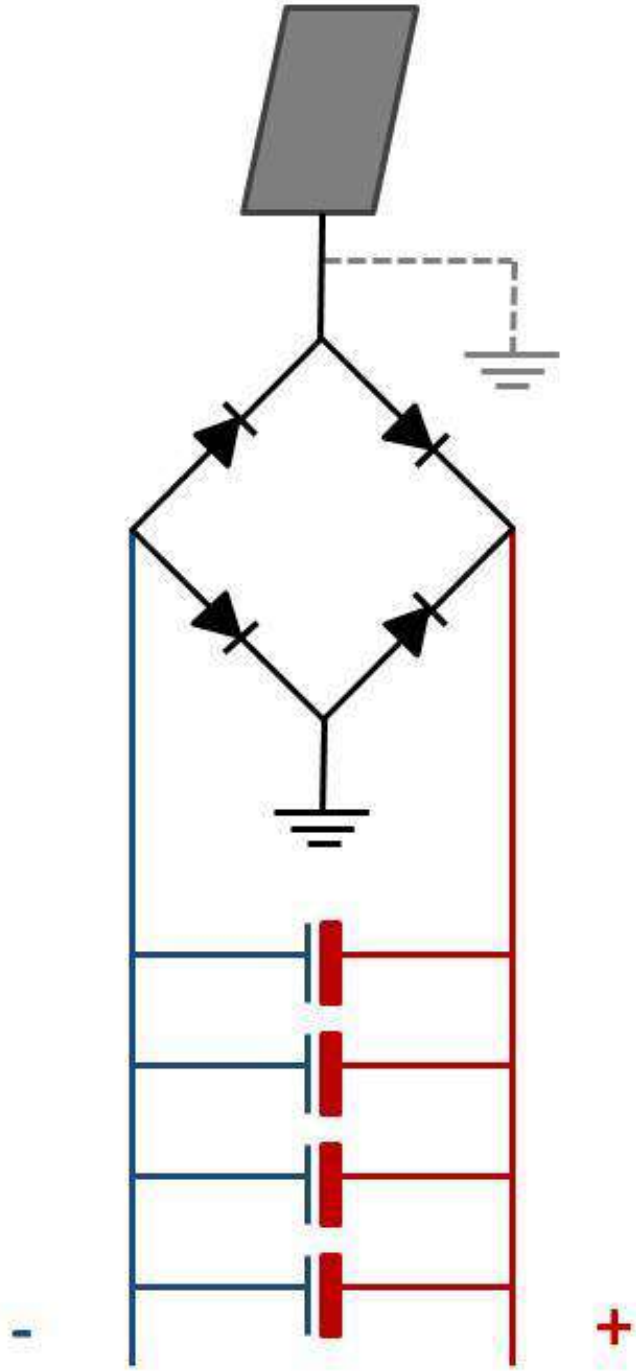
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Warka Water towers harvest drinkable water from the air


dezeen
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Insulated, polished aluminium plate high up in air

An extra direct earth connection might help

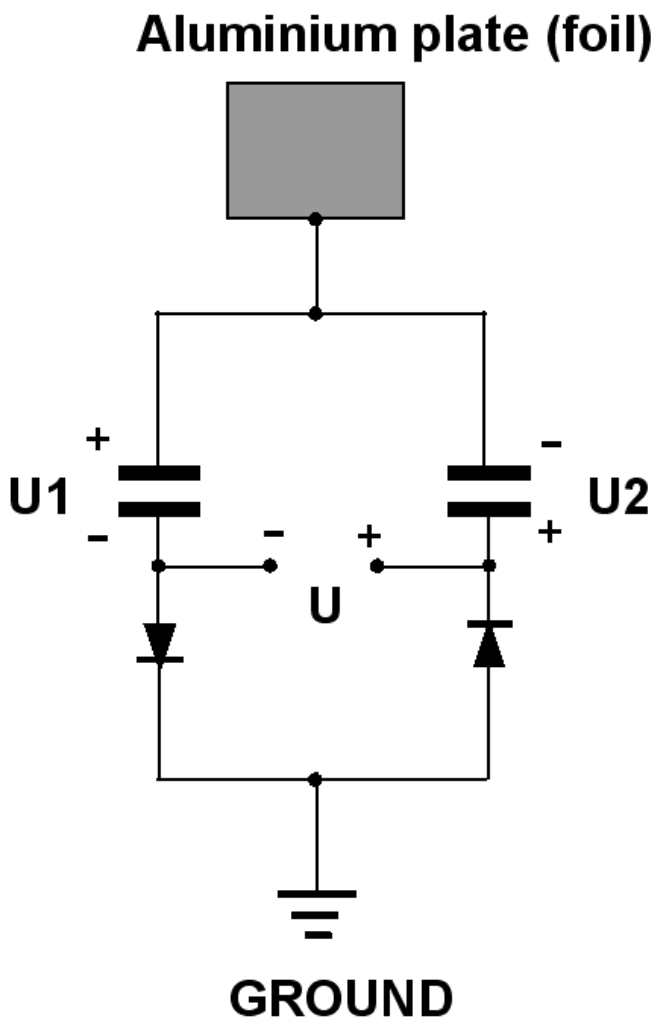
1N34a germanium diodes as full-wave bridge rectifier

4mm high load single core copper wire

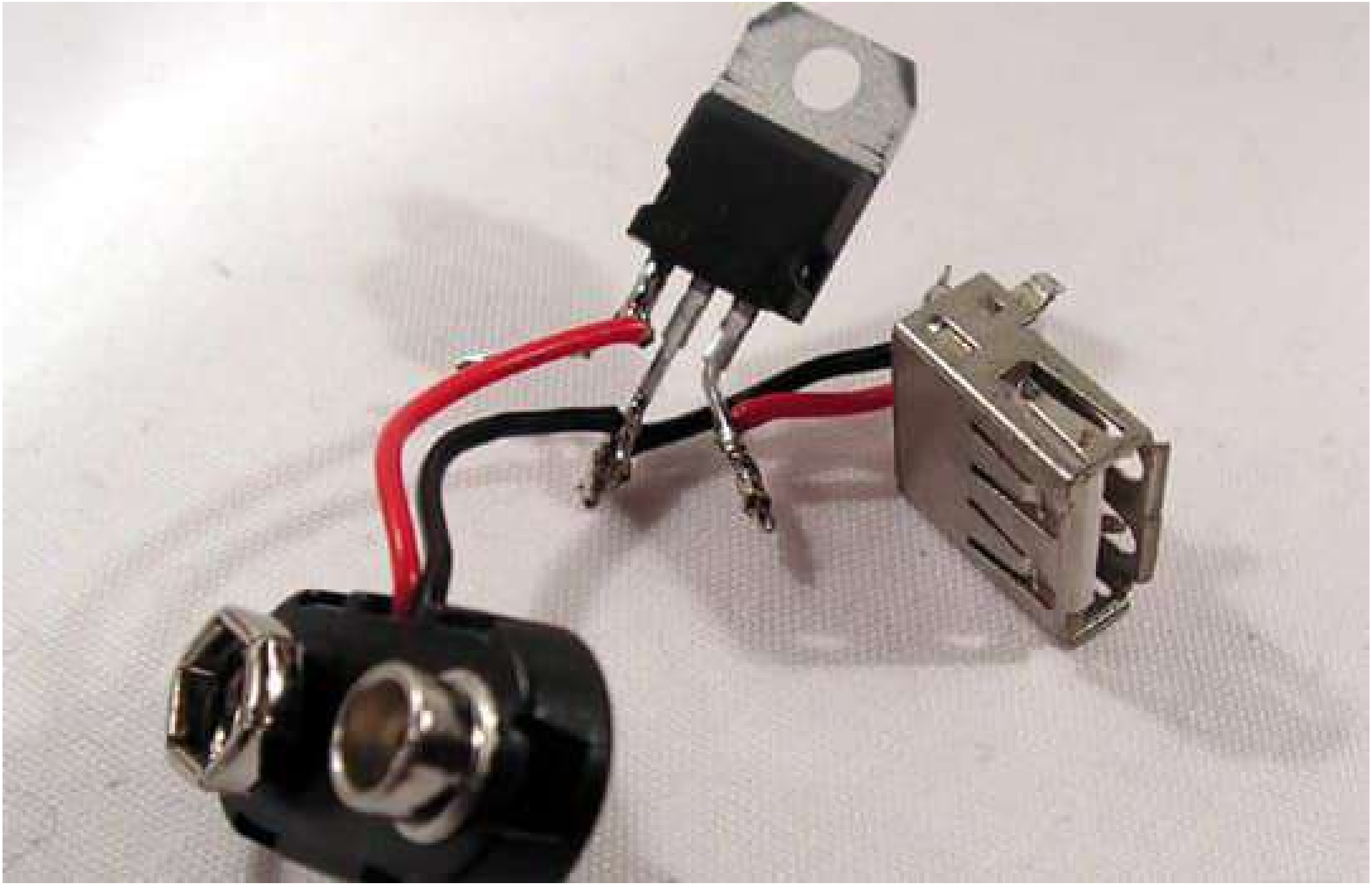
Earth is copper pipe 2 metres deep in moist soil

100uF 50V electrolytic capacitors in parallel

IMPROVEMENT OF RECEIVER:



U = U1 + U2



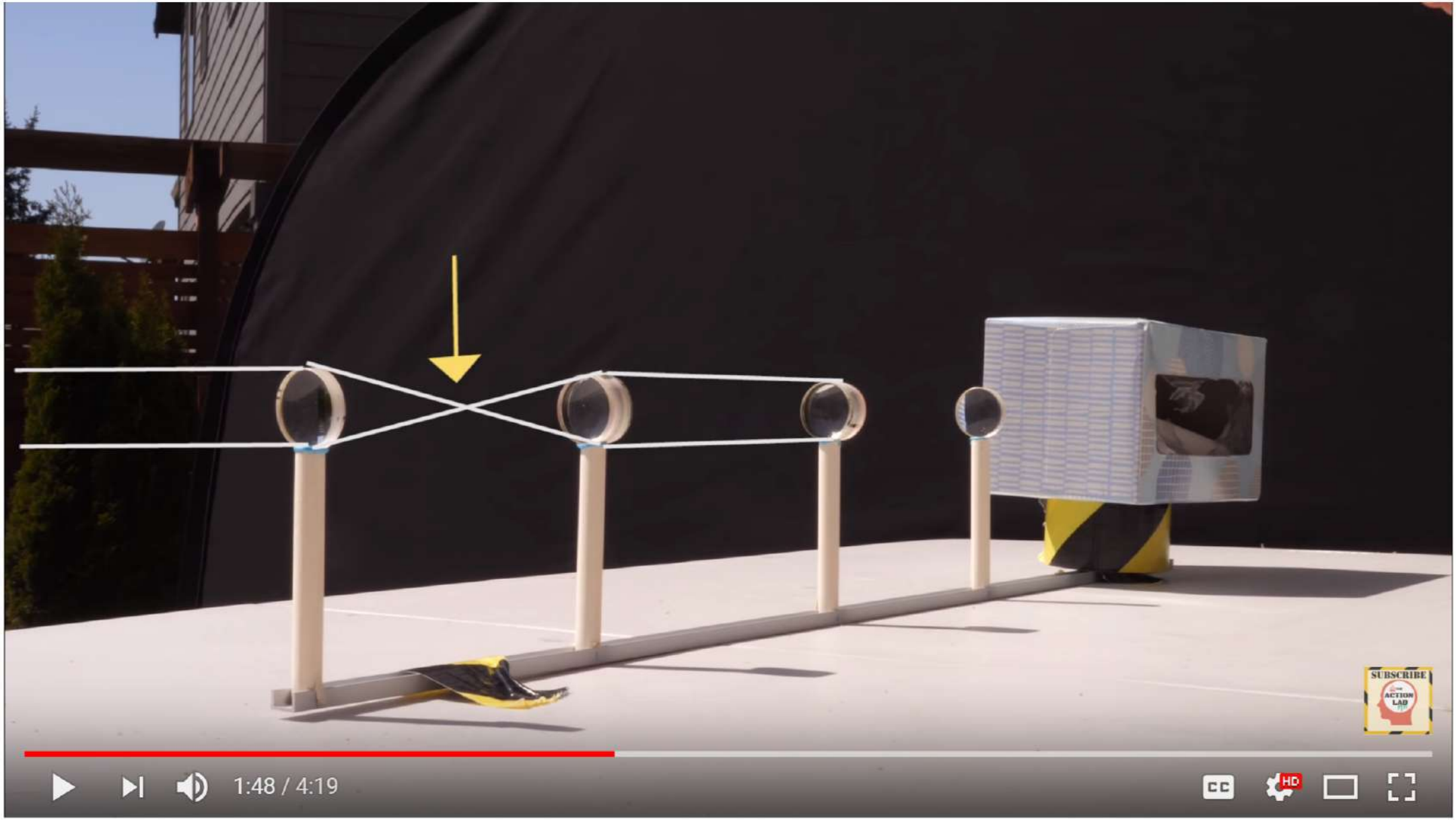


Make Water Appear Frozen In Time Using Sound

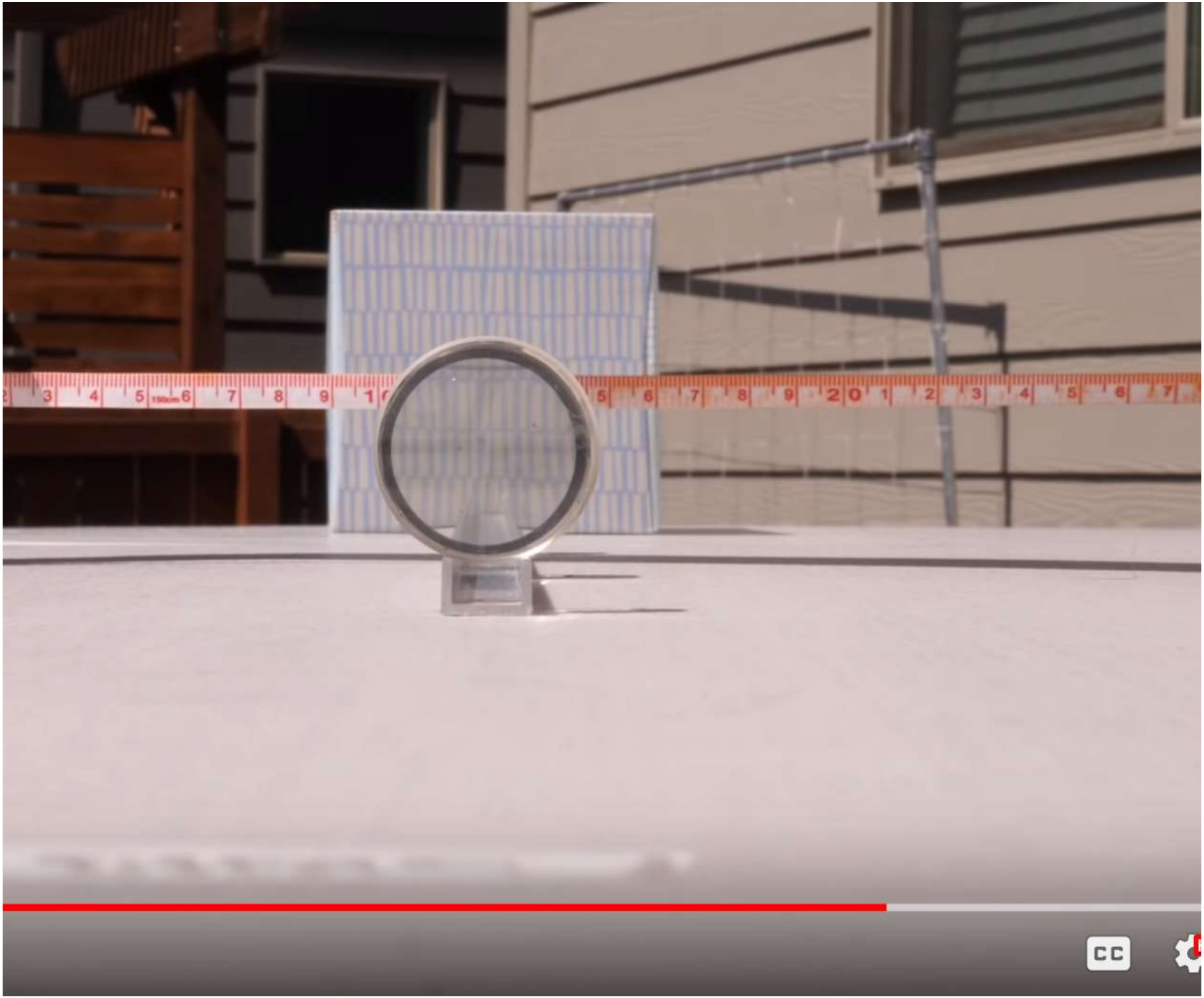

24 Hz sound
makes water appear "frozen"
2:35 / 7:34
CC
HD

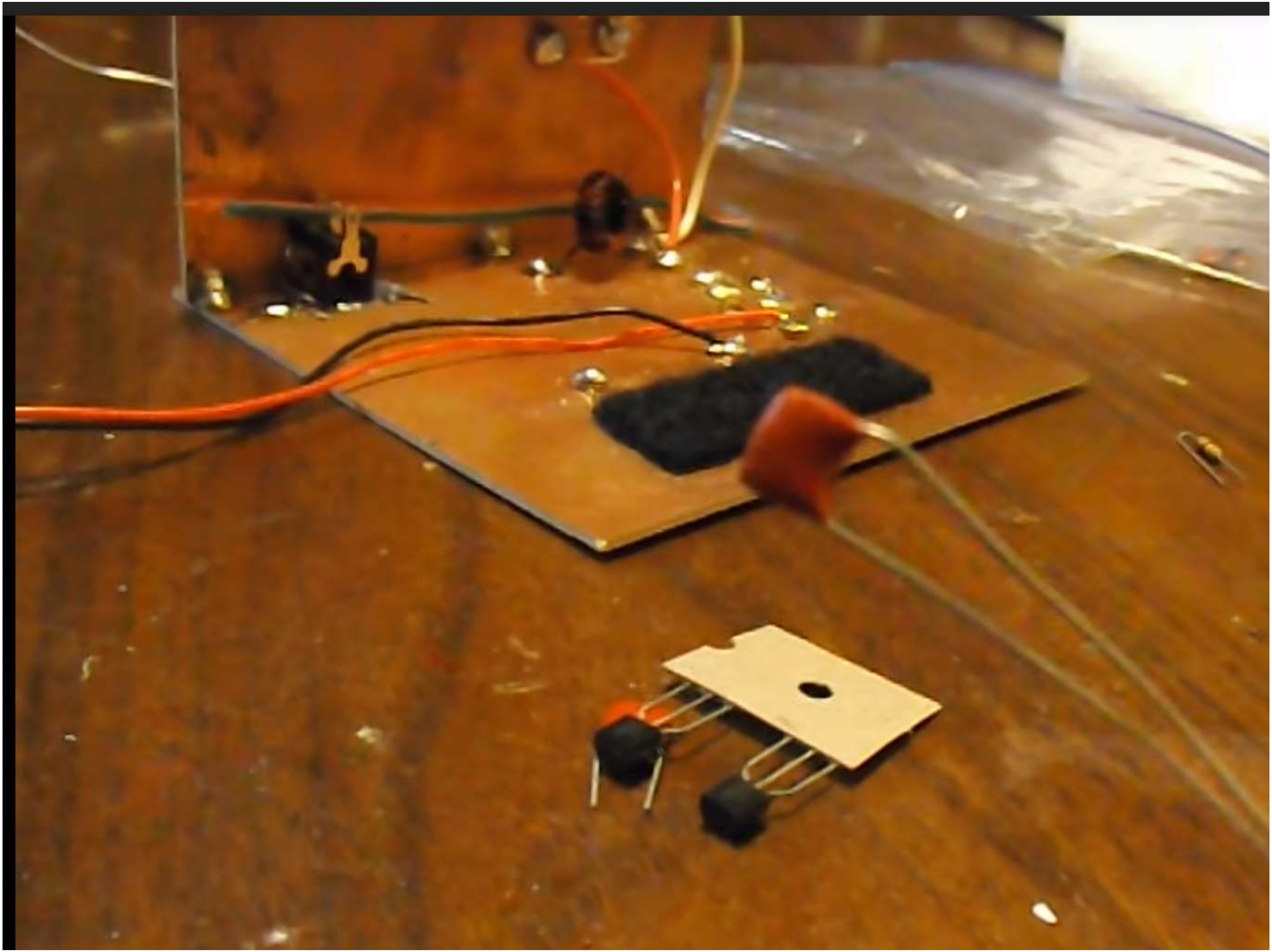

f1=24.0 Hz
f2=23.0 Hz

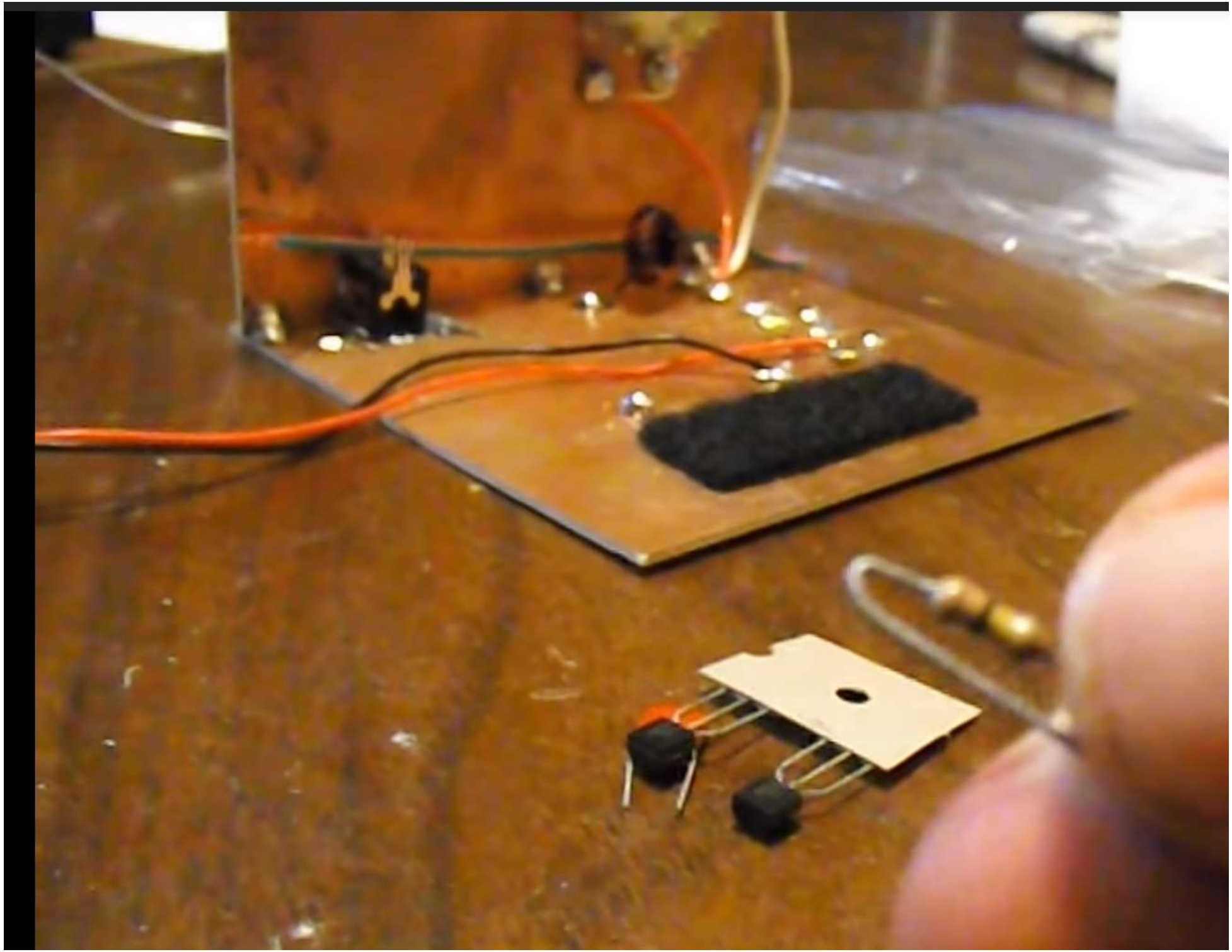


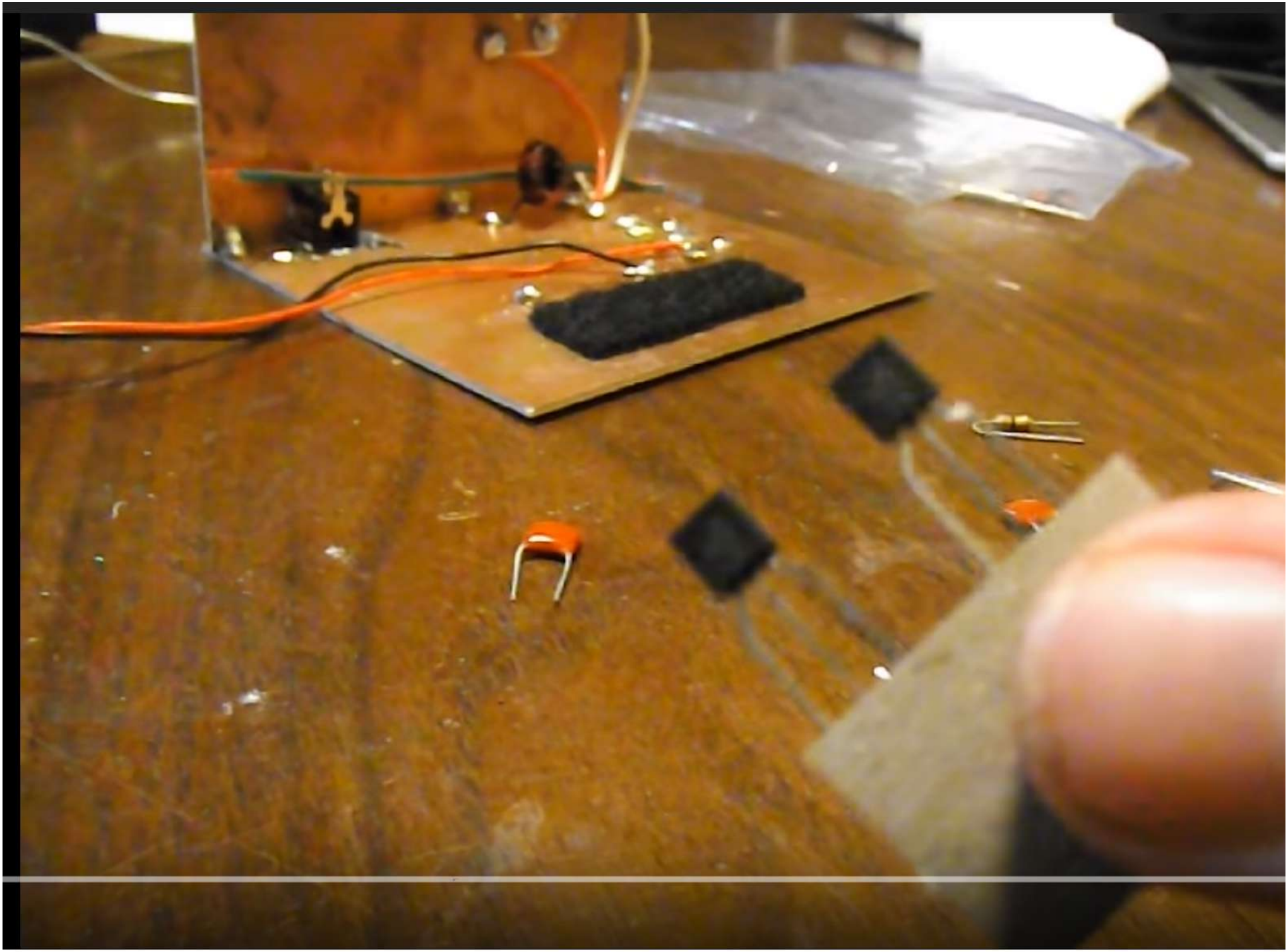

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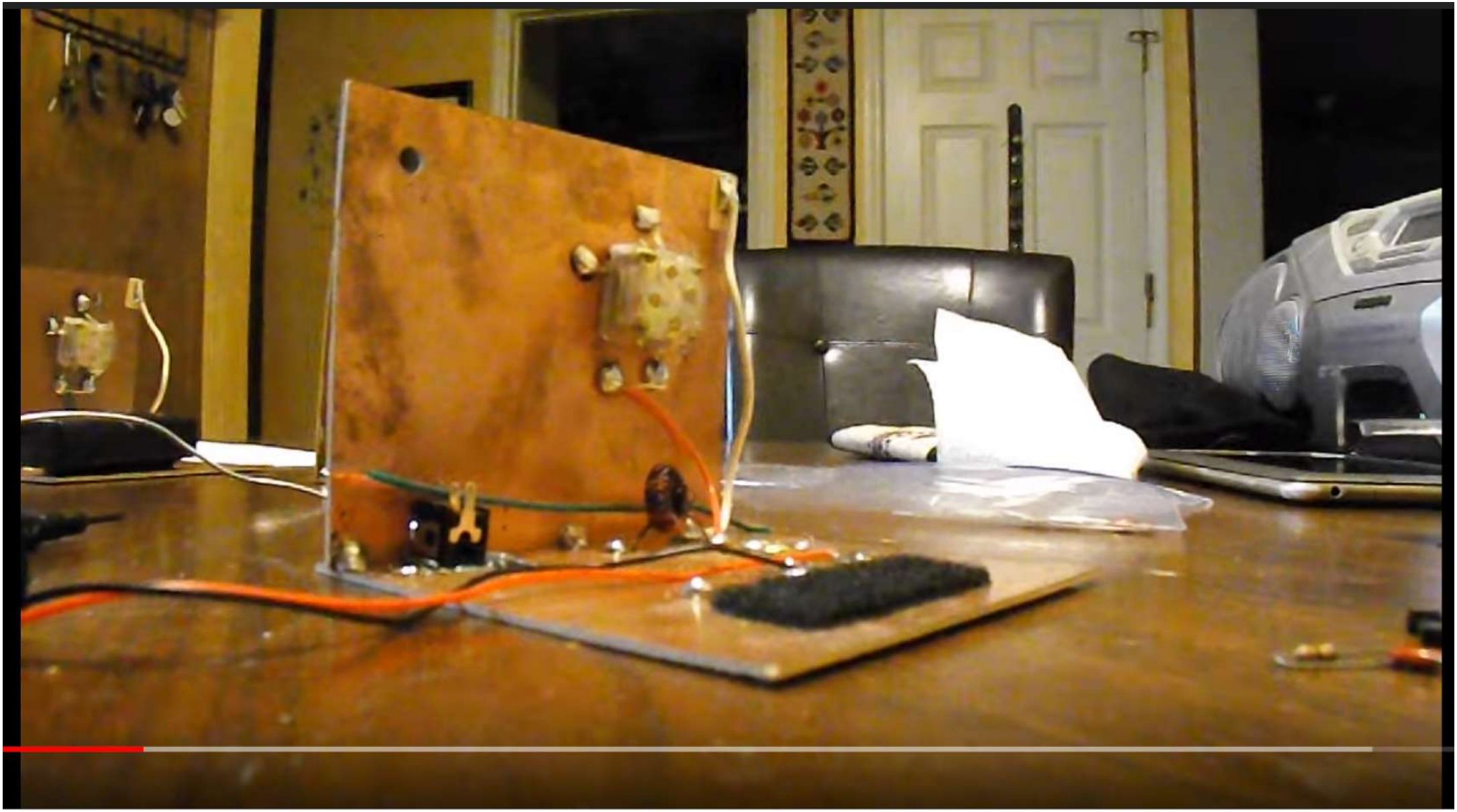

These two areas look the same
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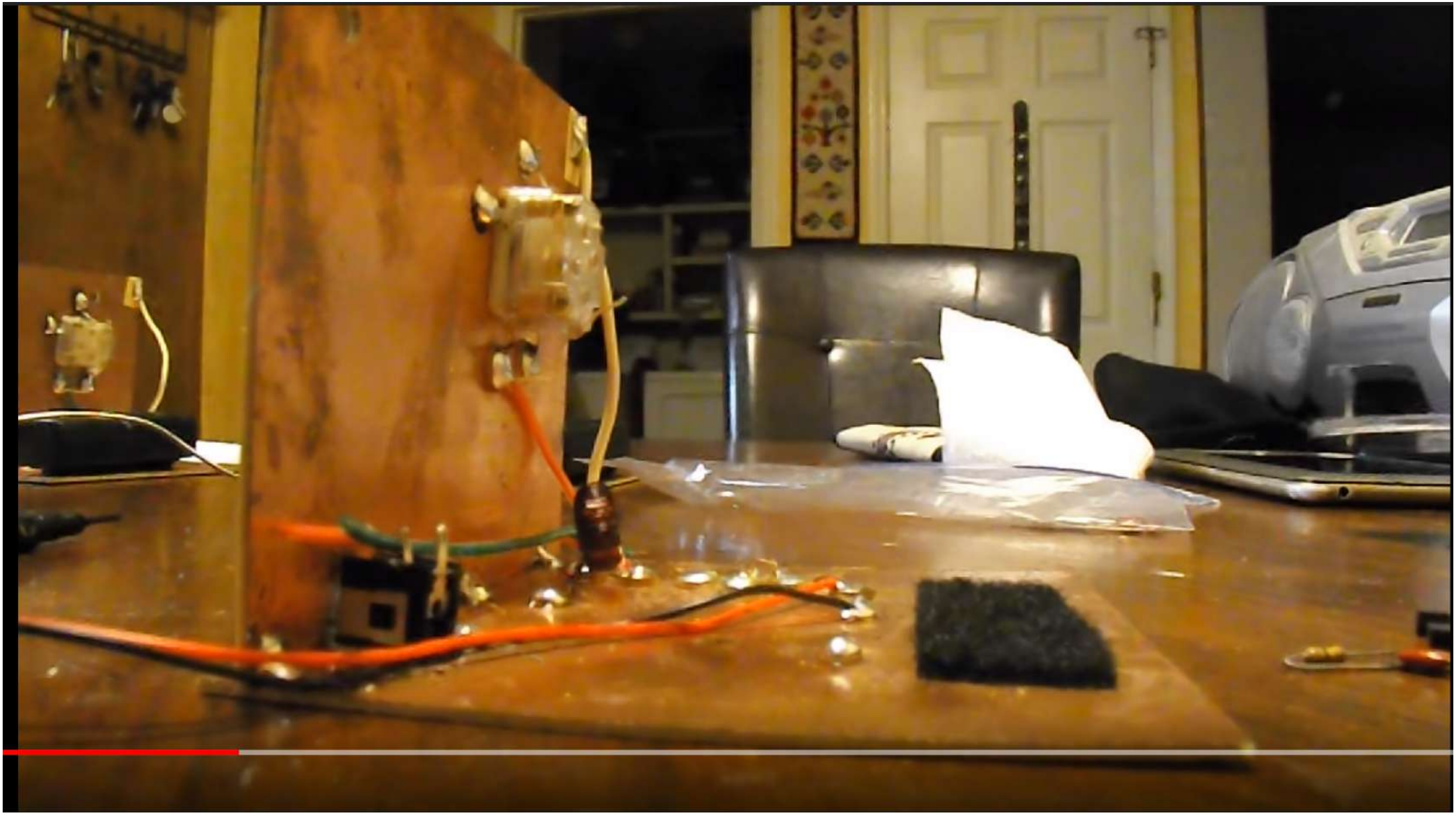


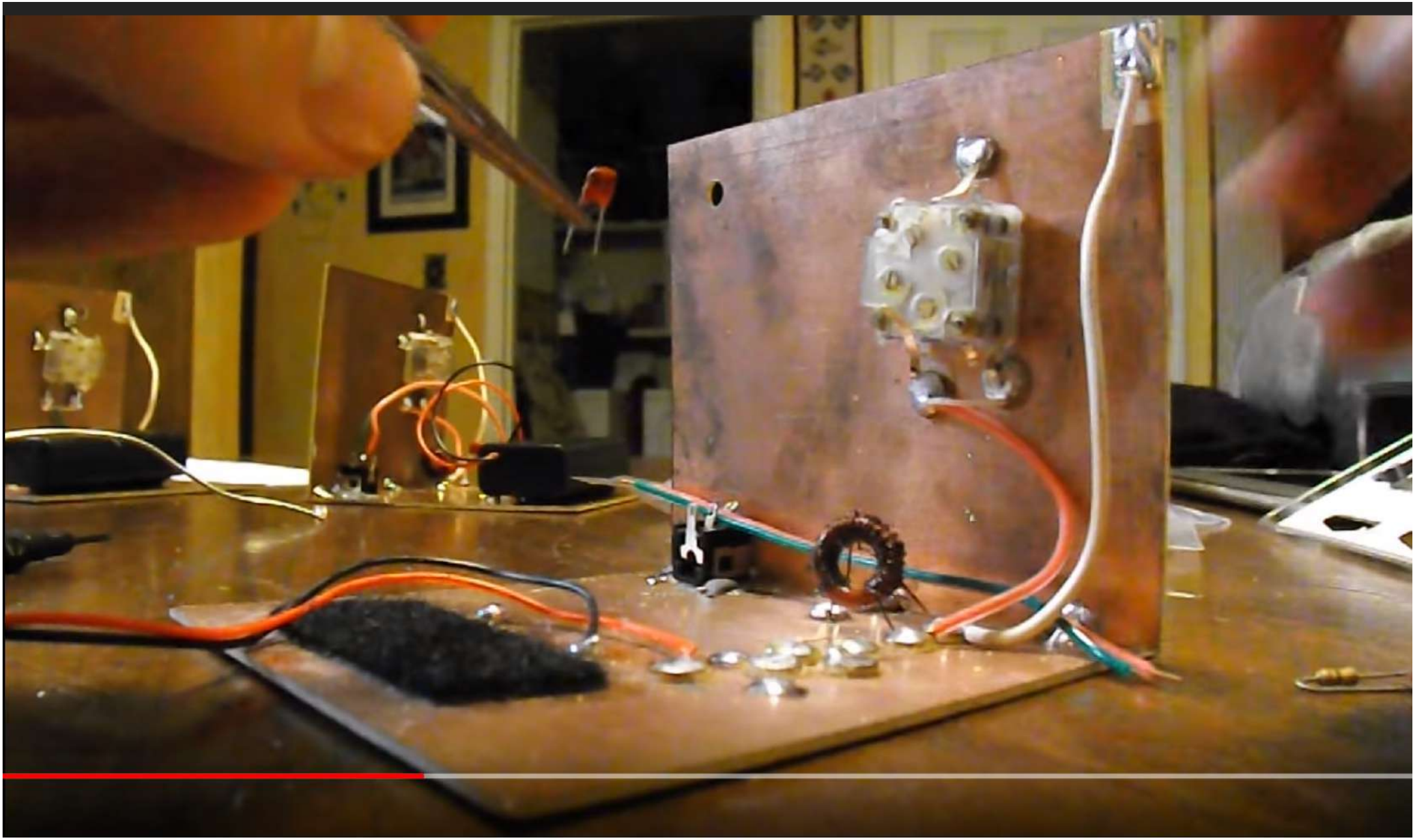


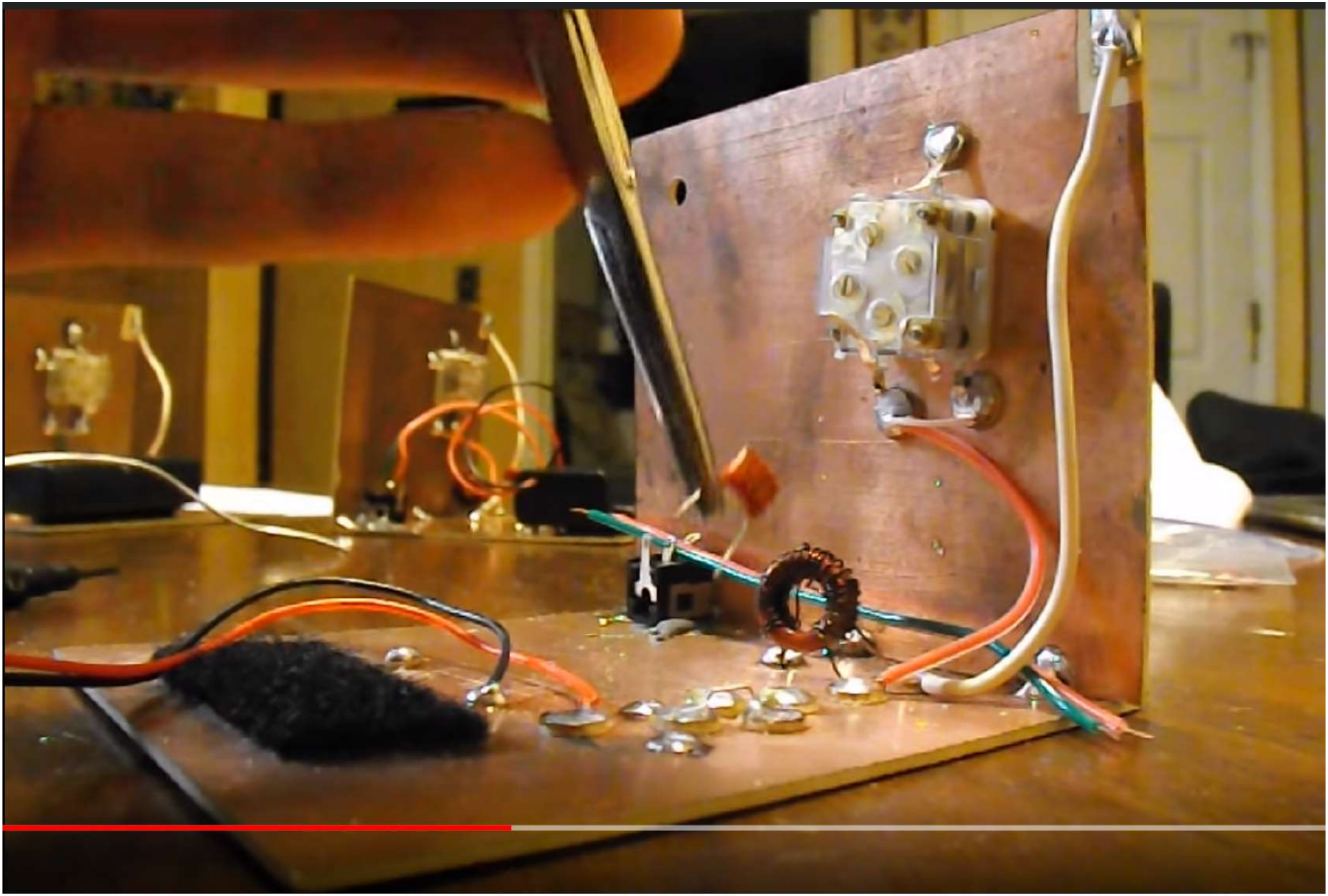


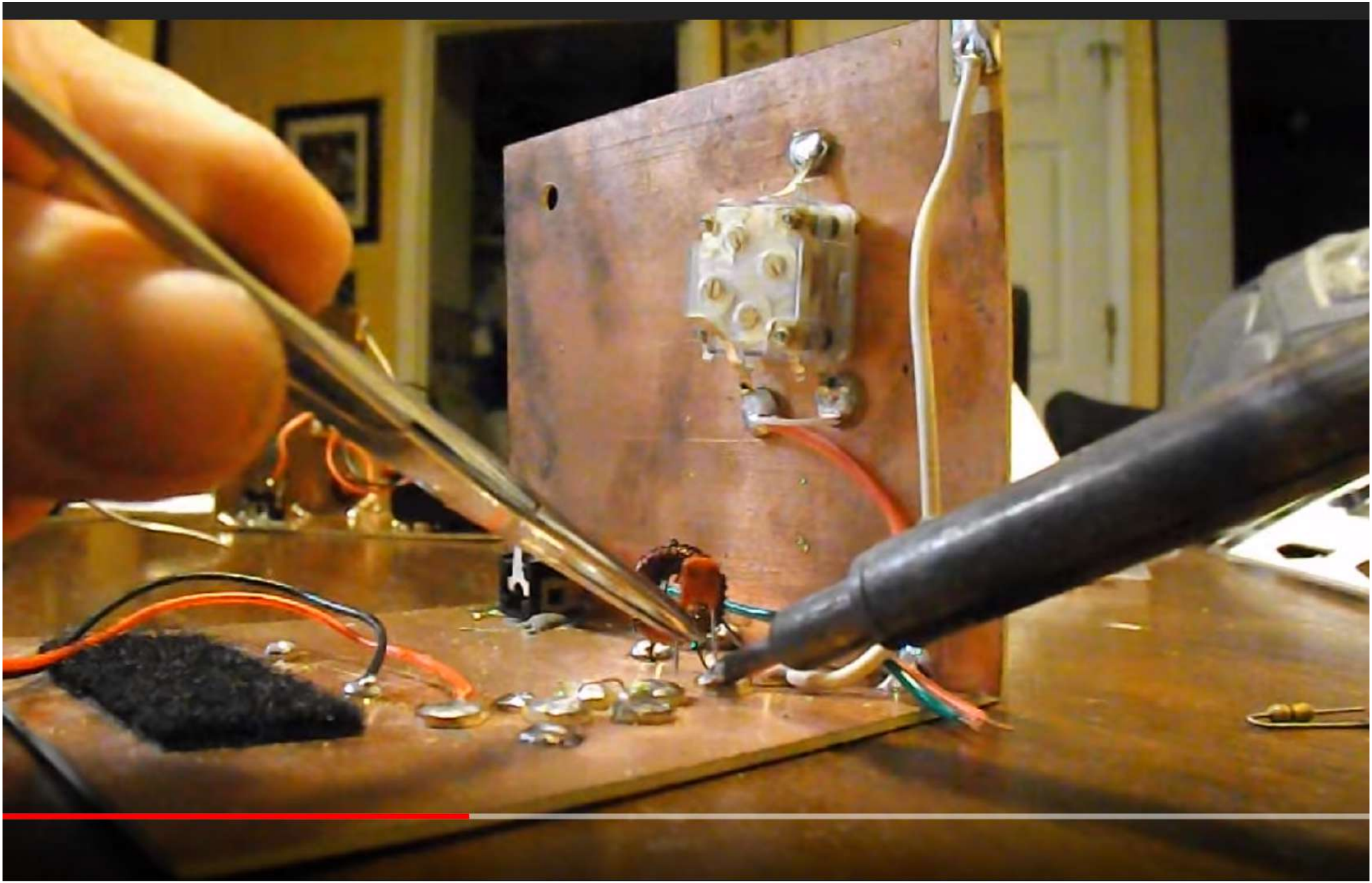


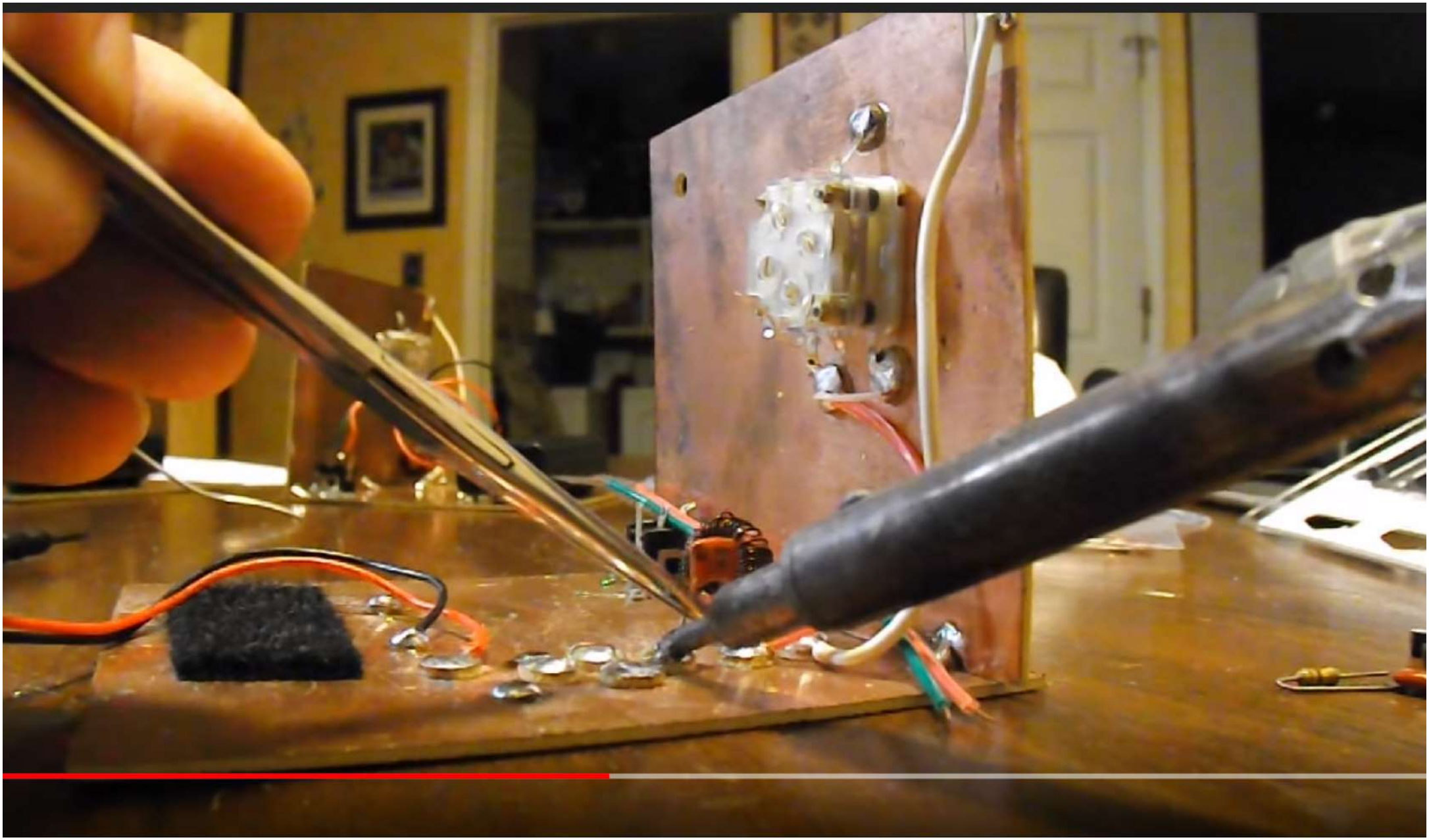


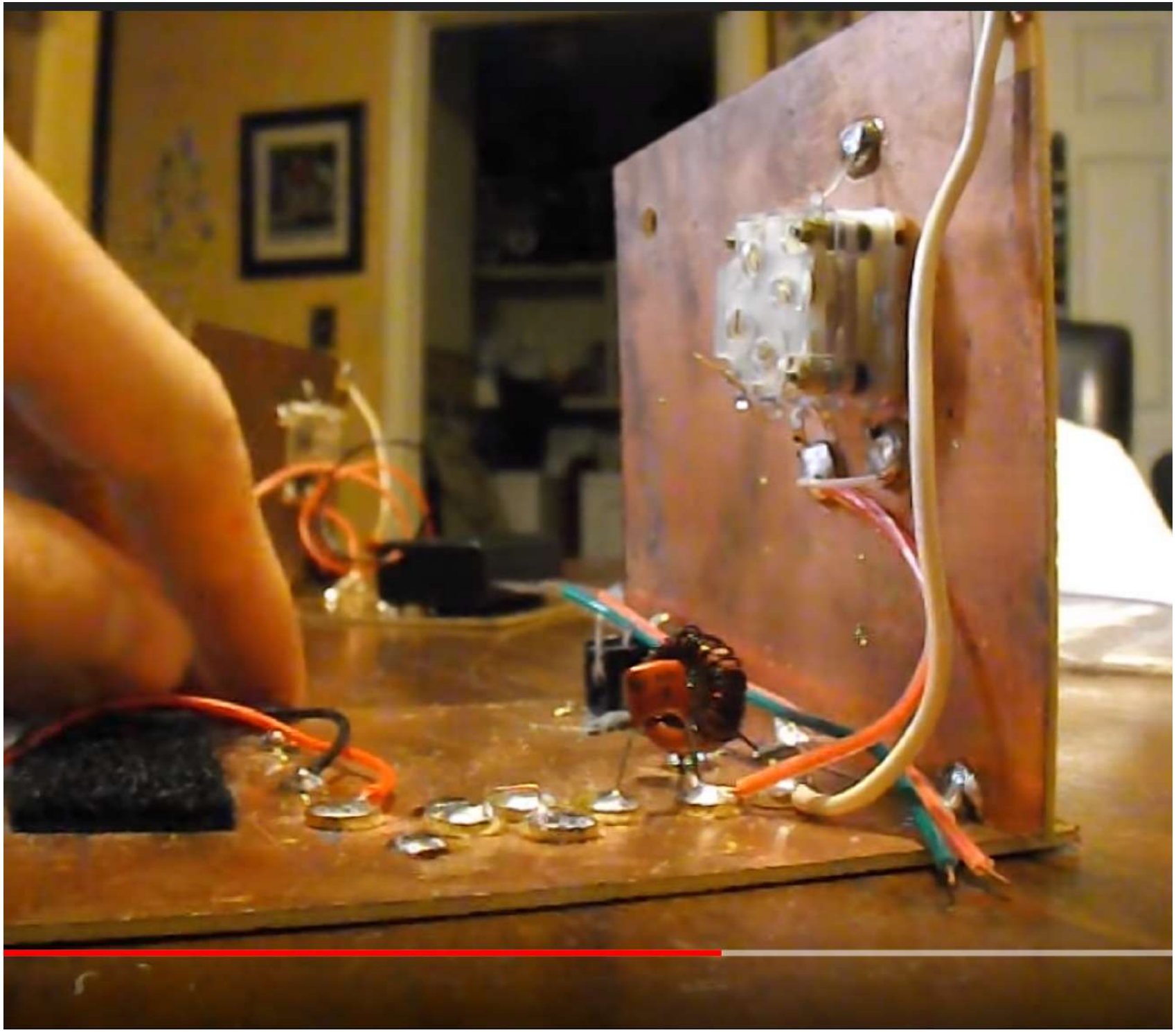


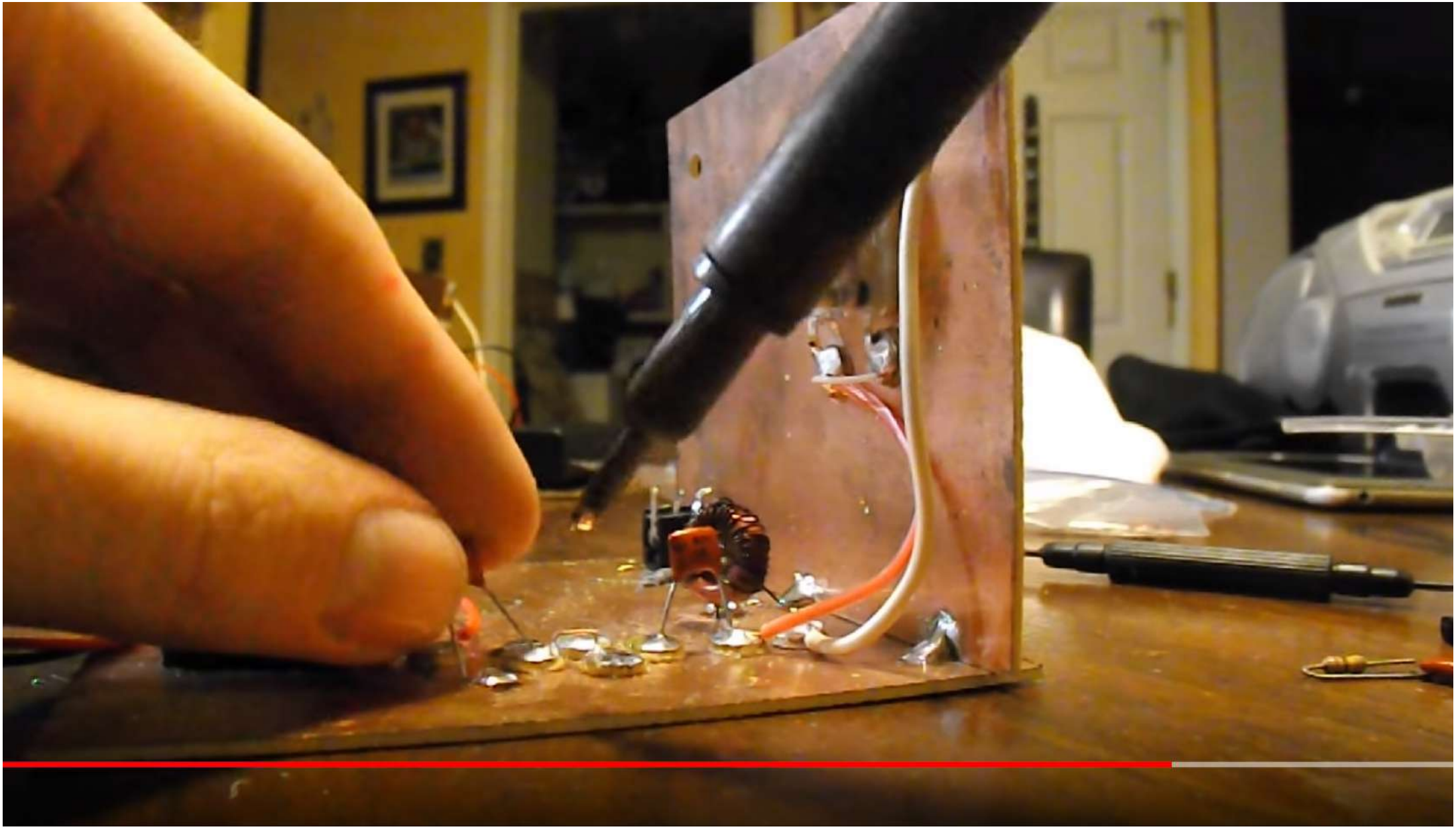


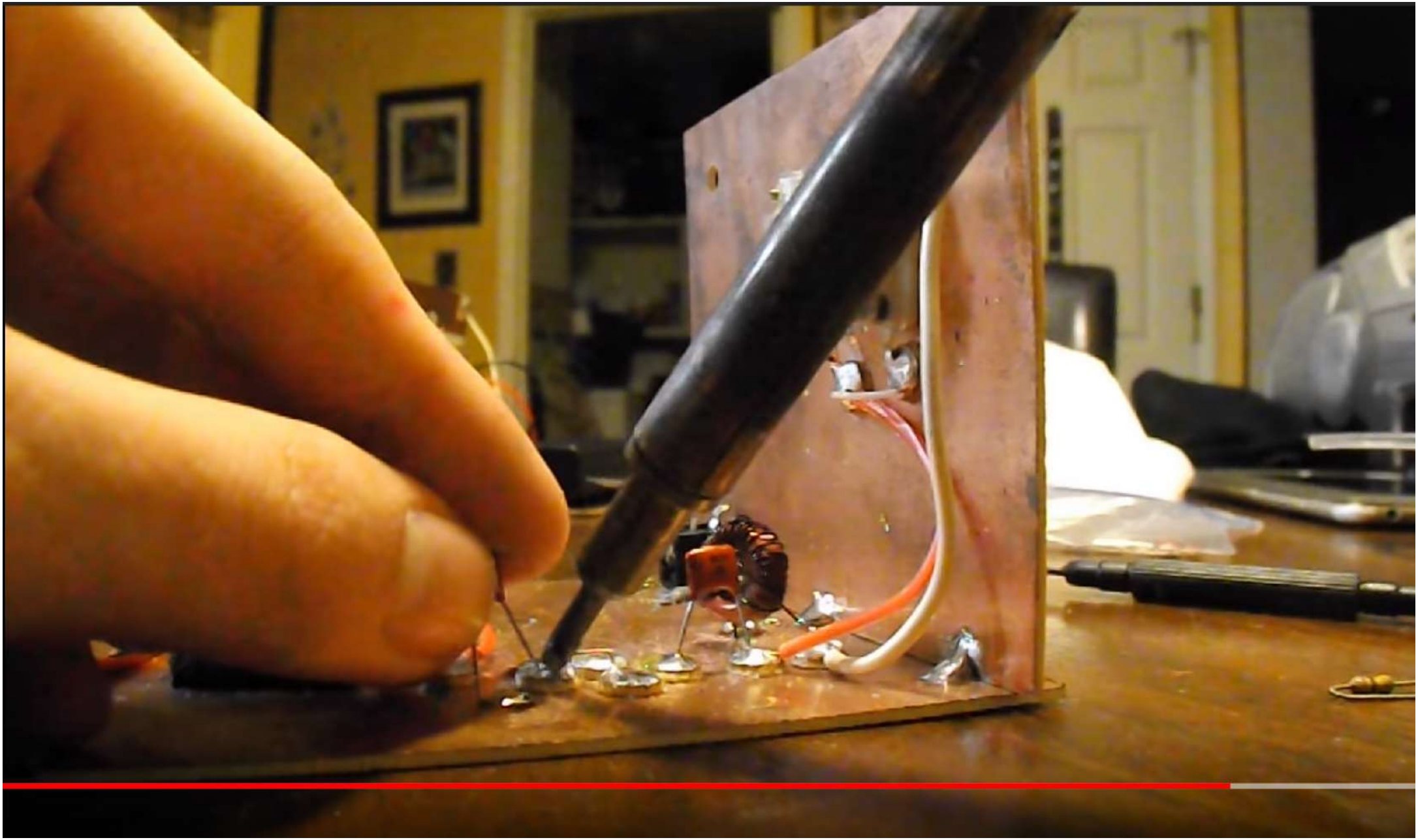


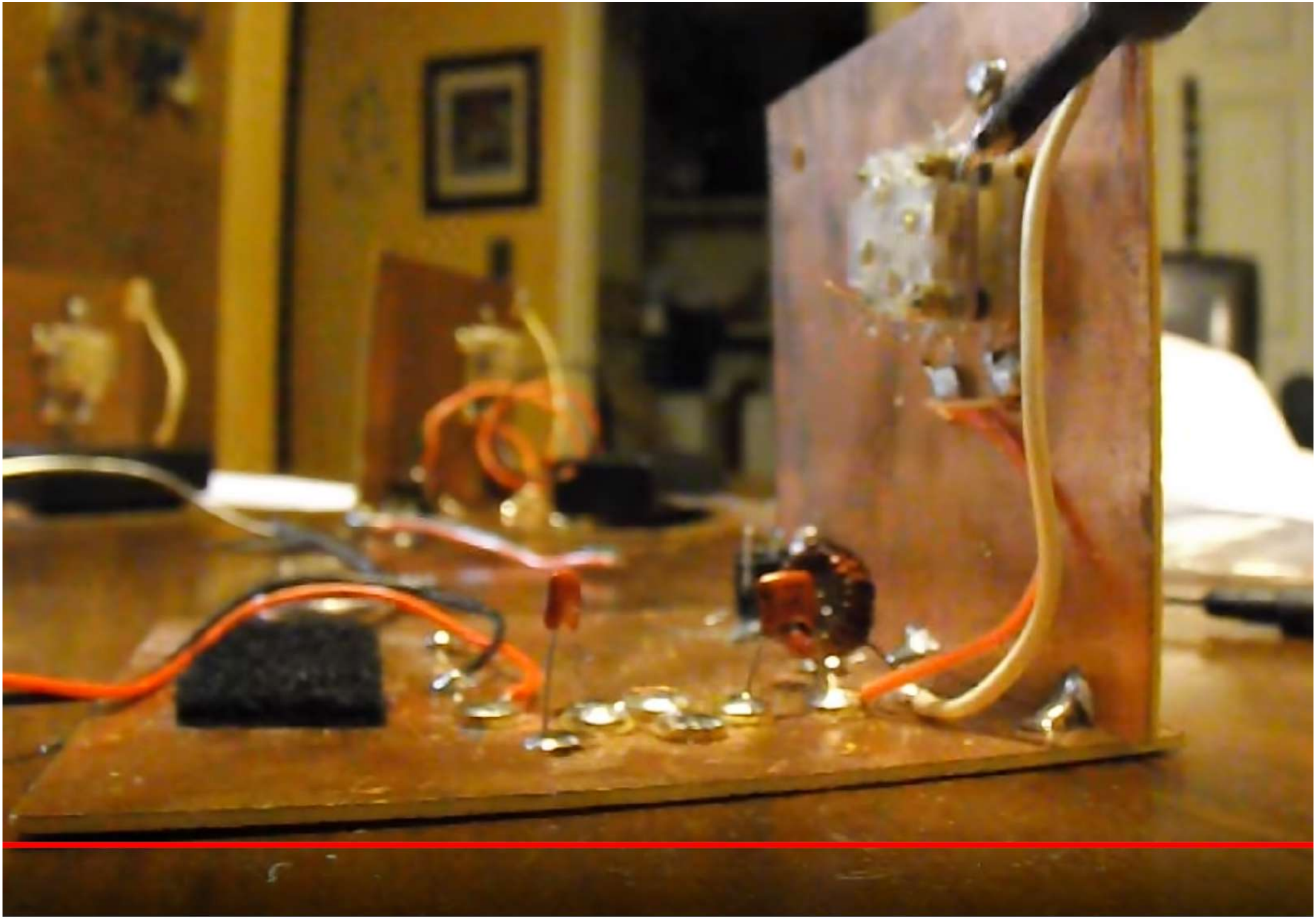


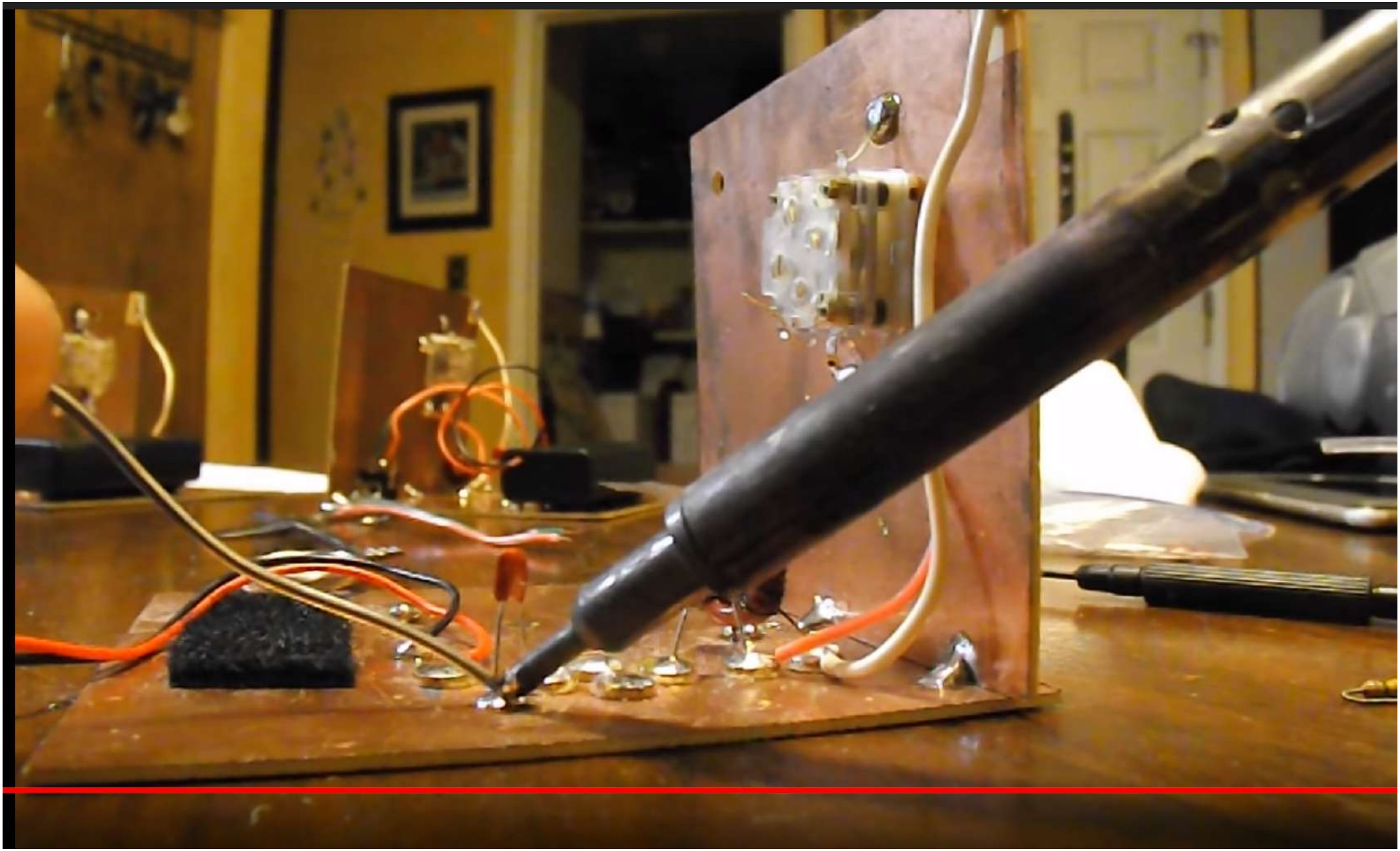


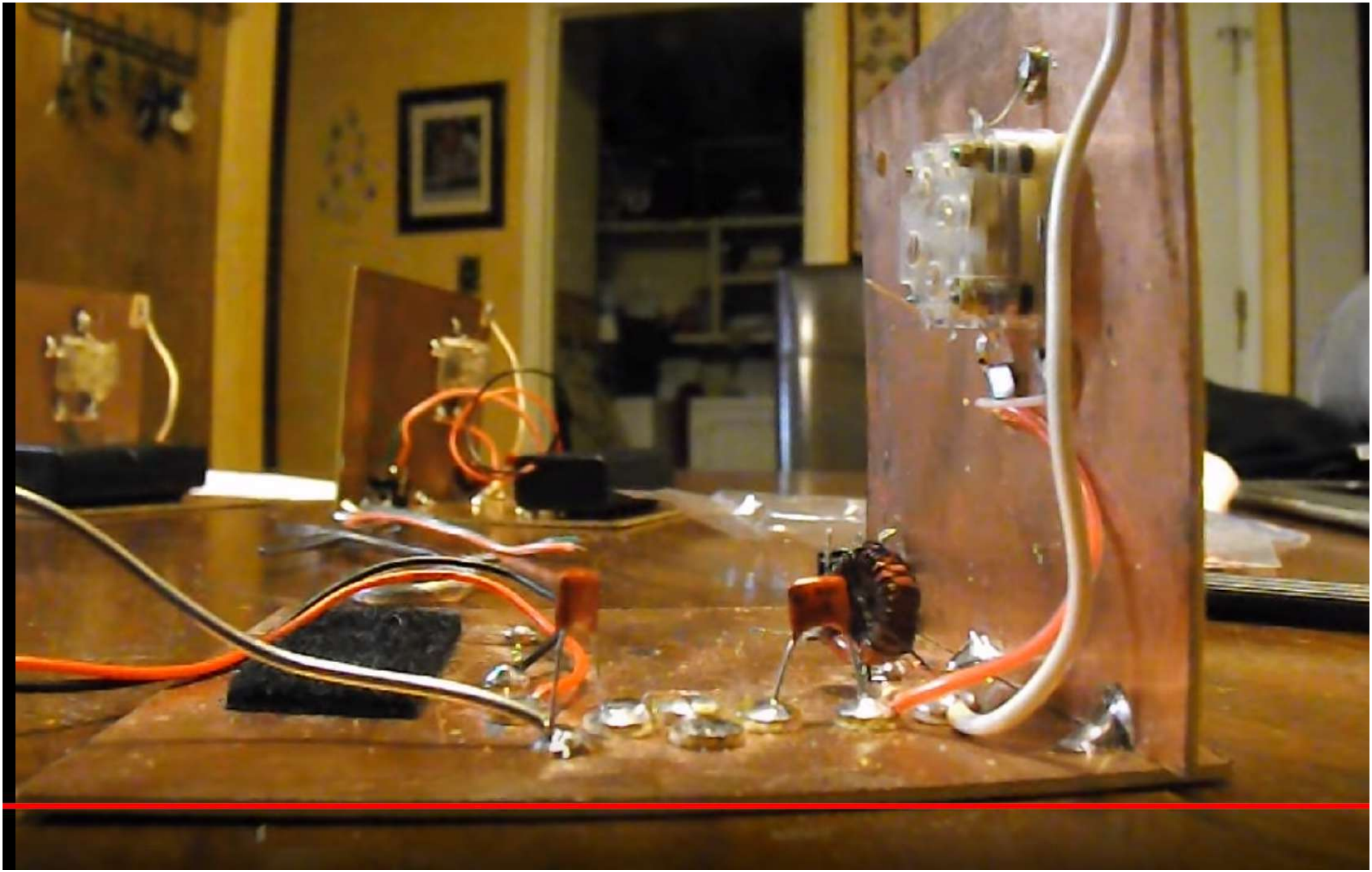


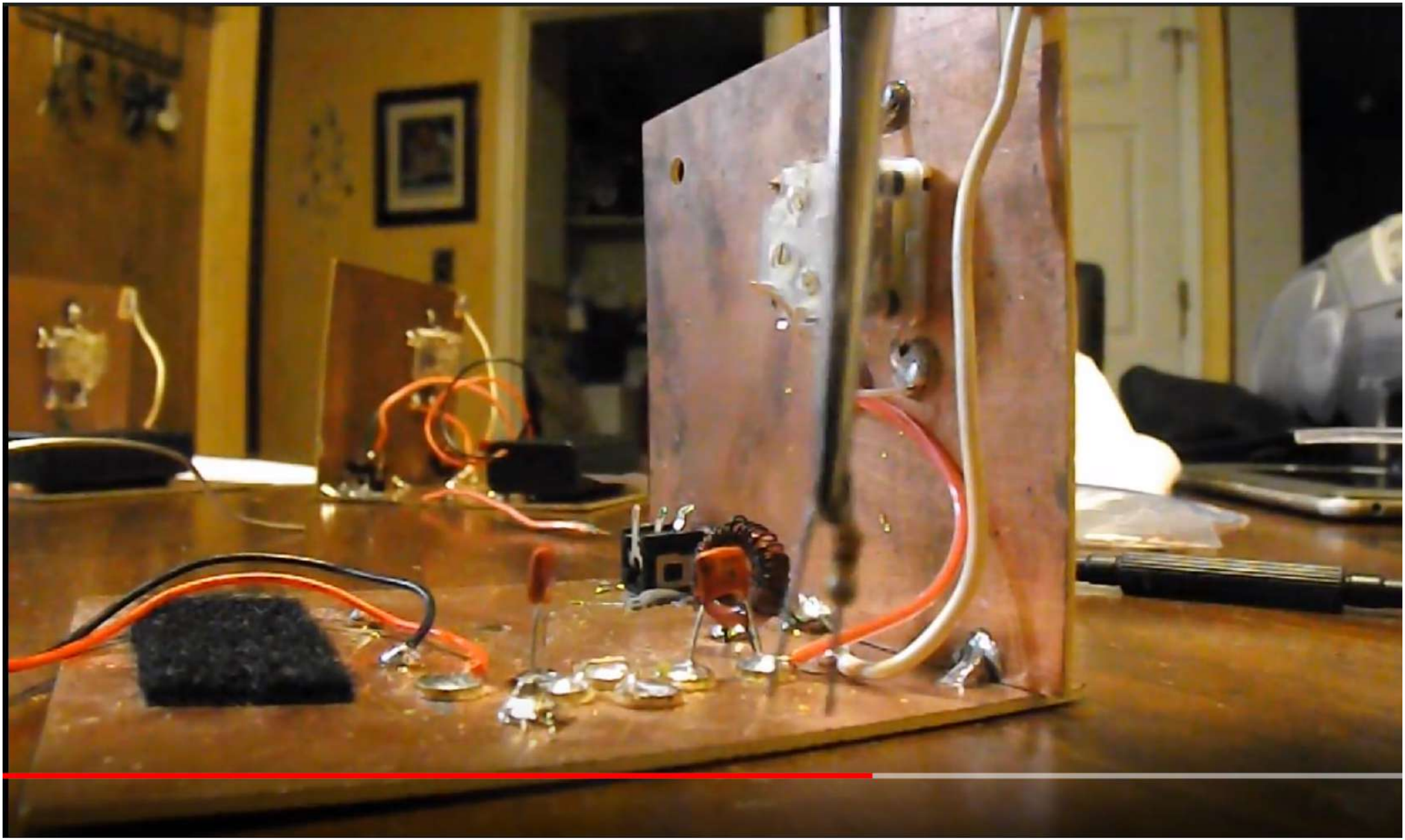


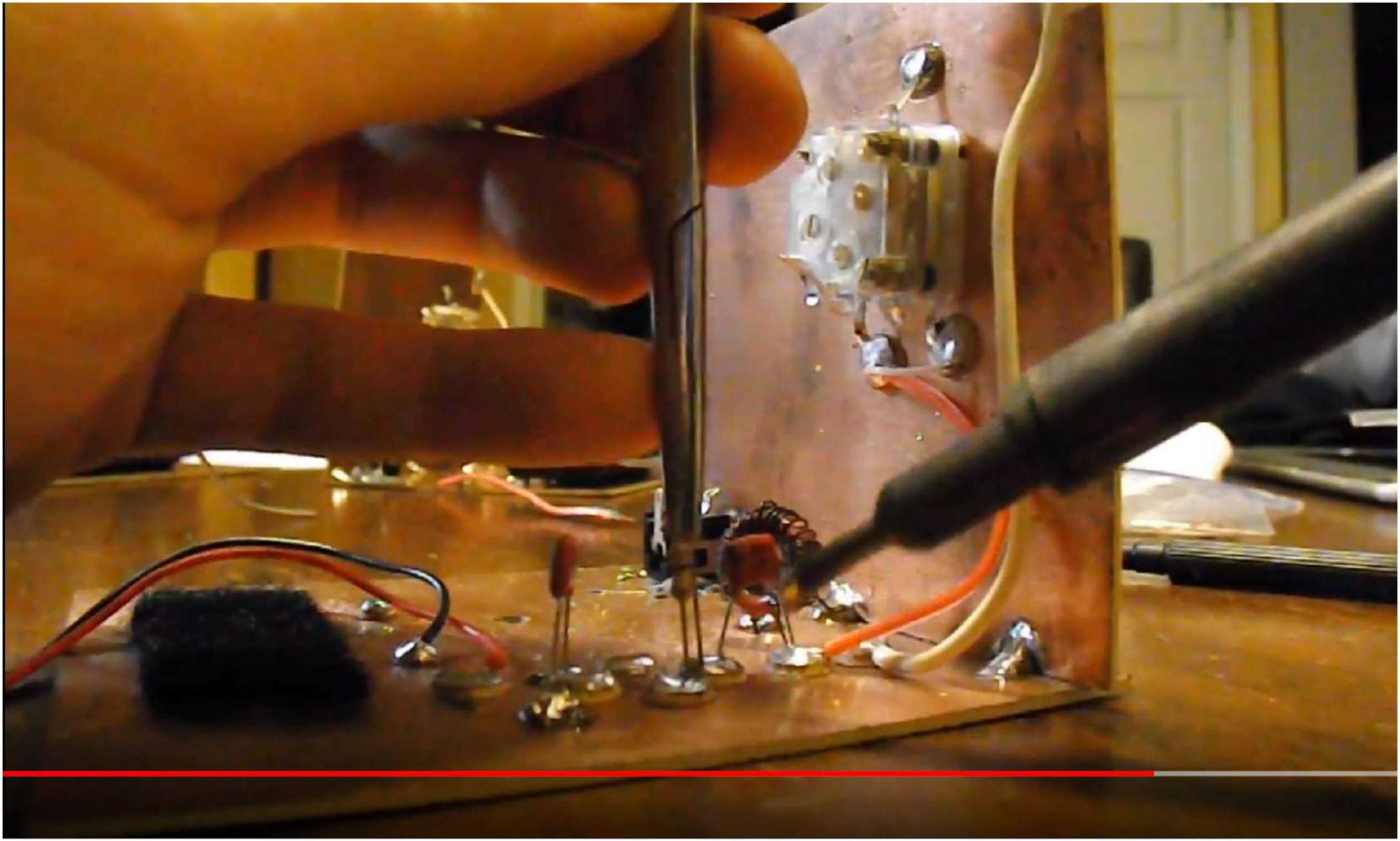


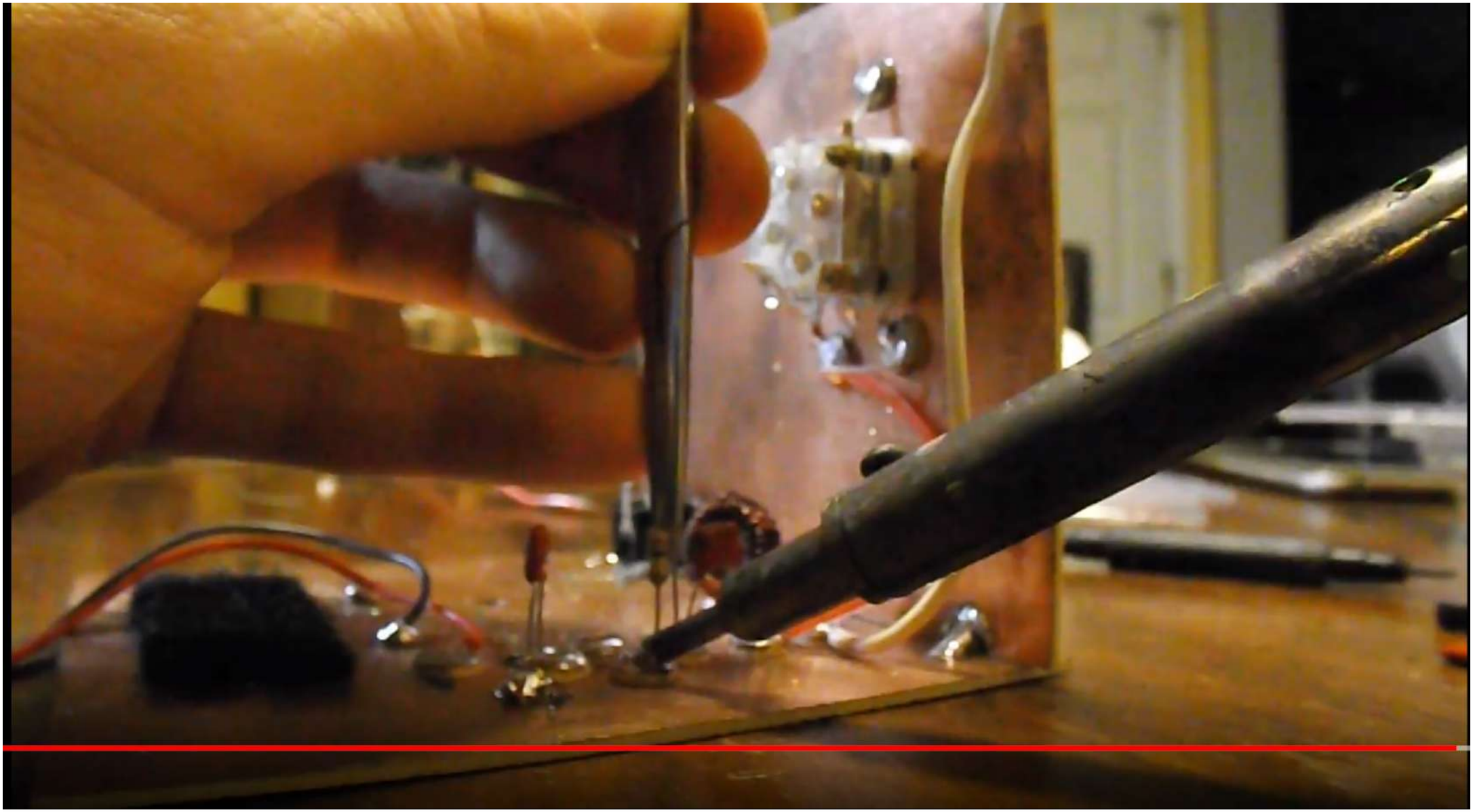


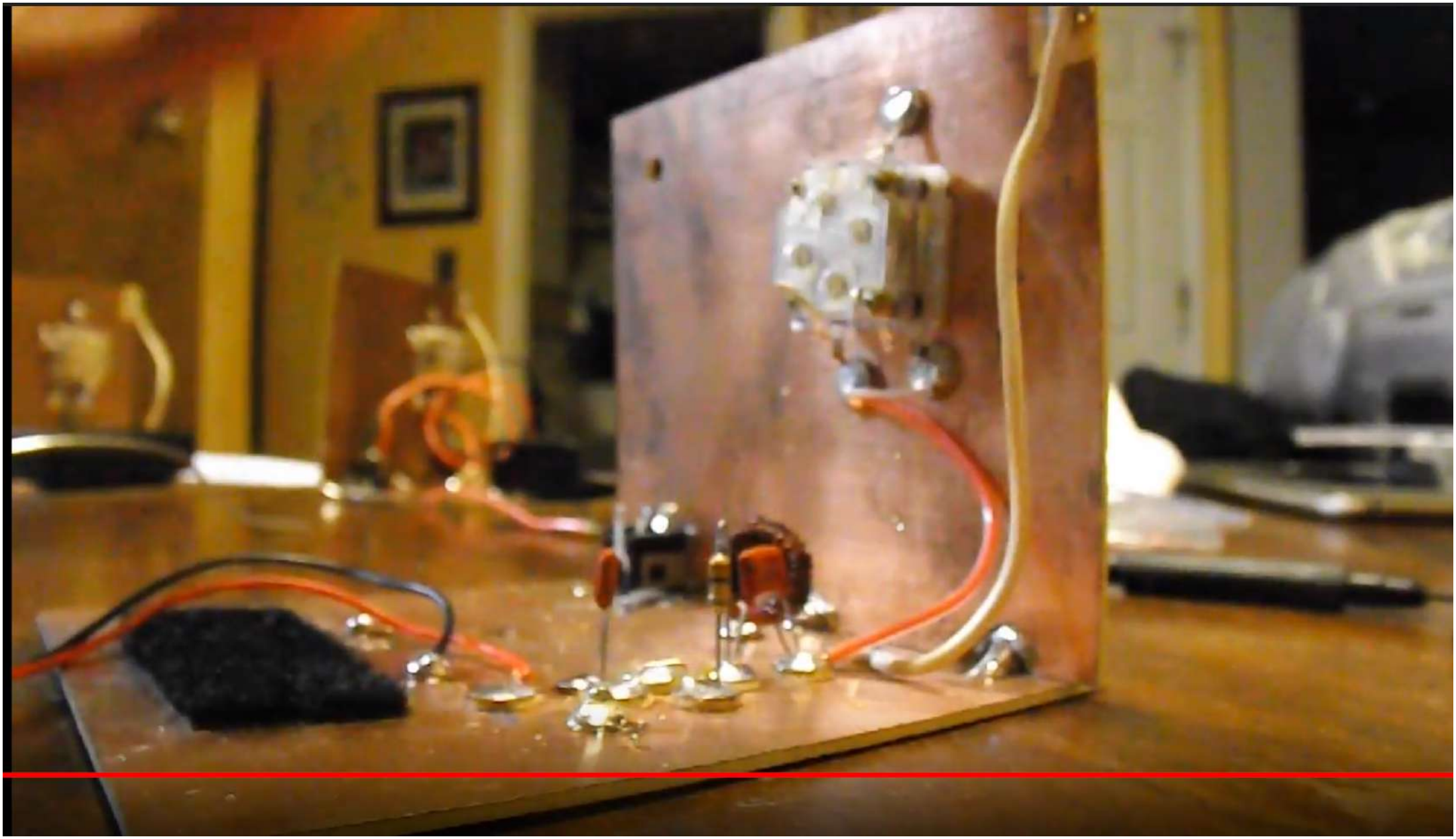


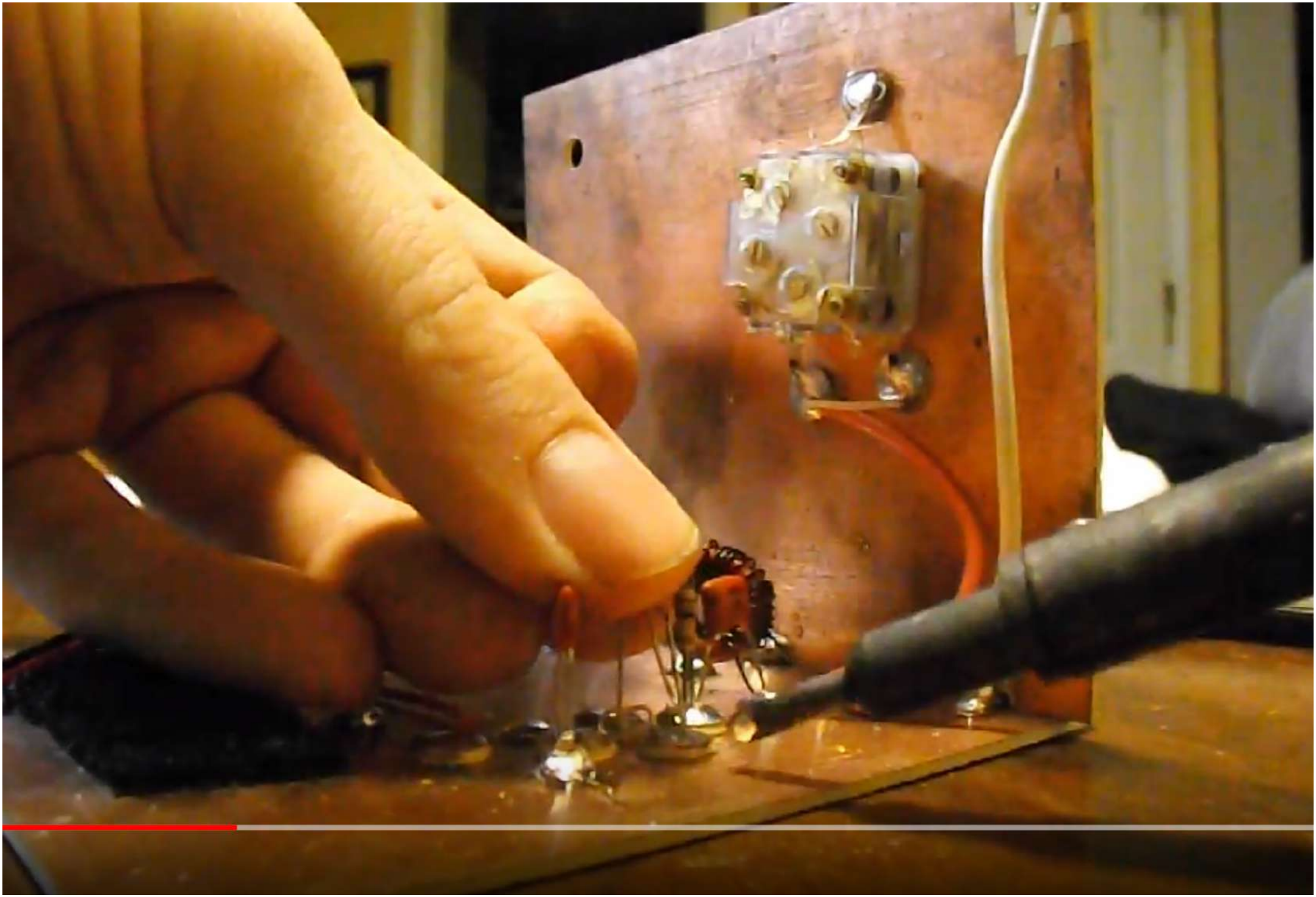


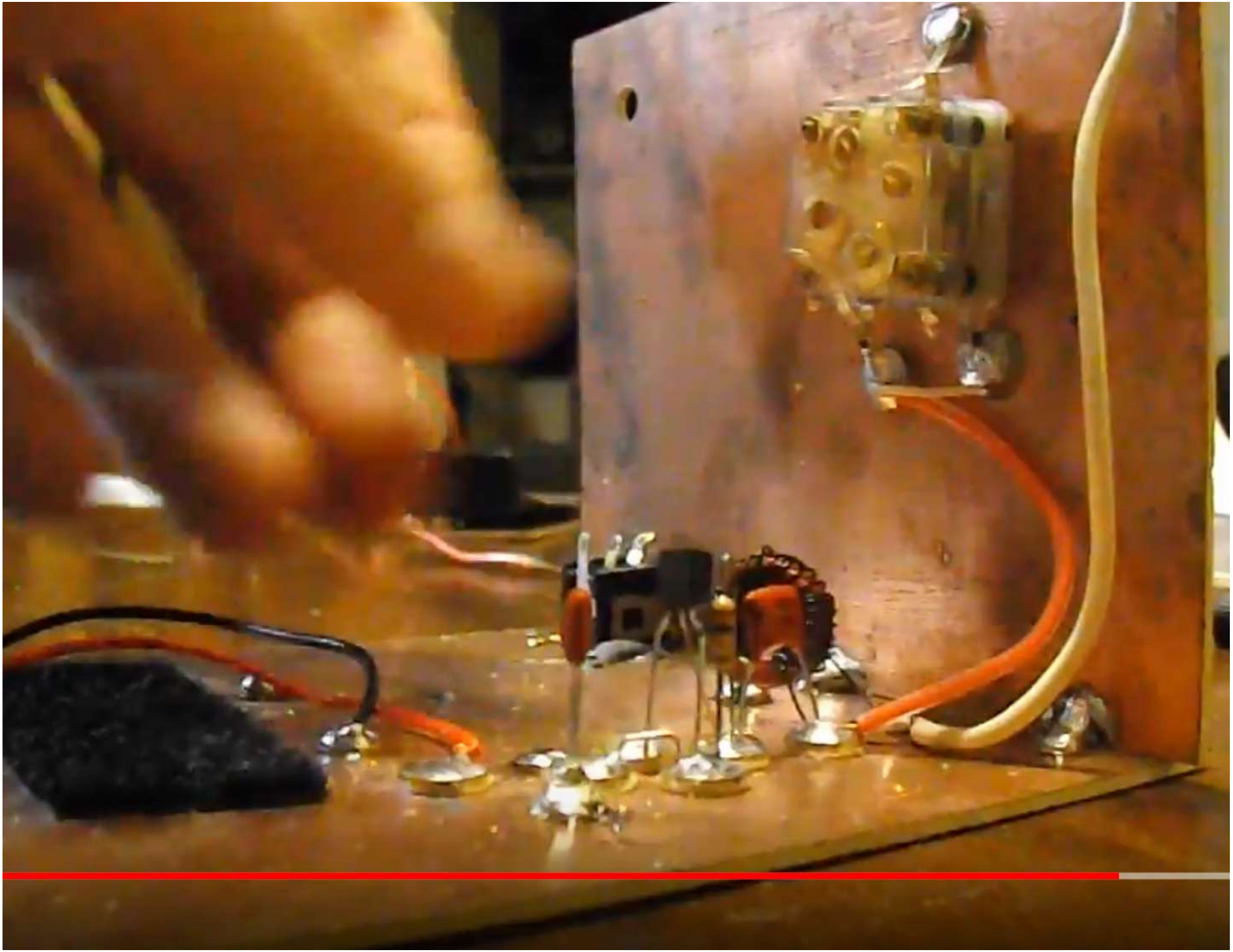


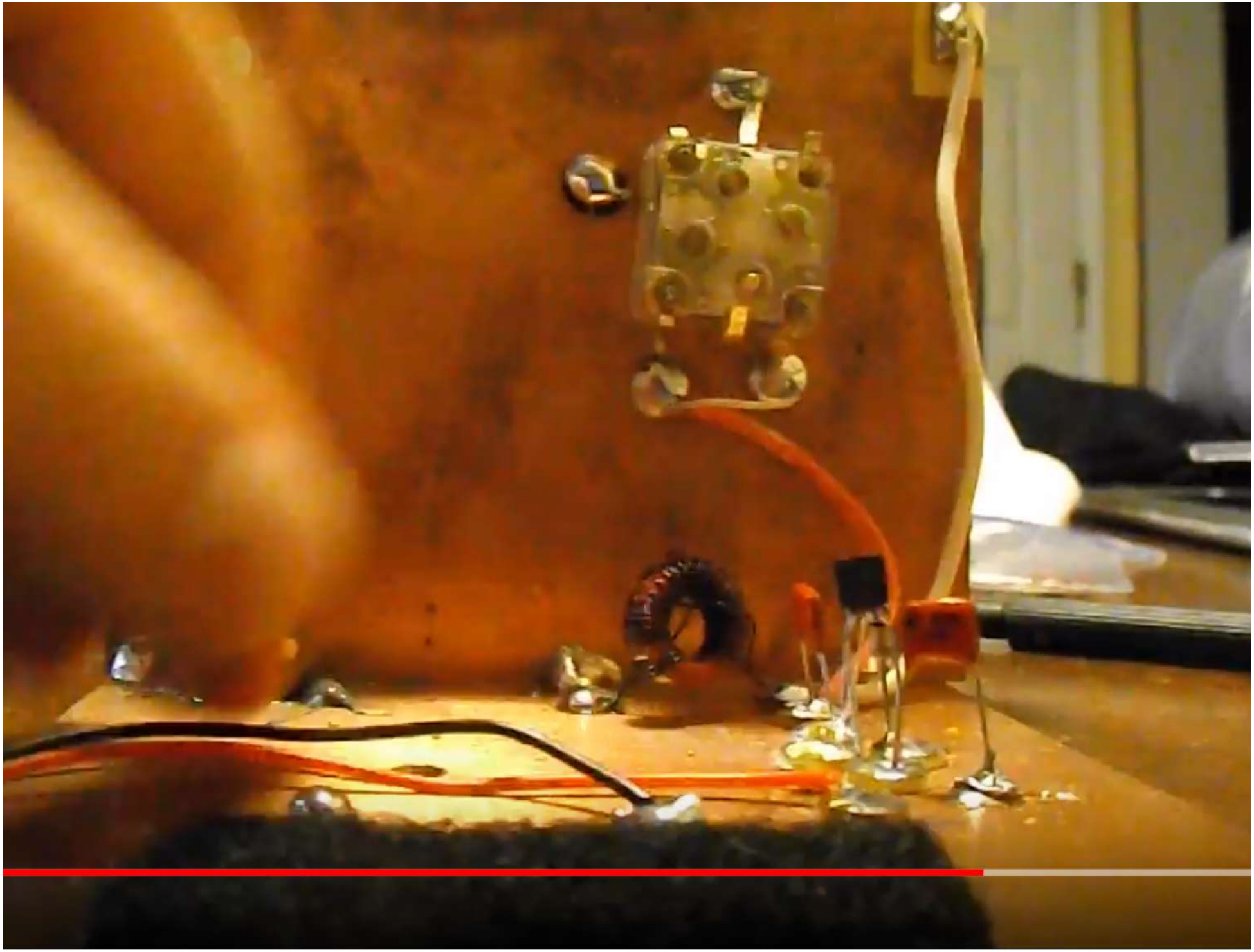


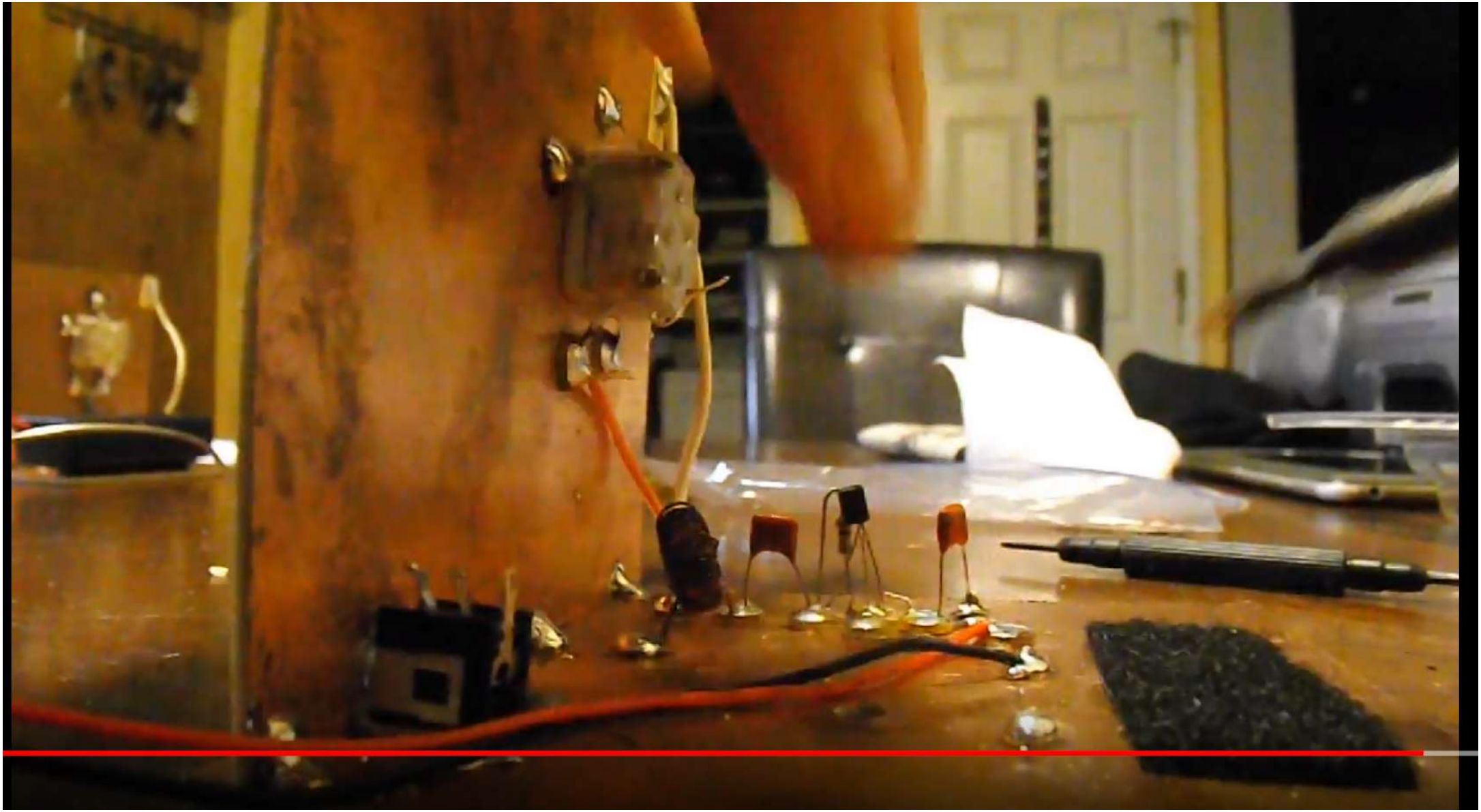




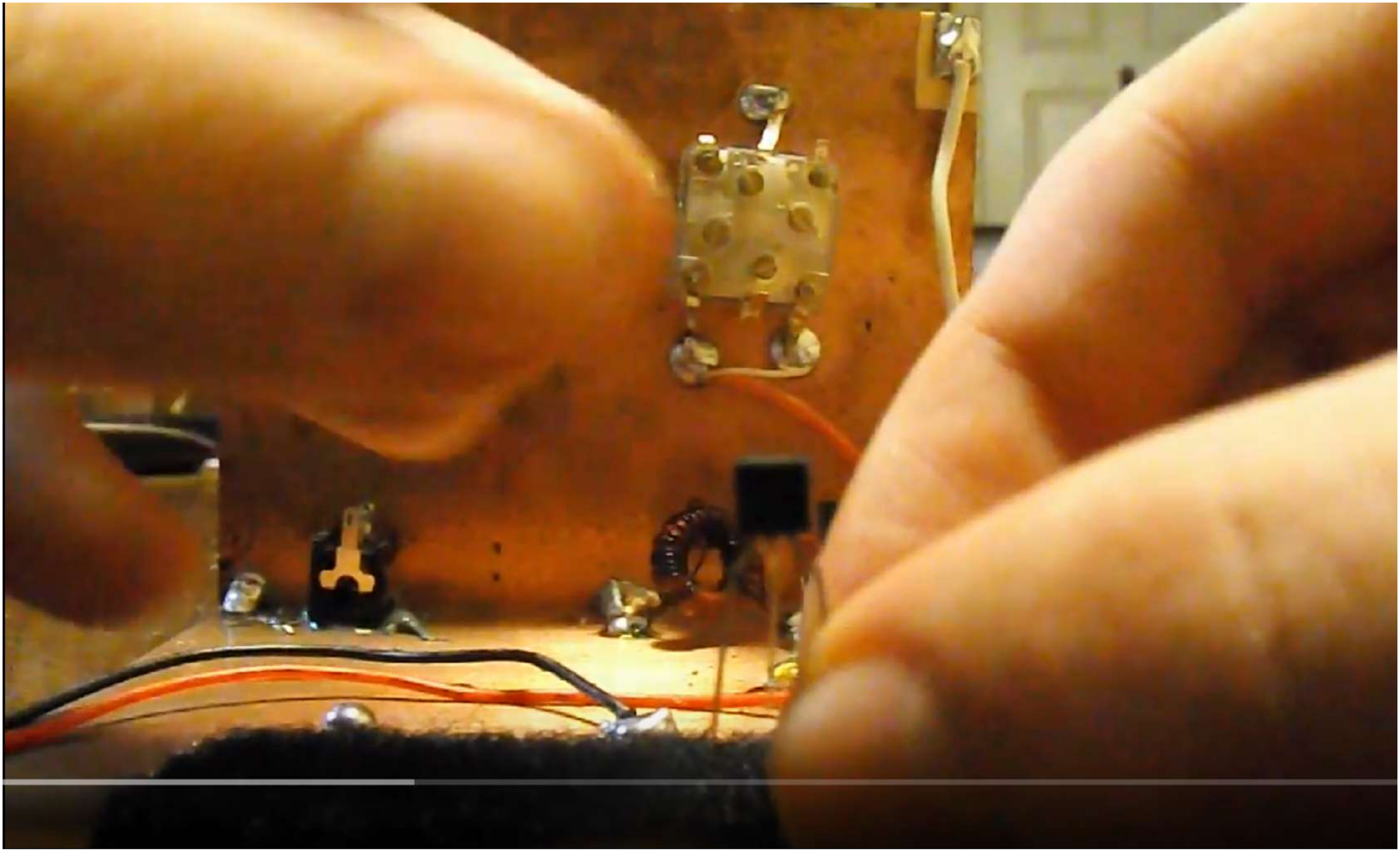


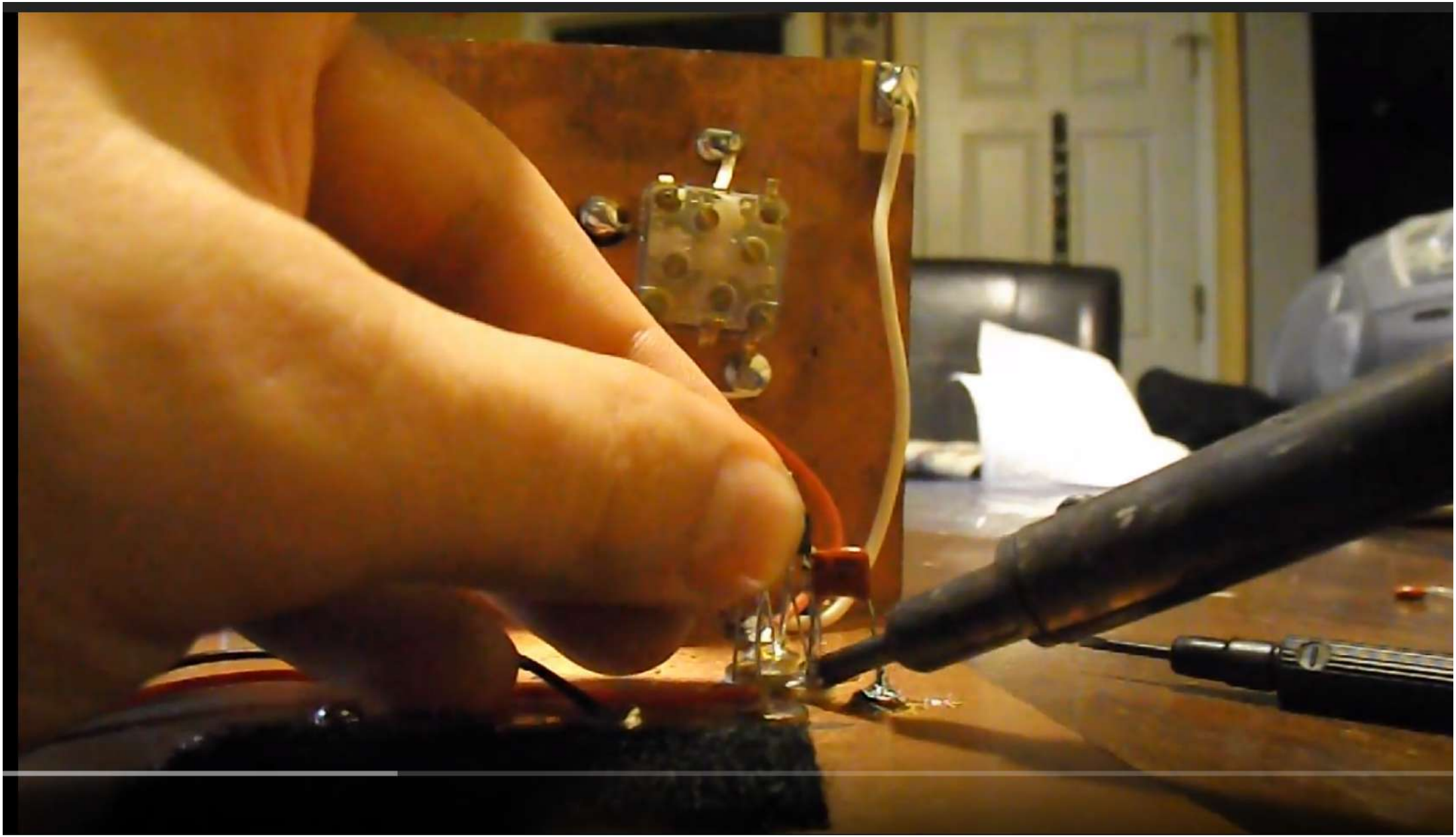


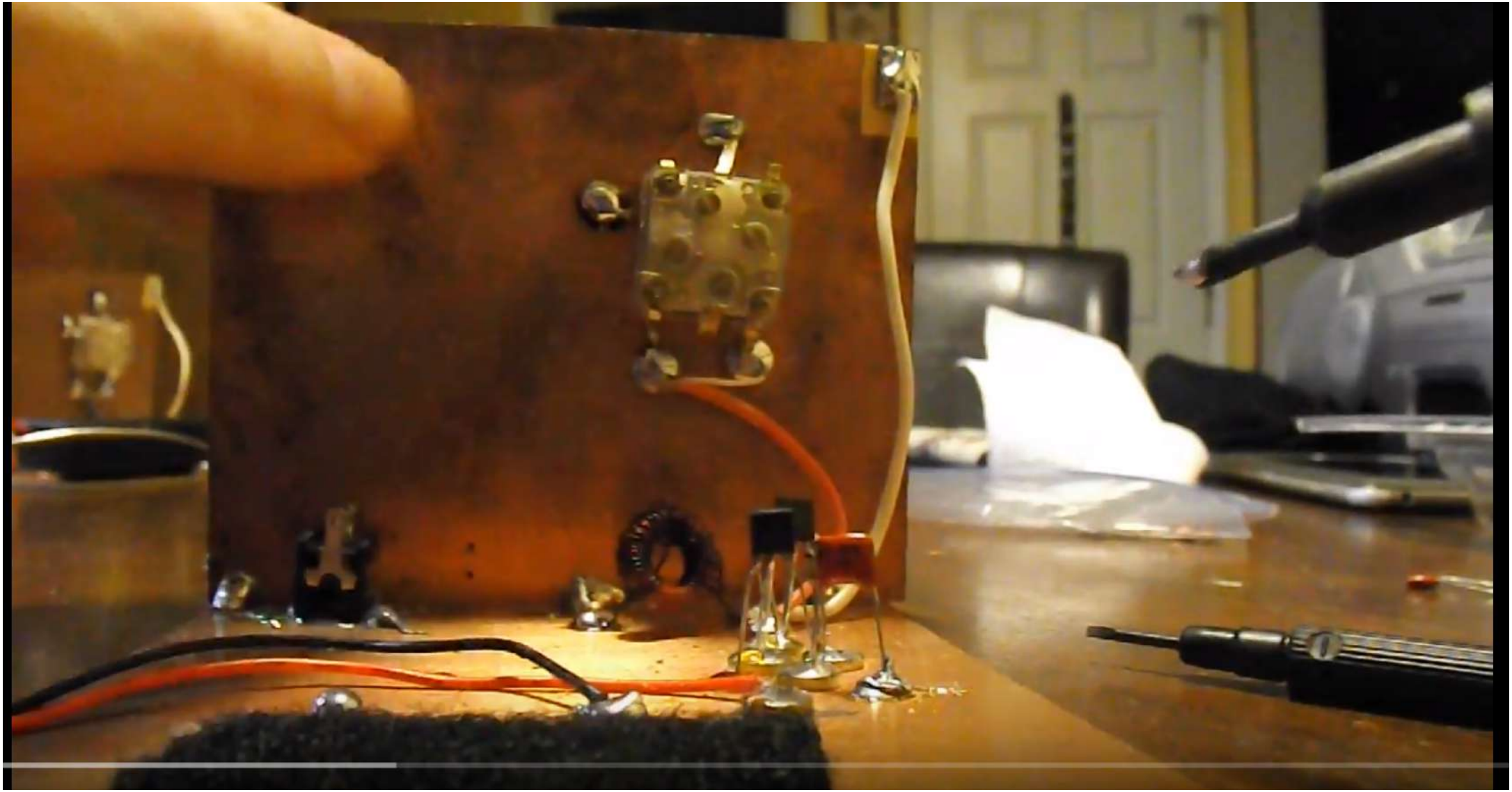


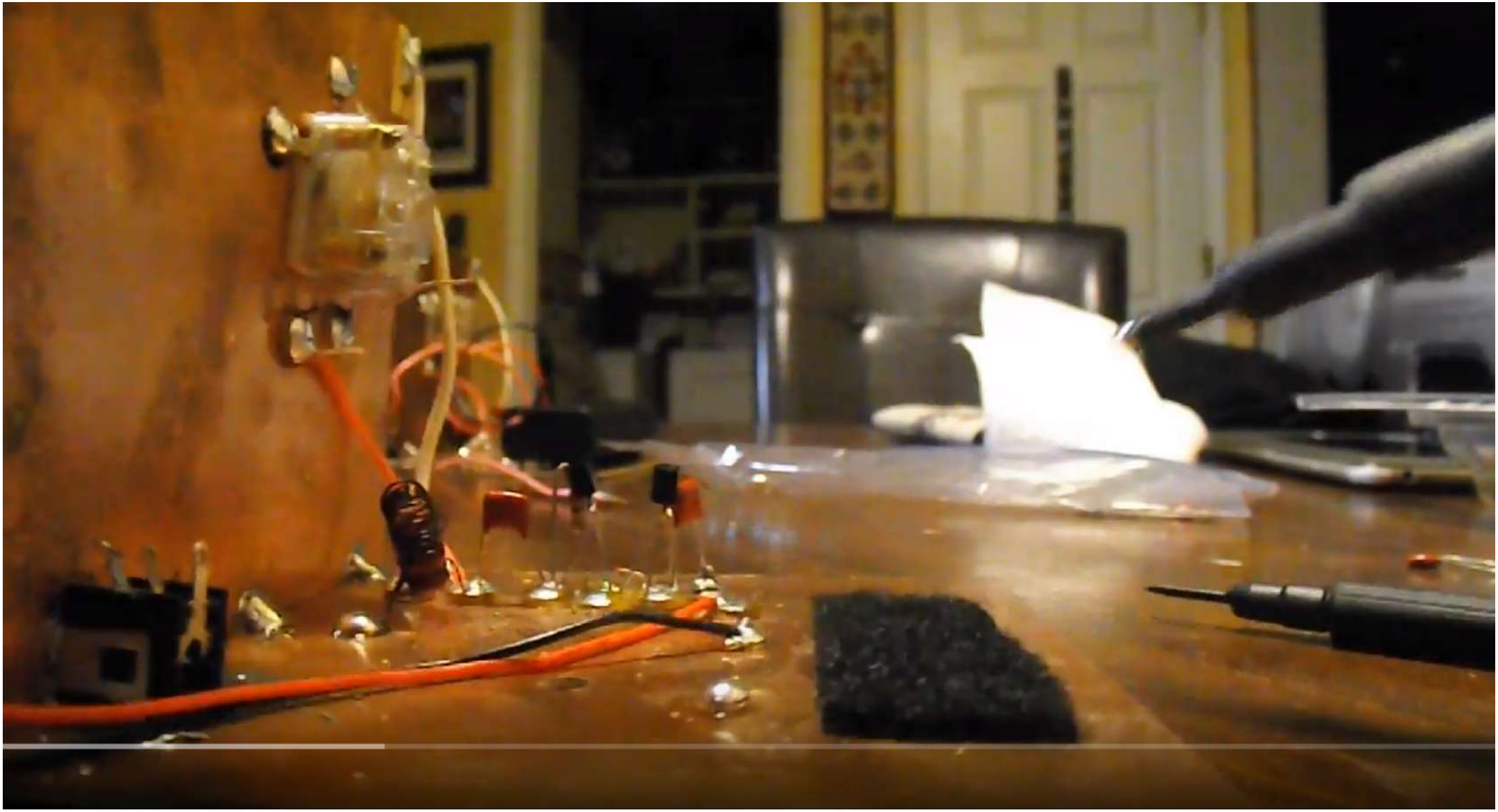


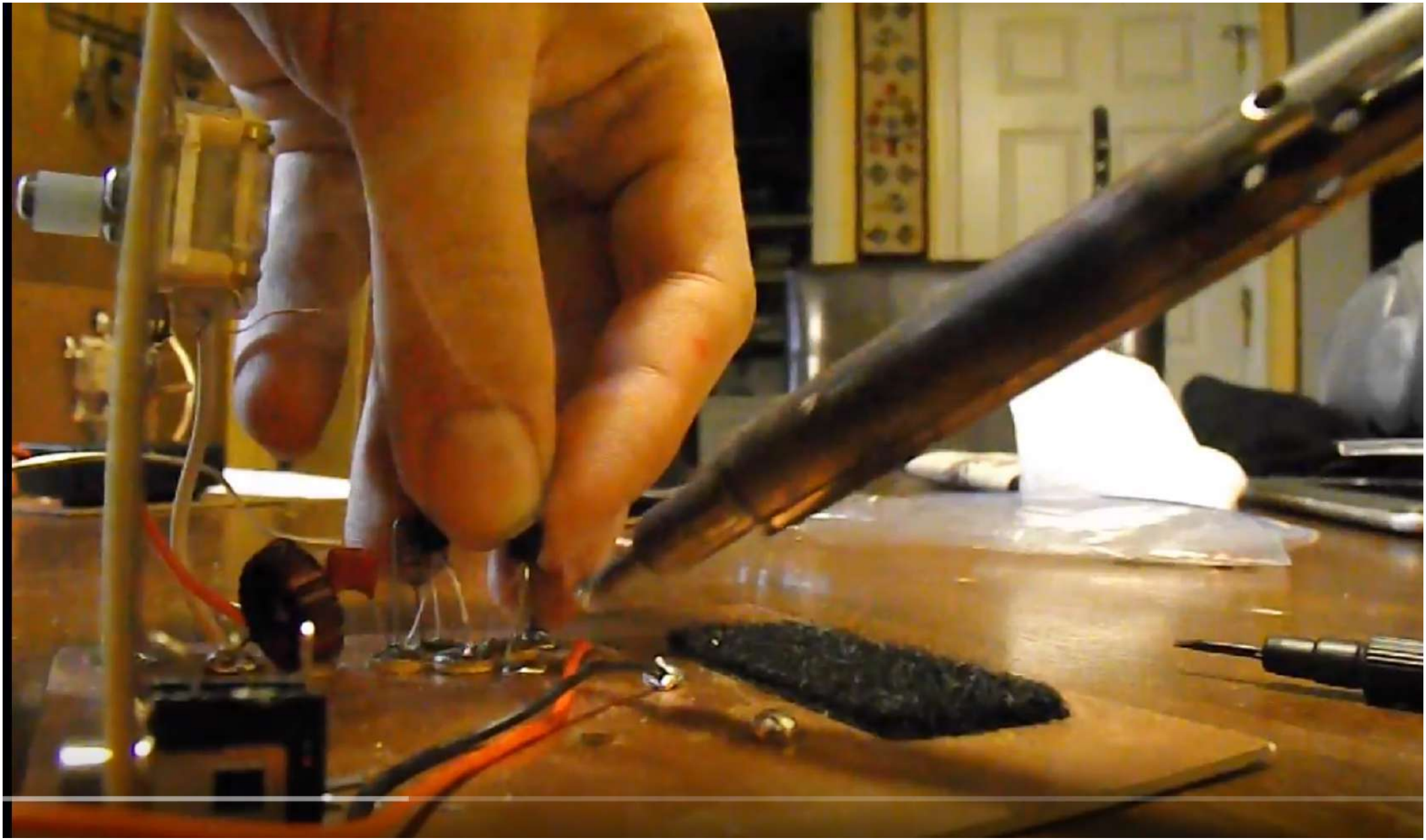


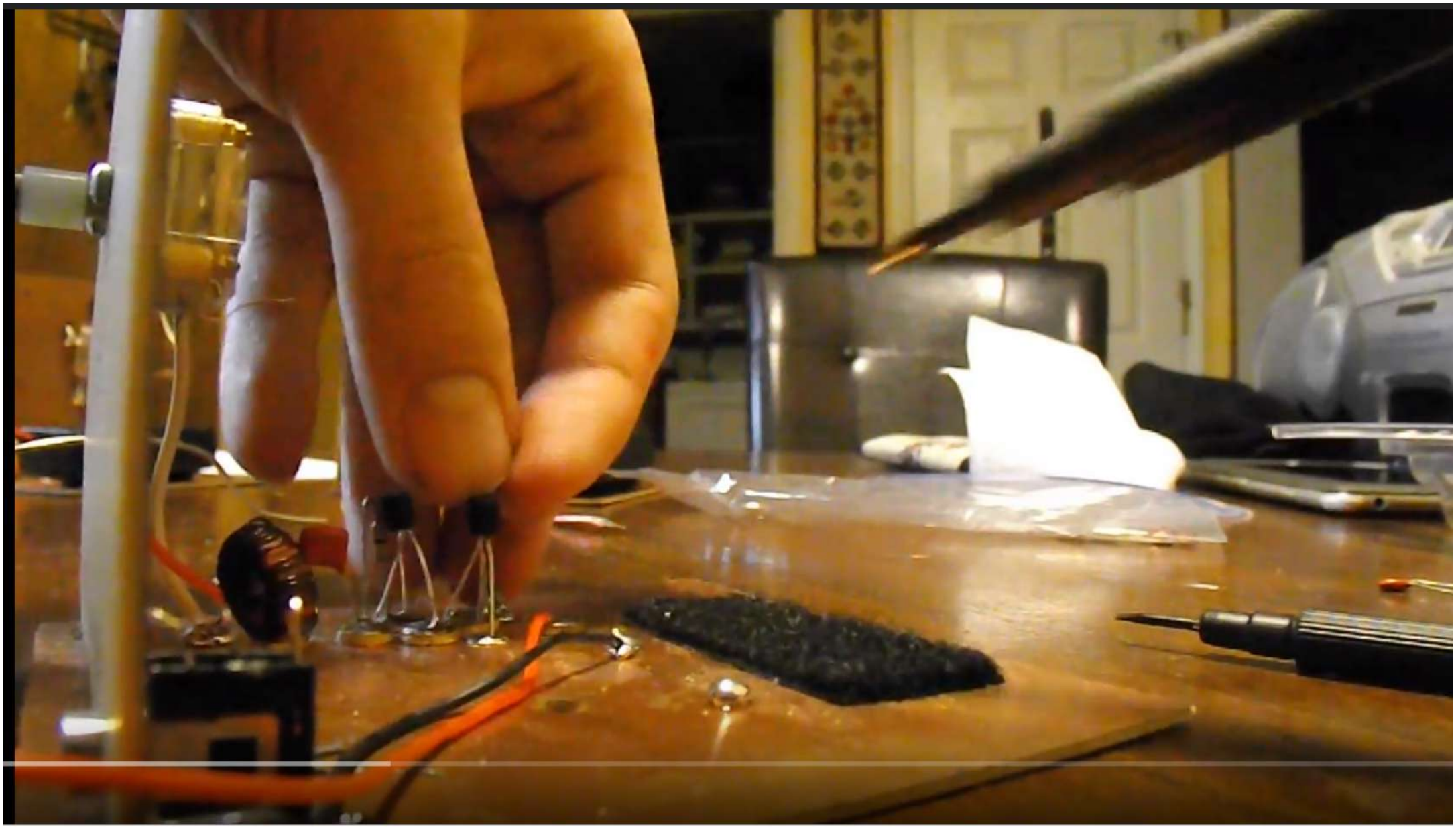


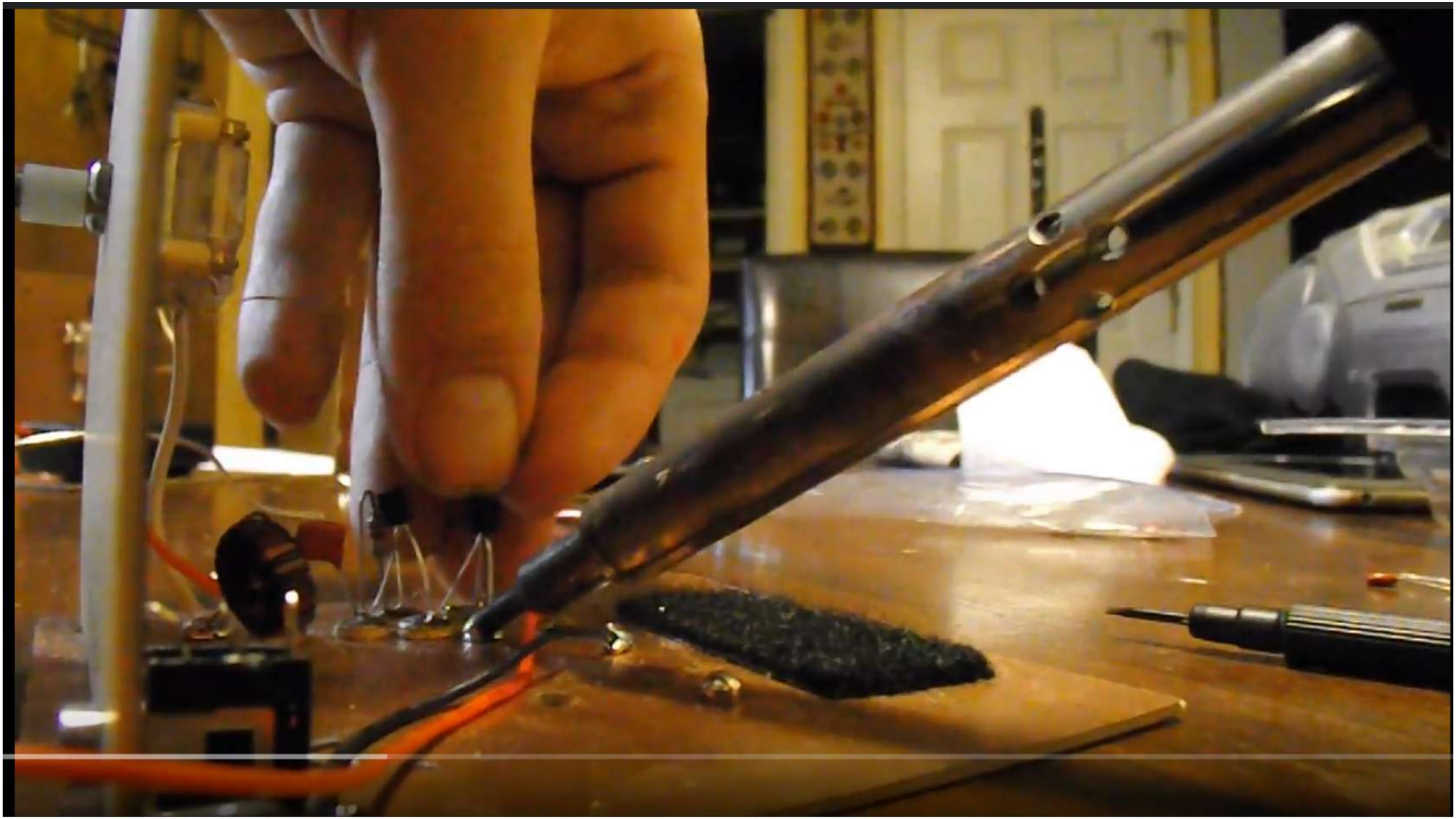


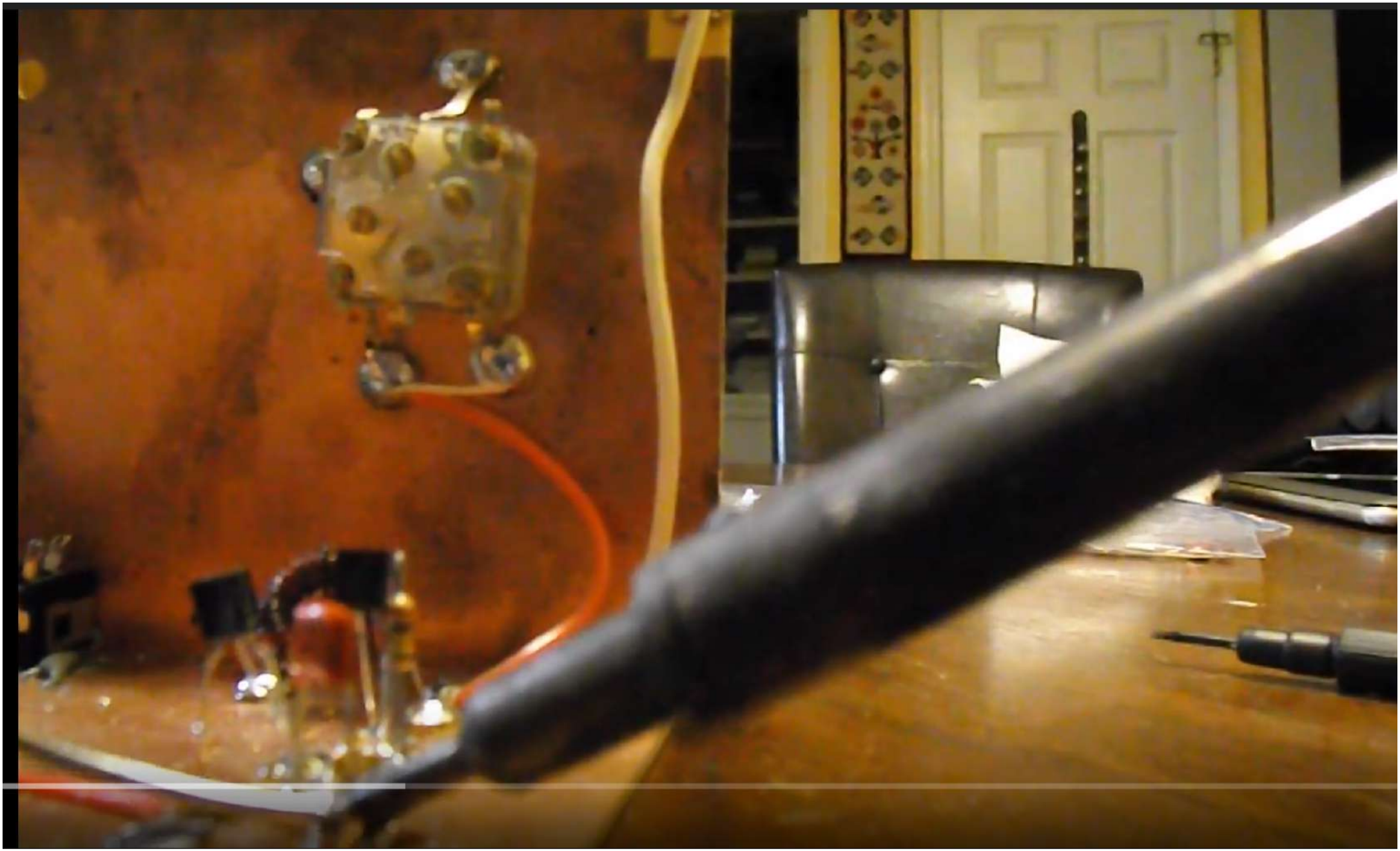


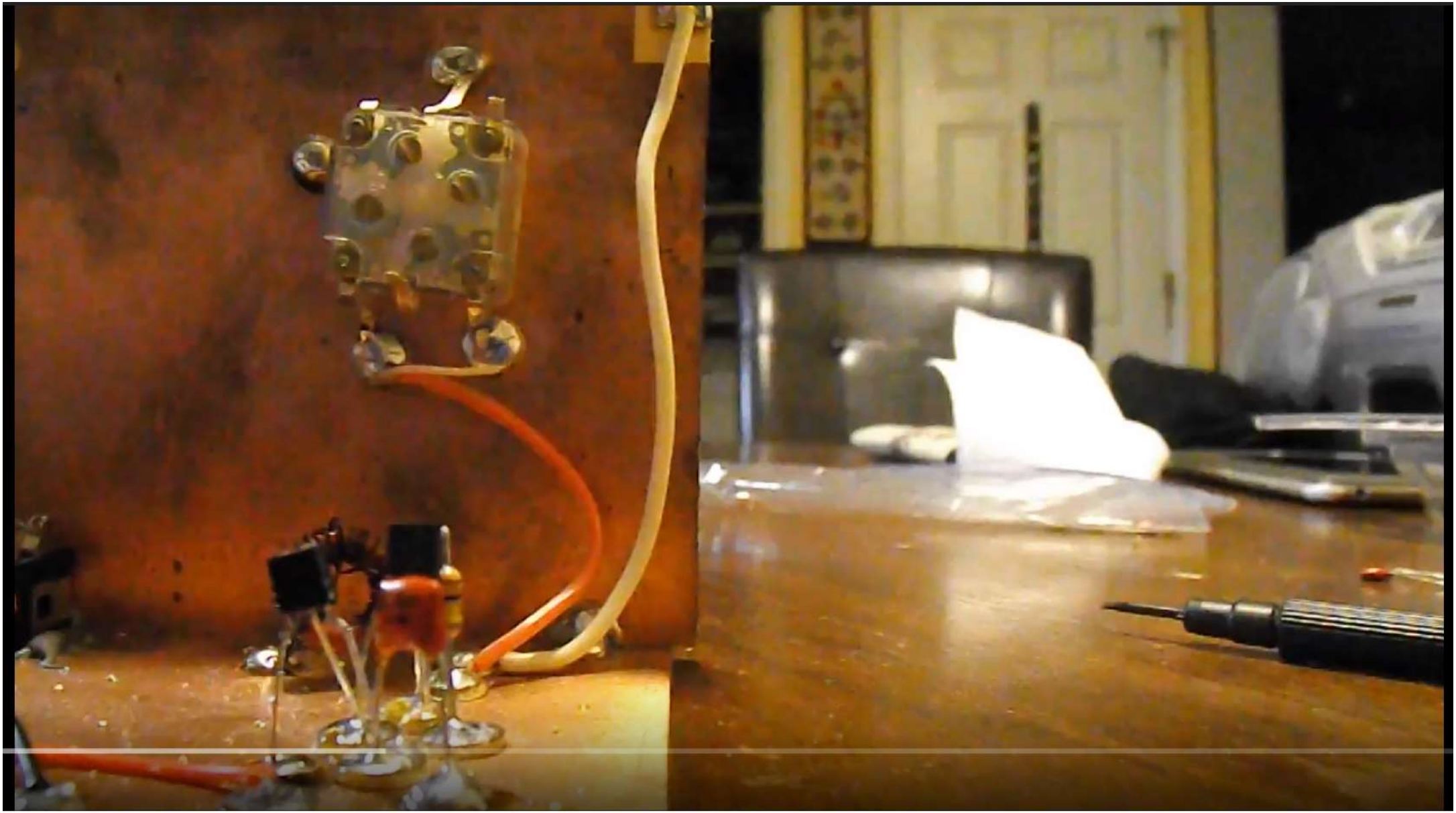


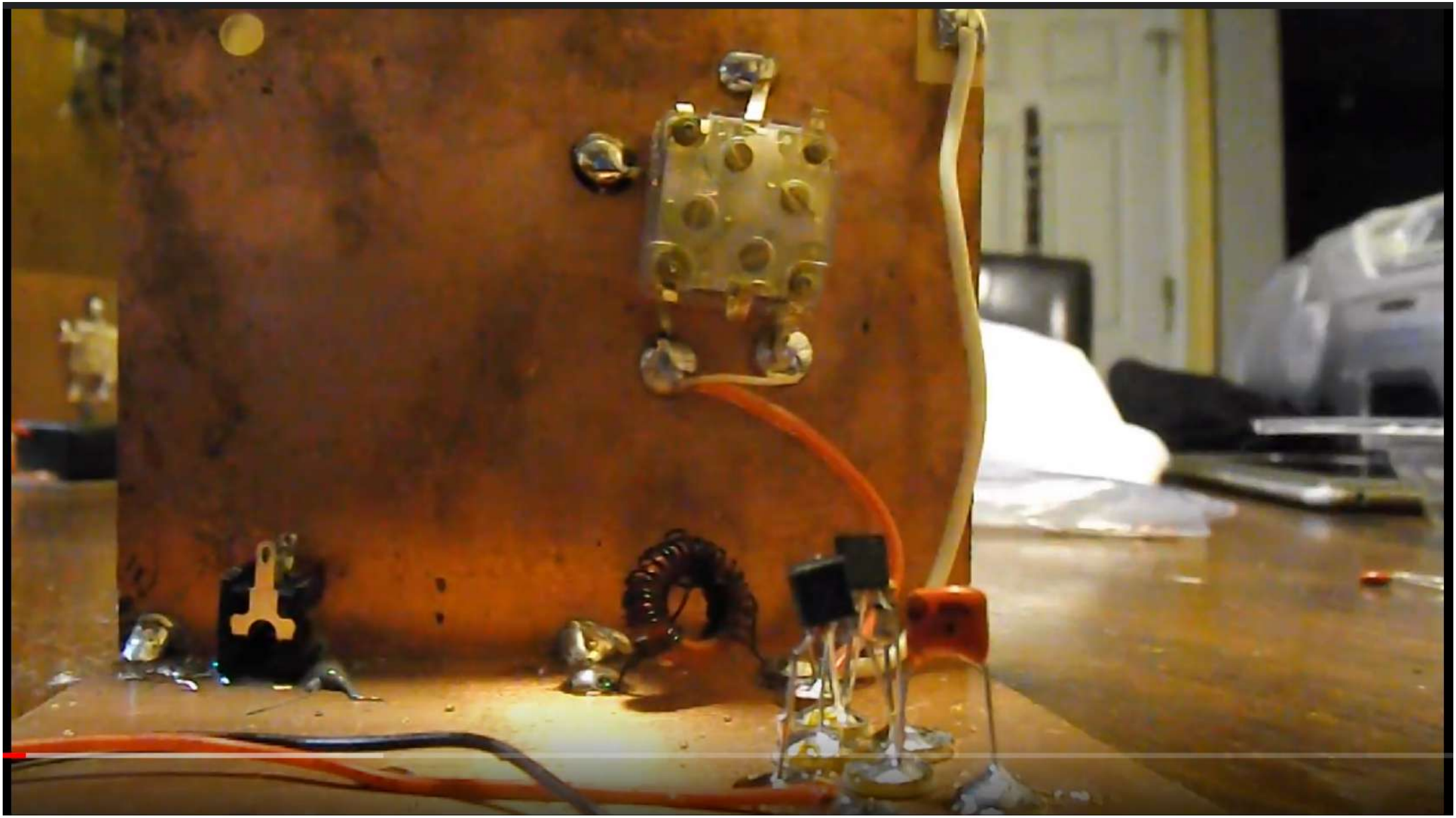


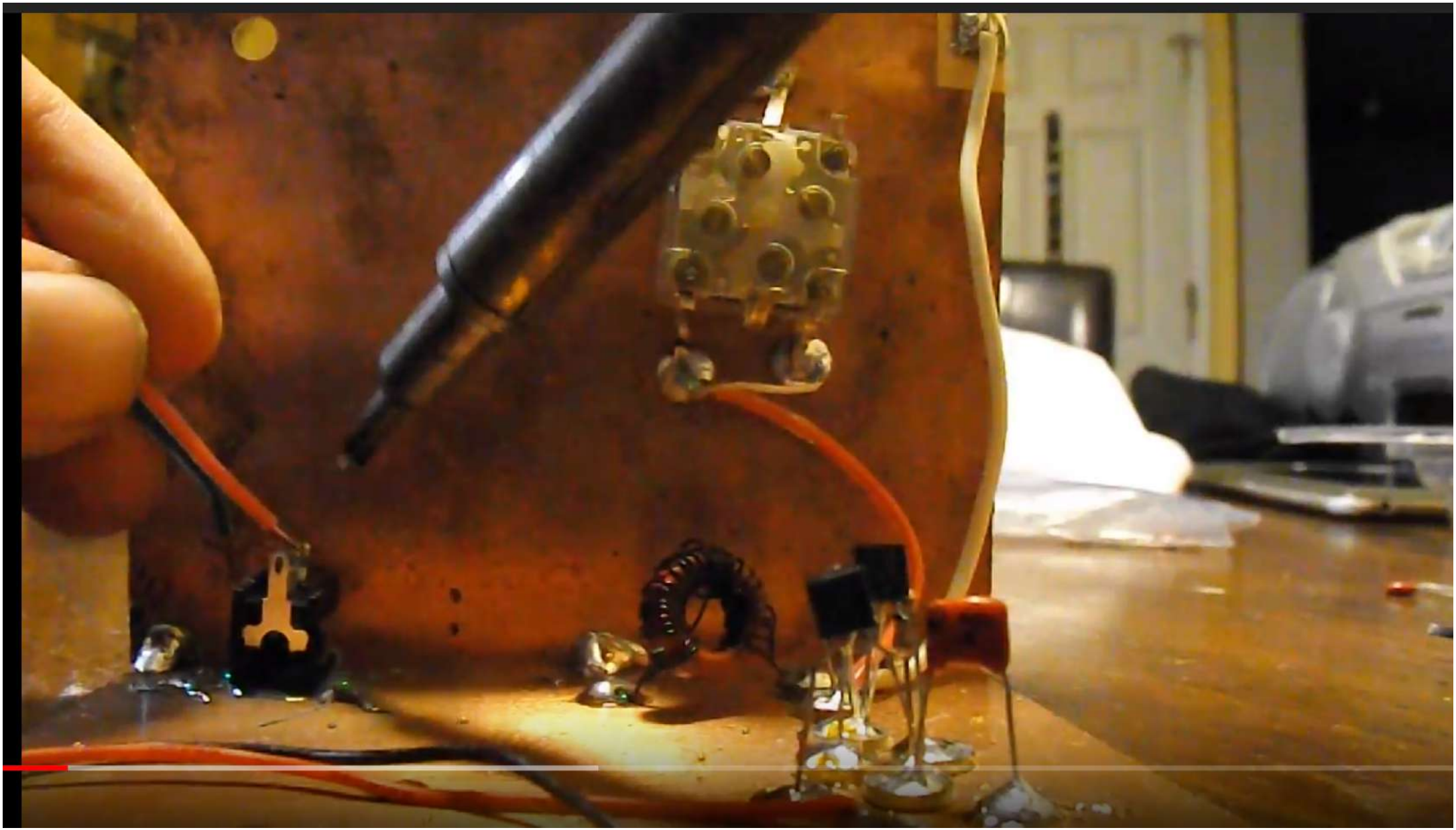


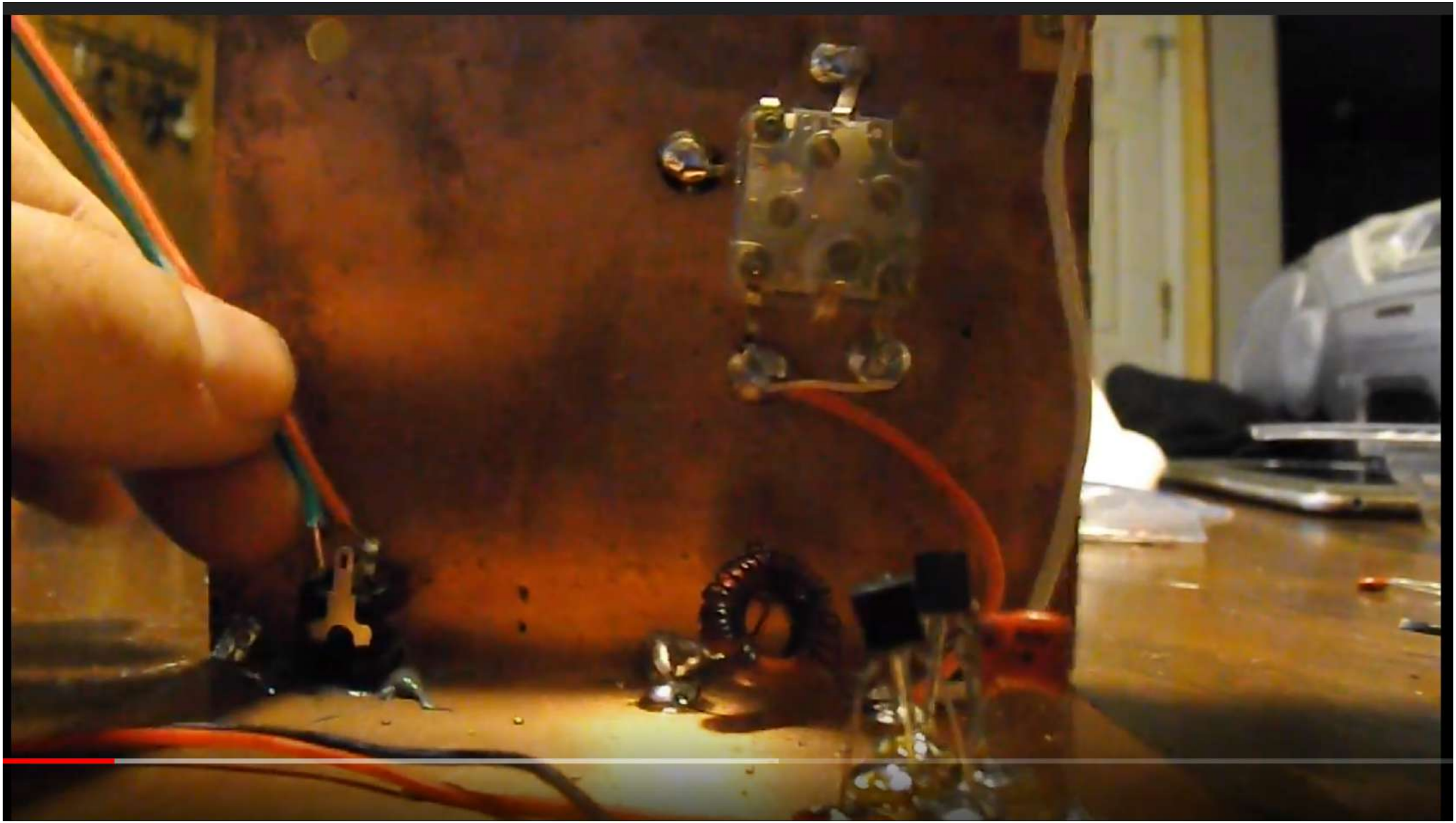


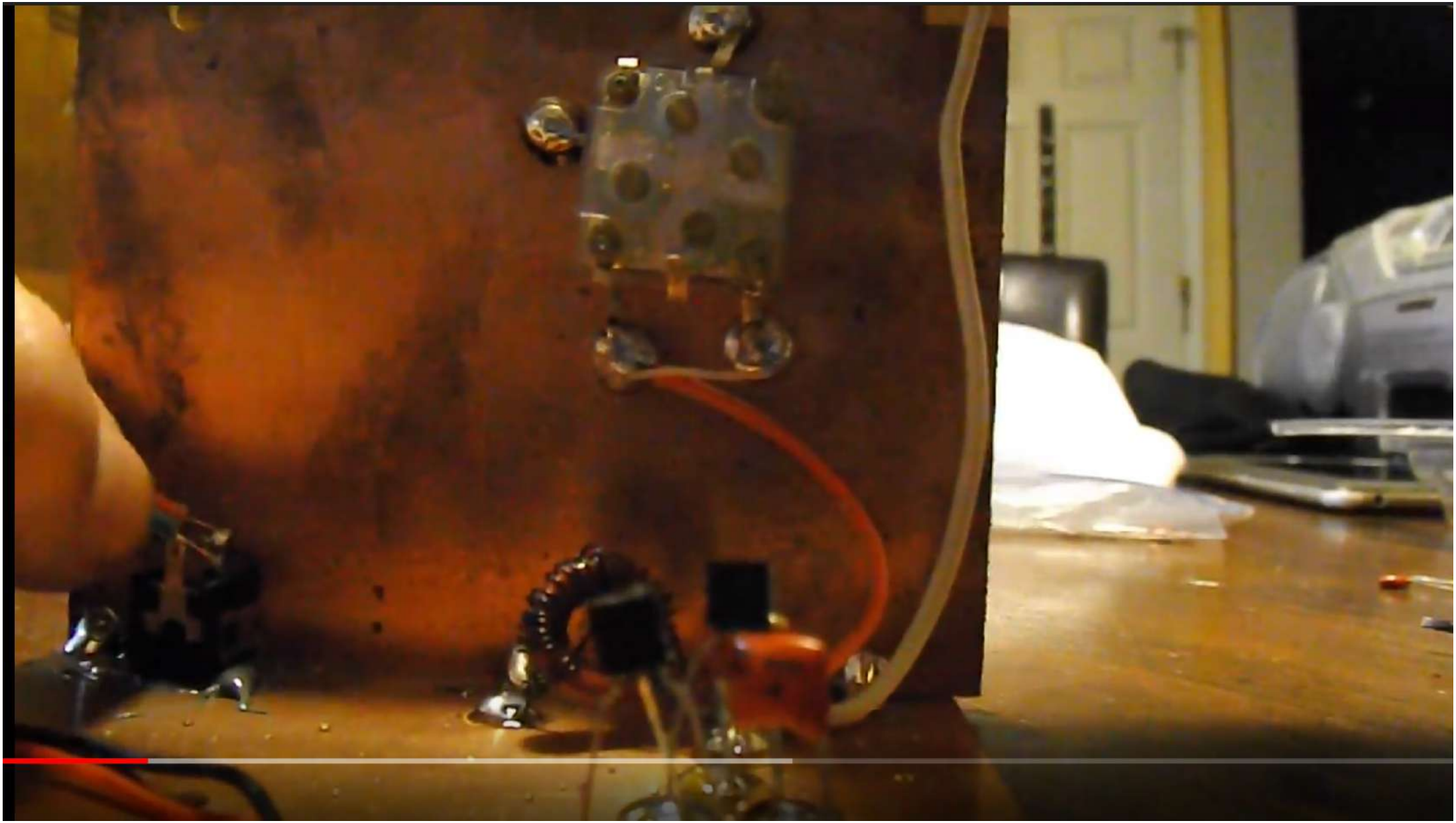


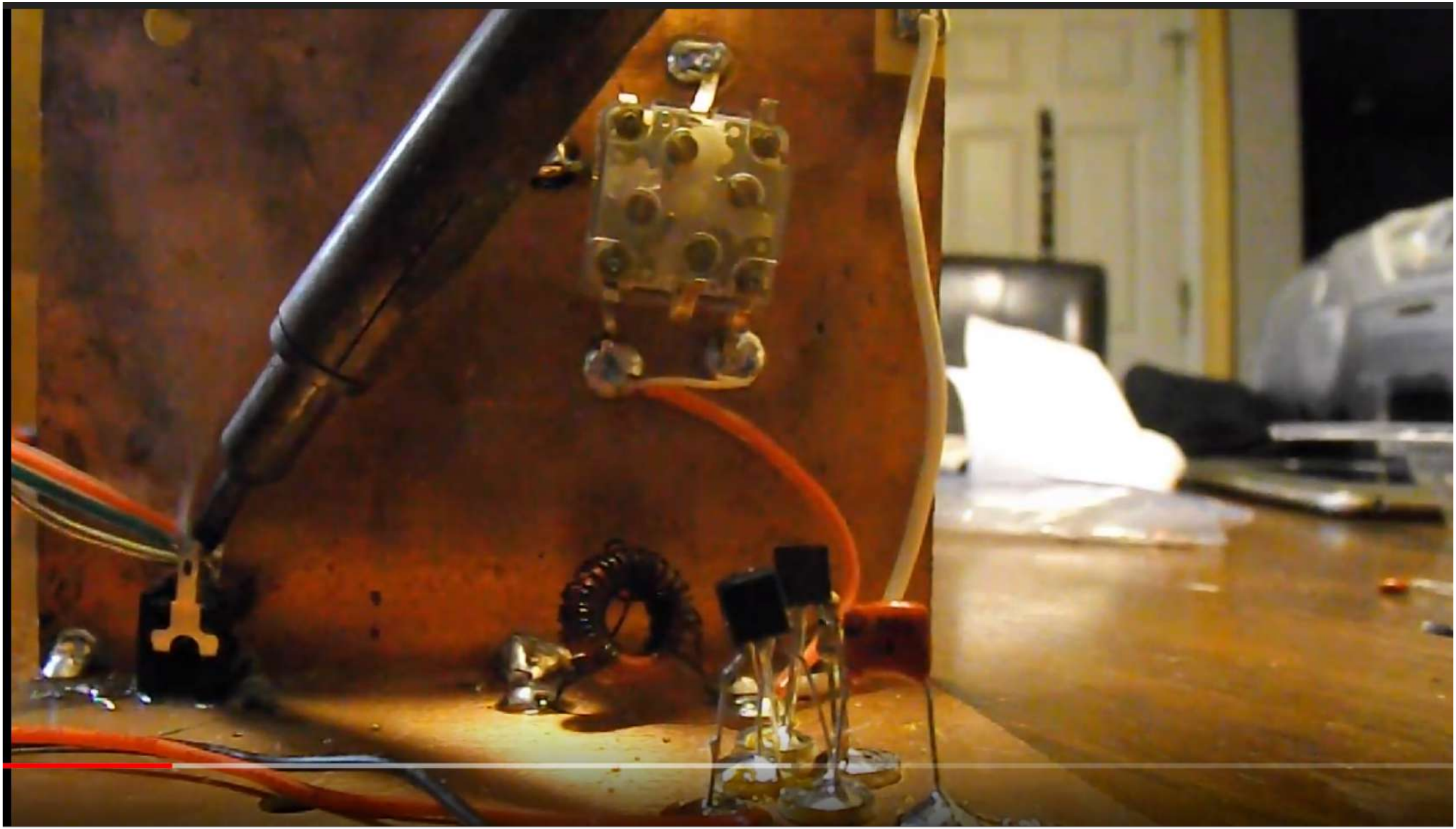


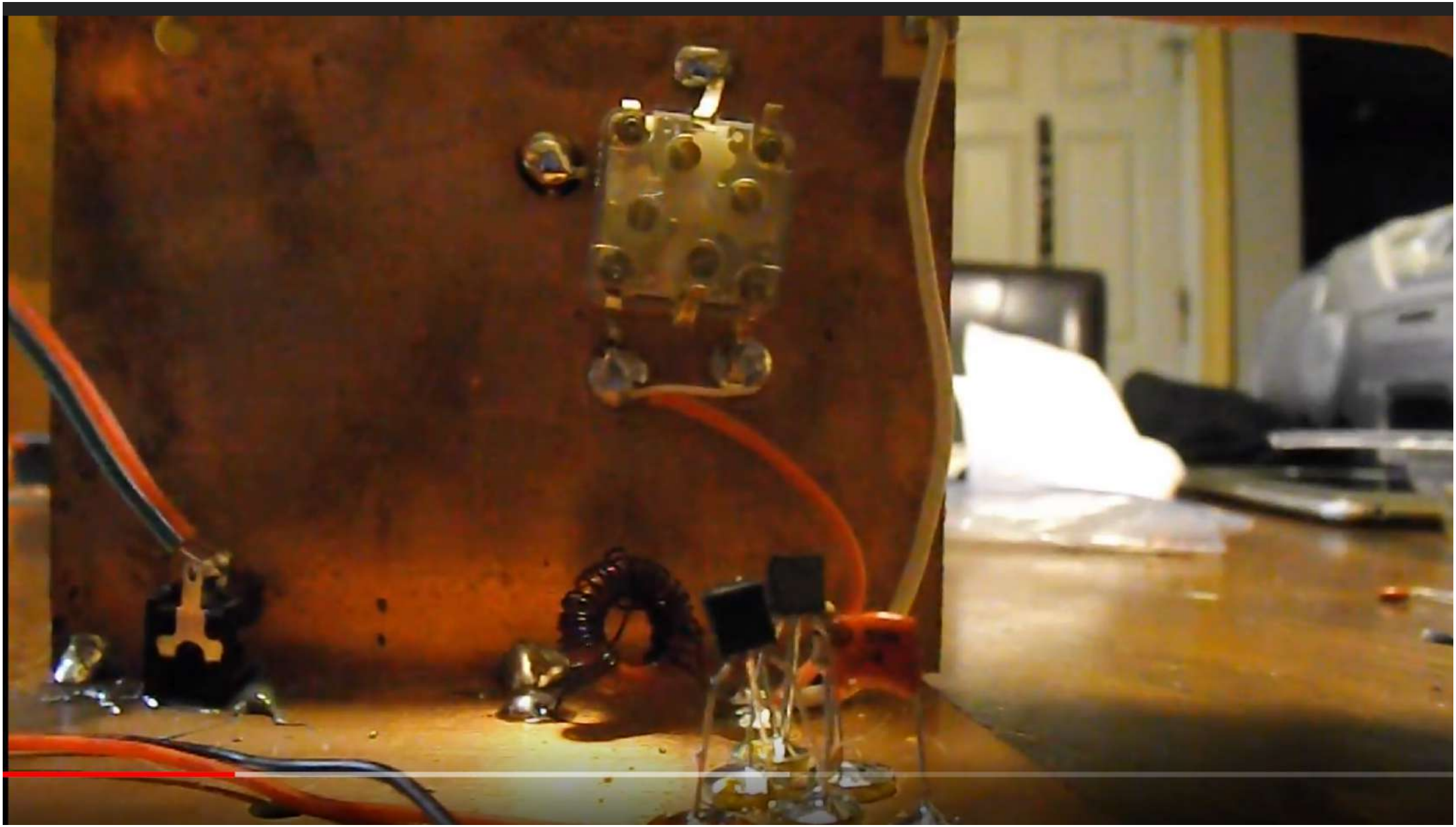


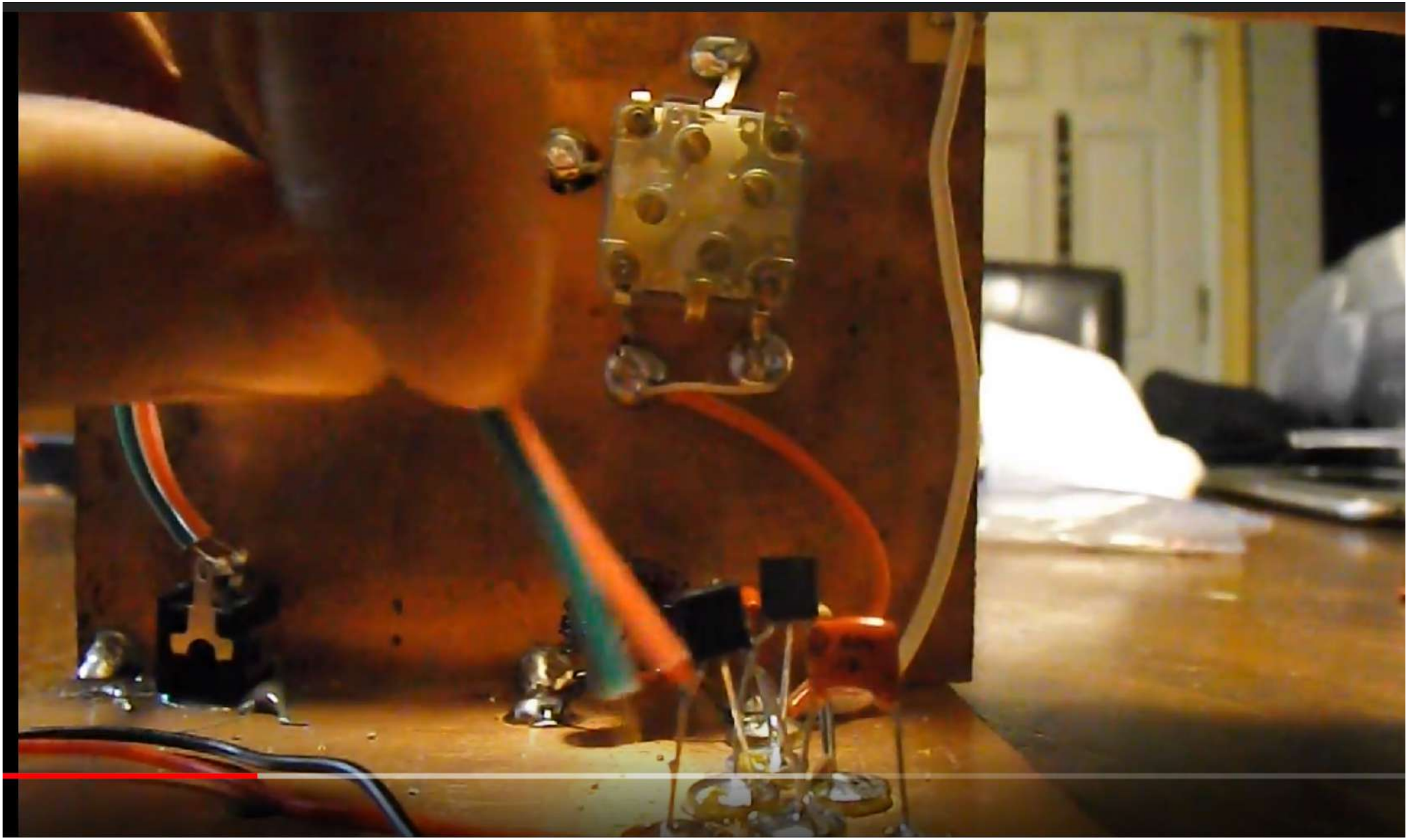


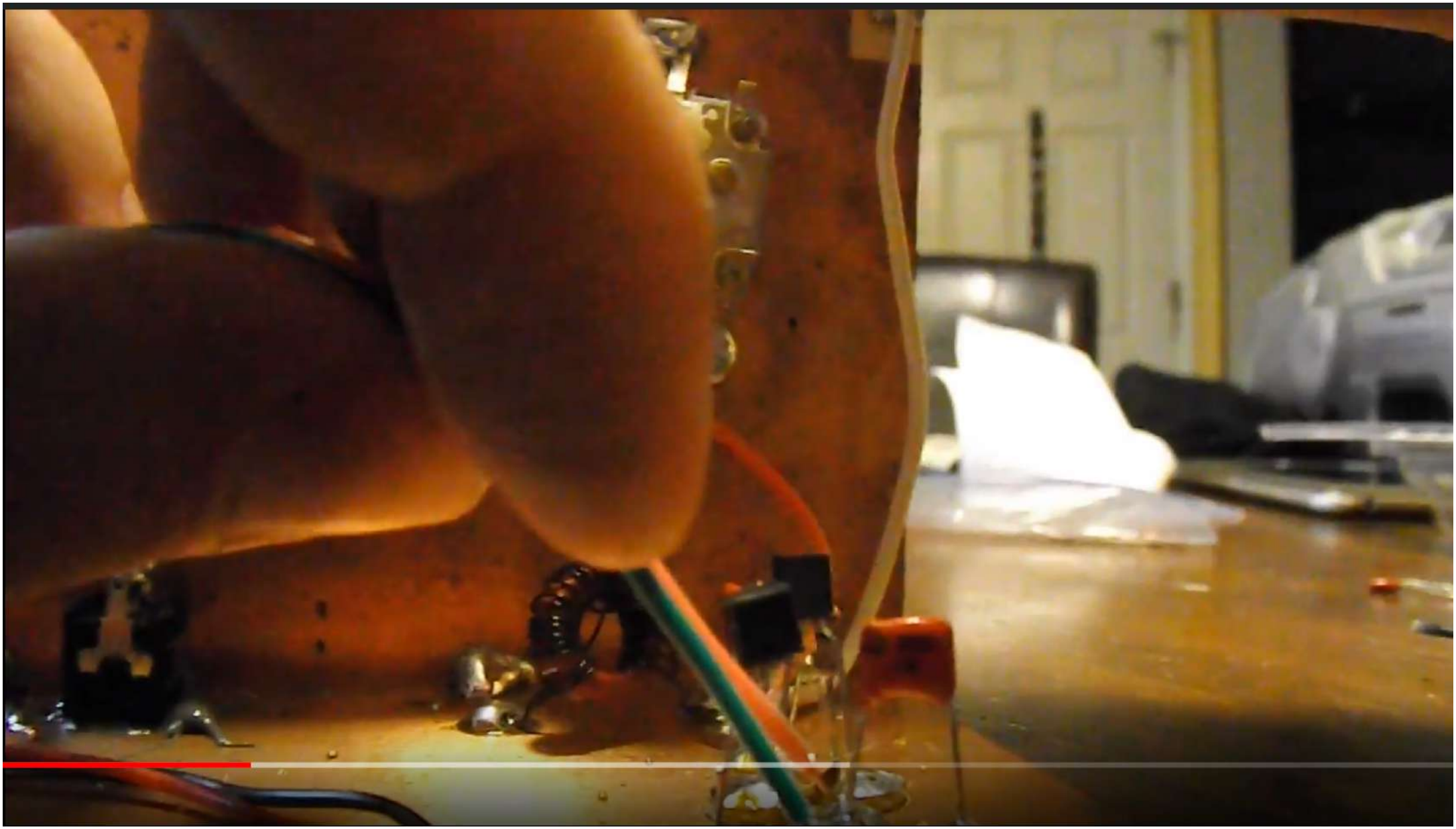


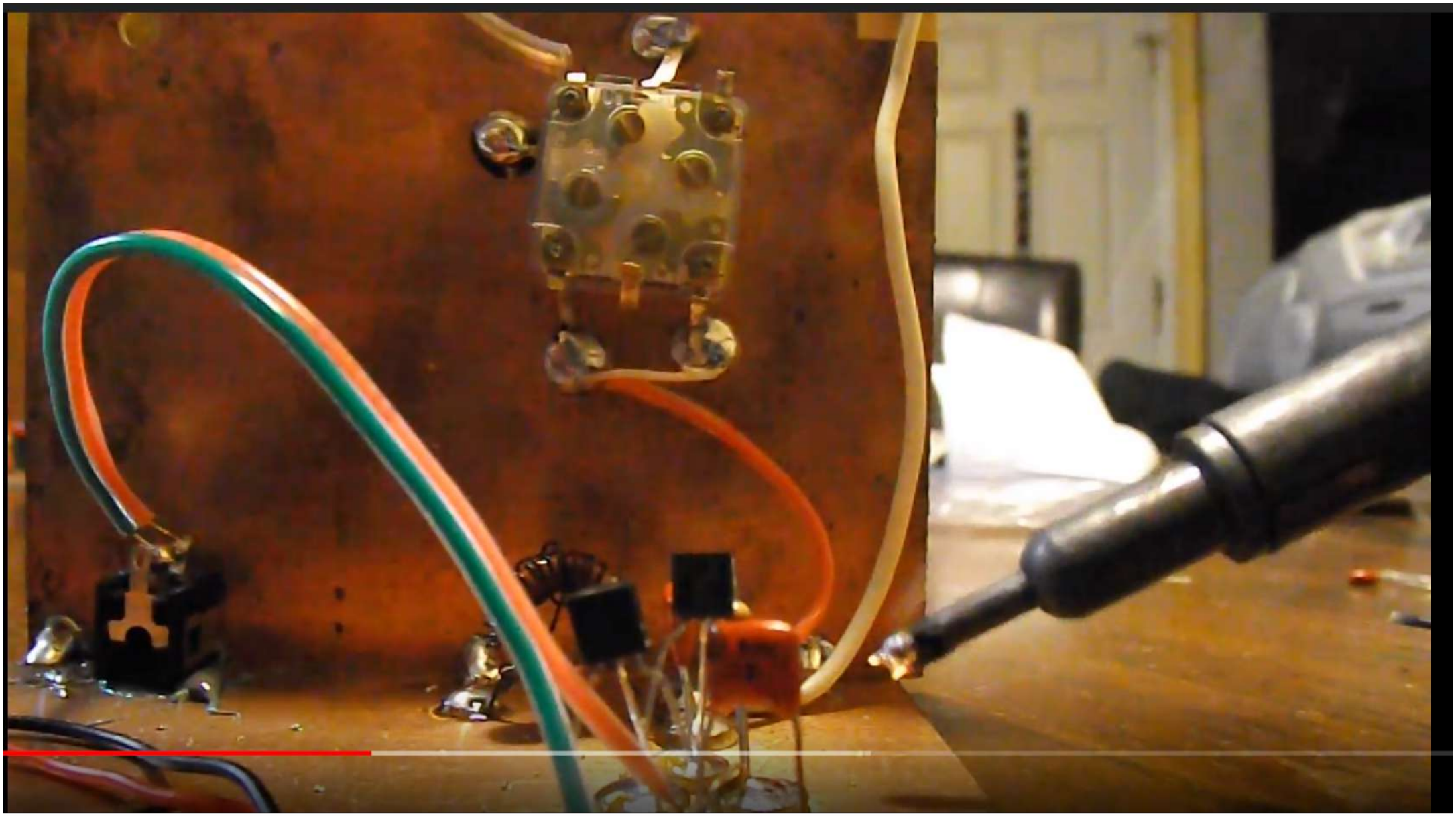


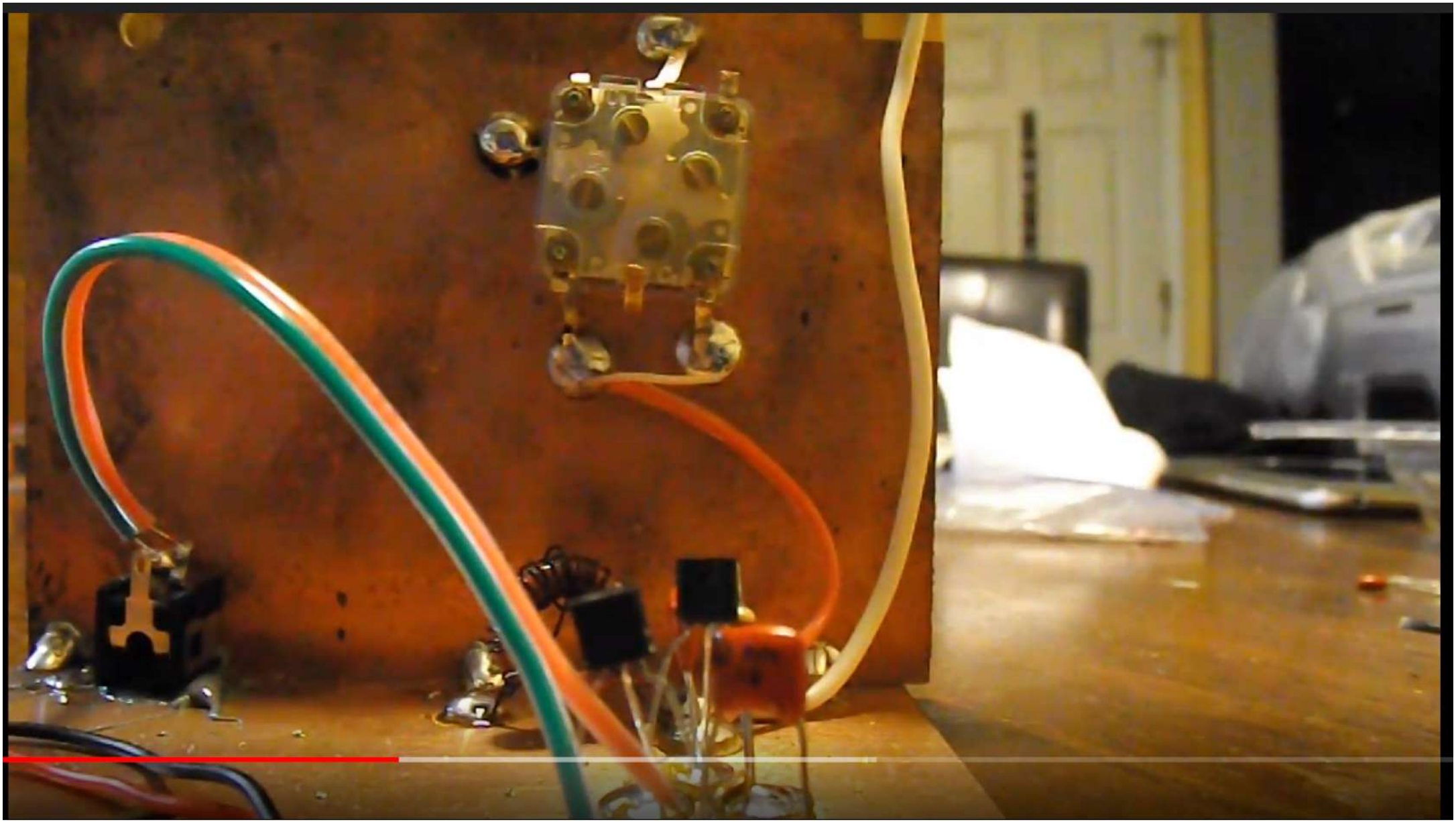


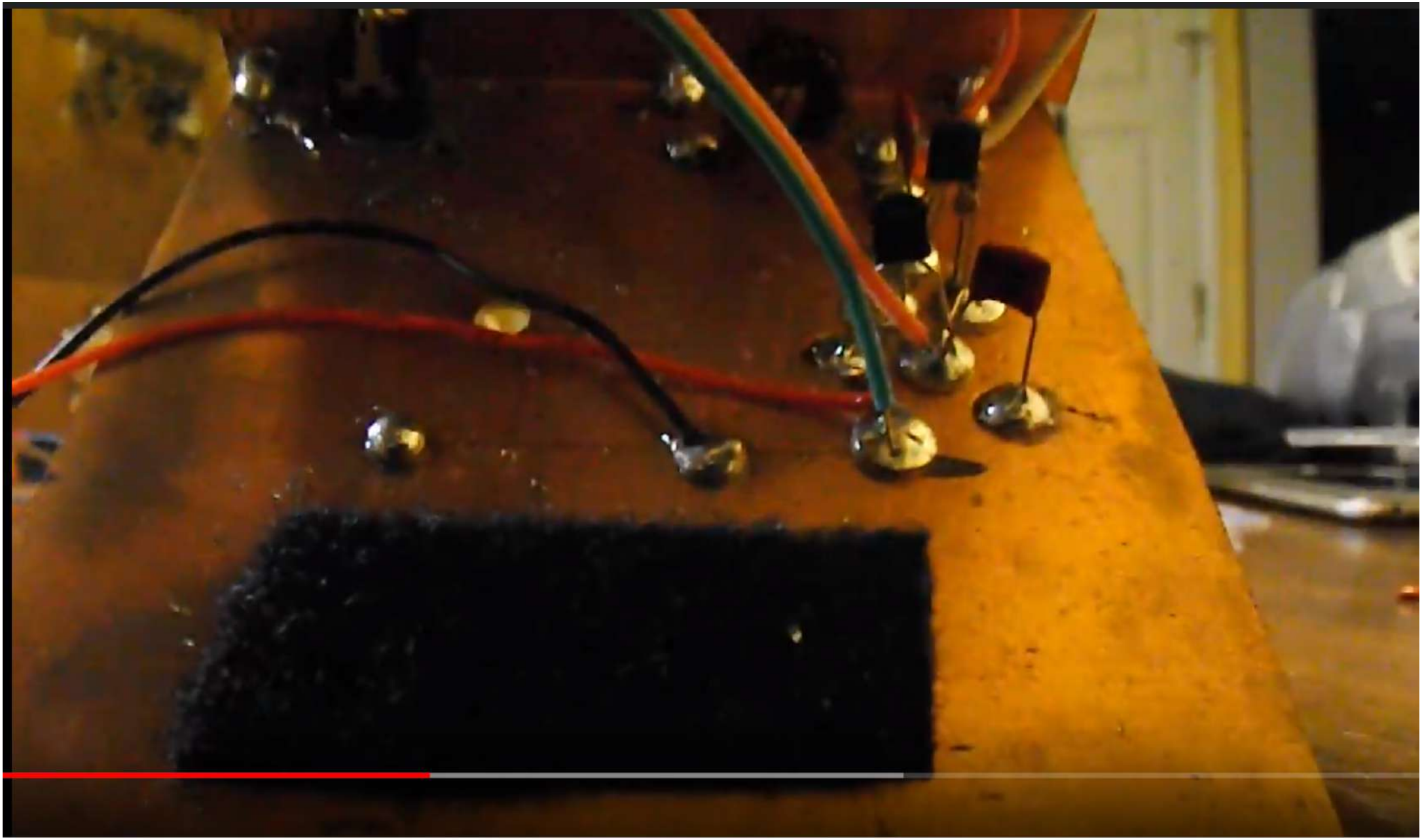


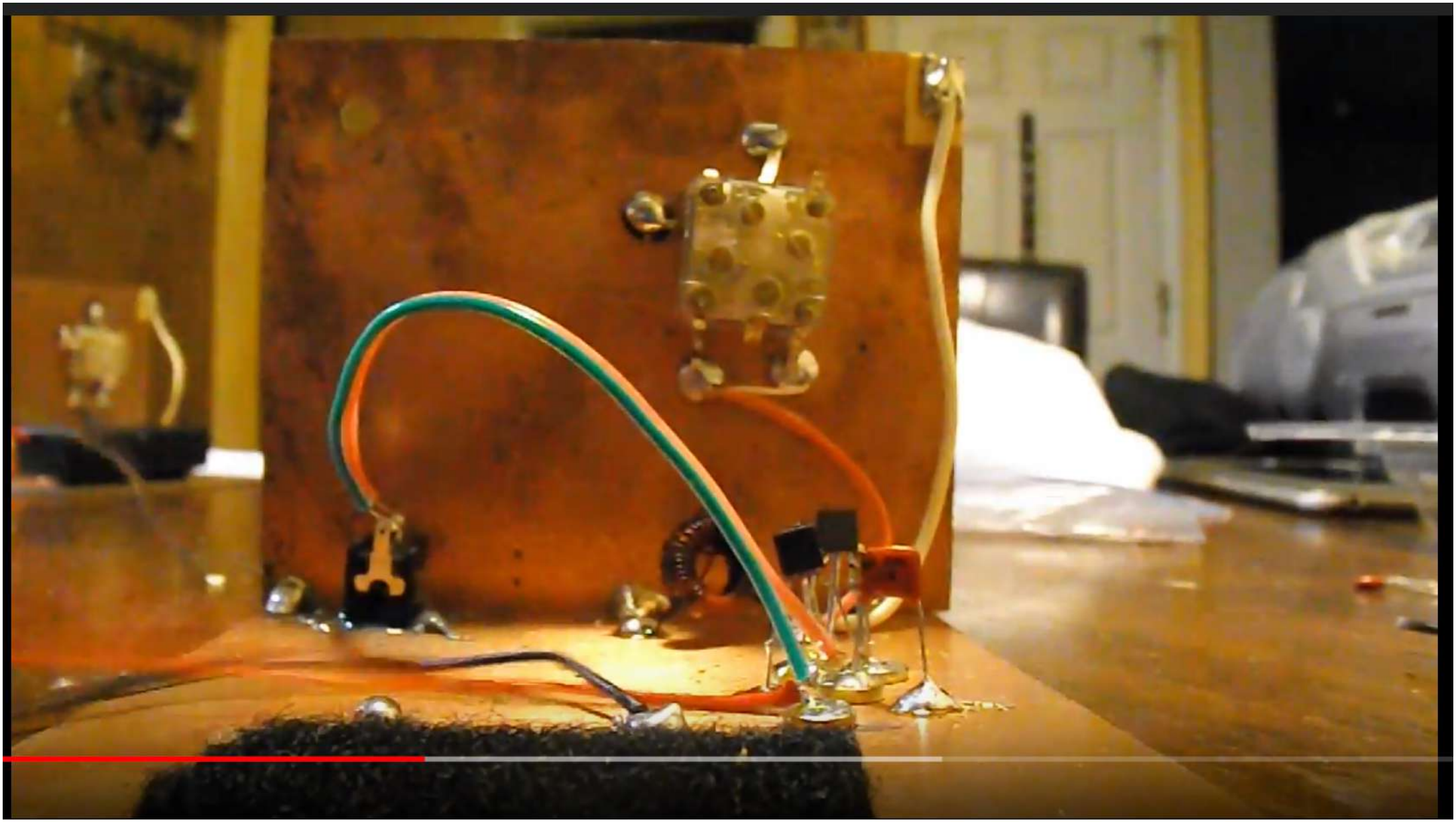


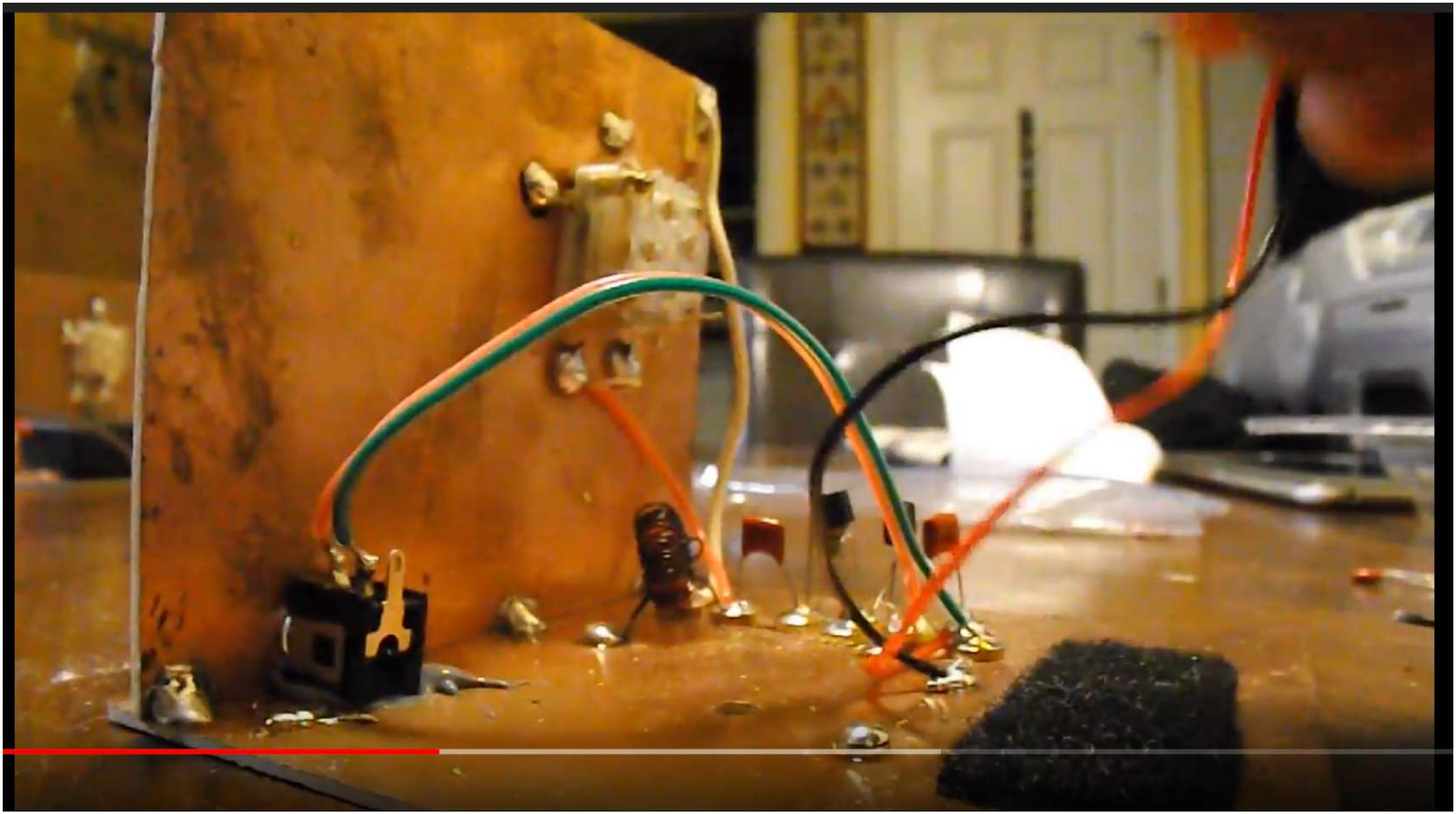


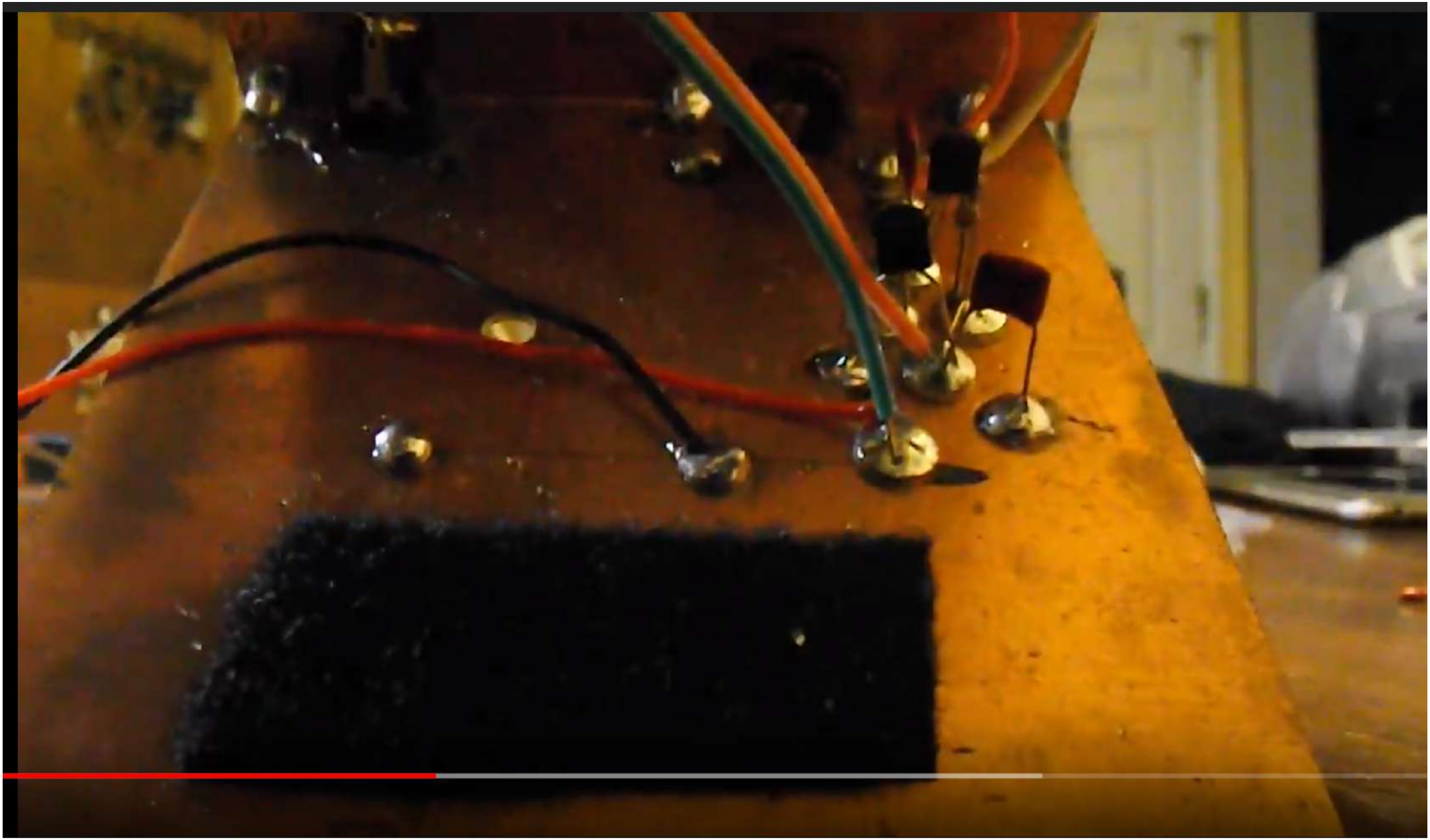


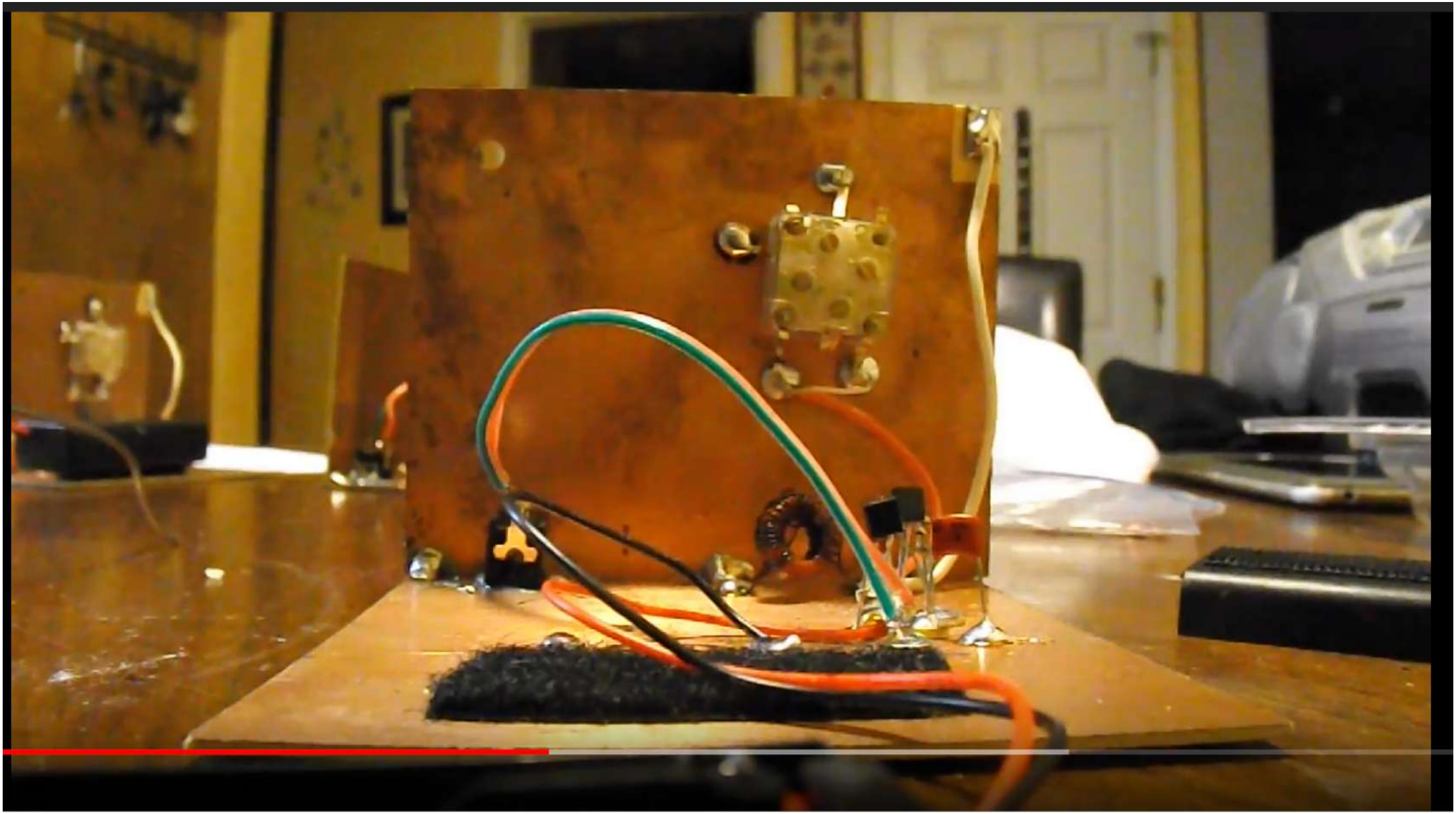


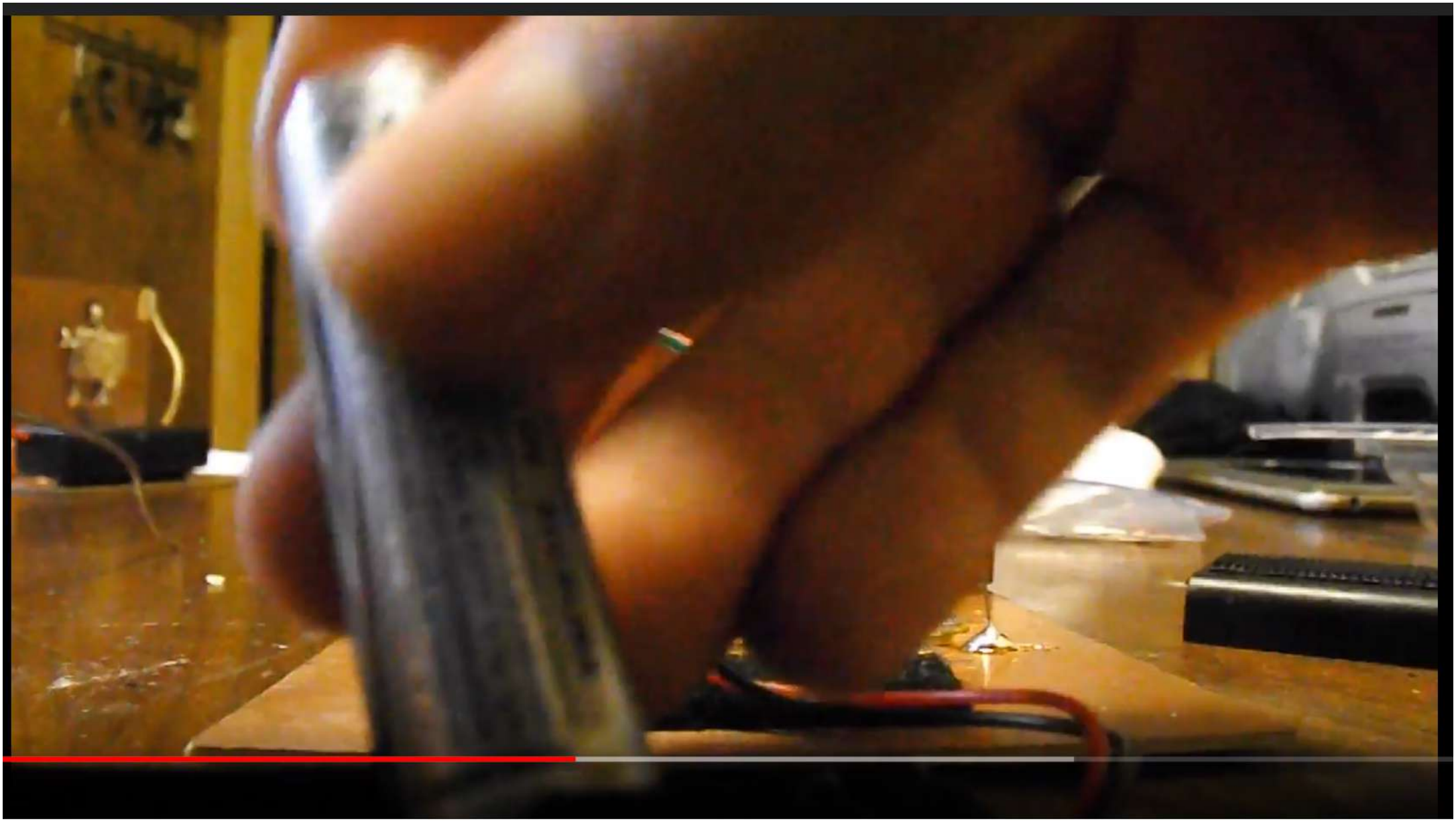


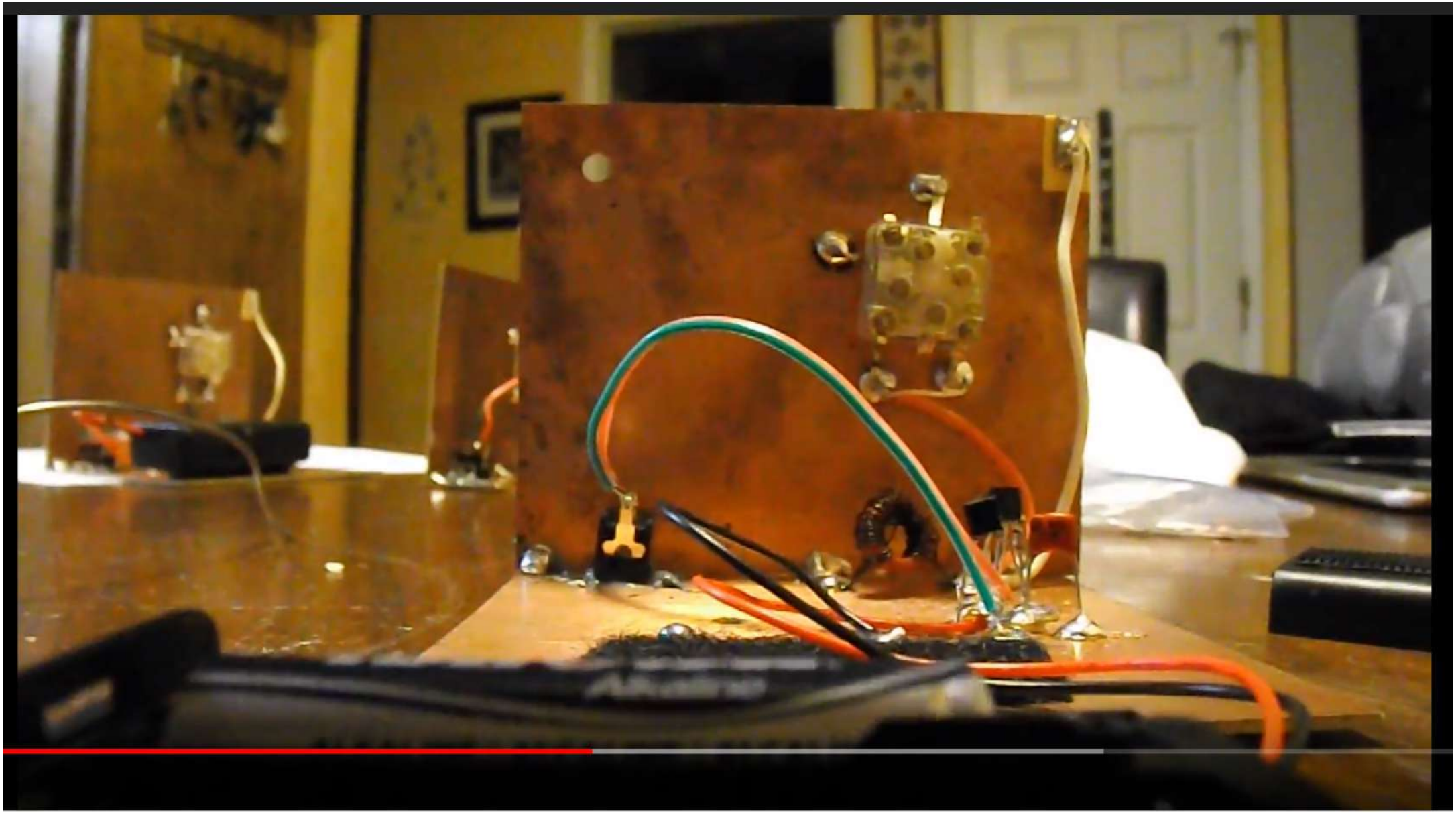


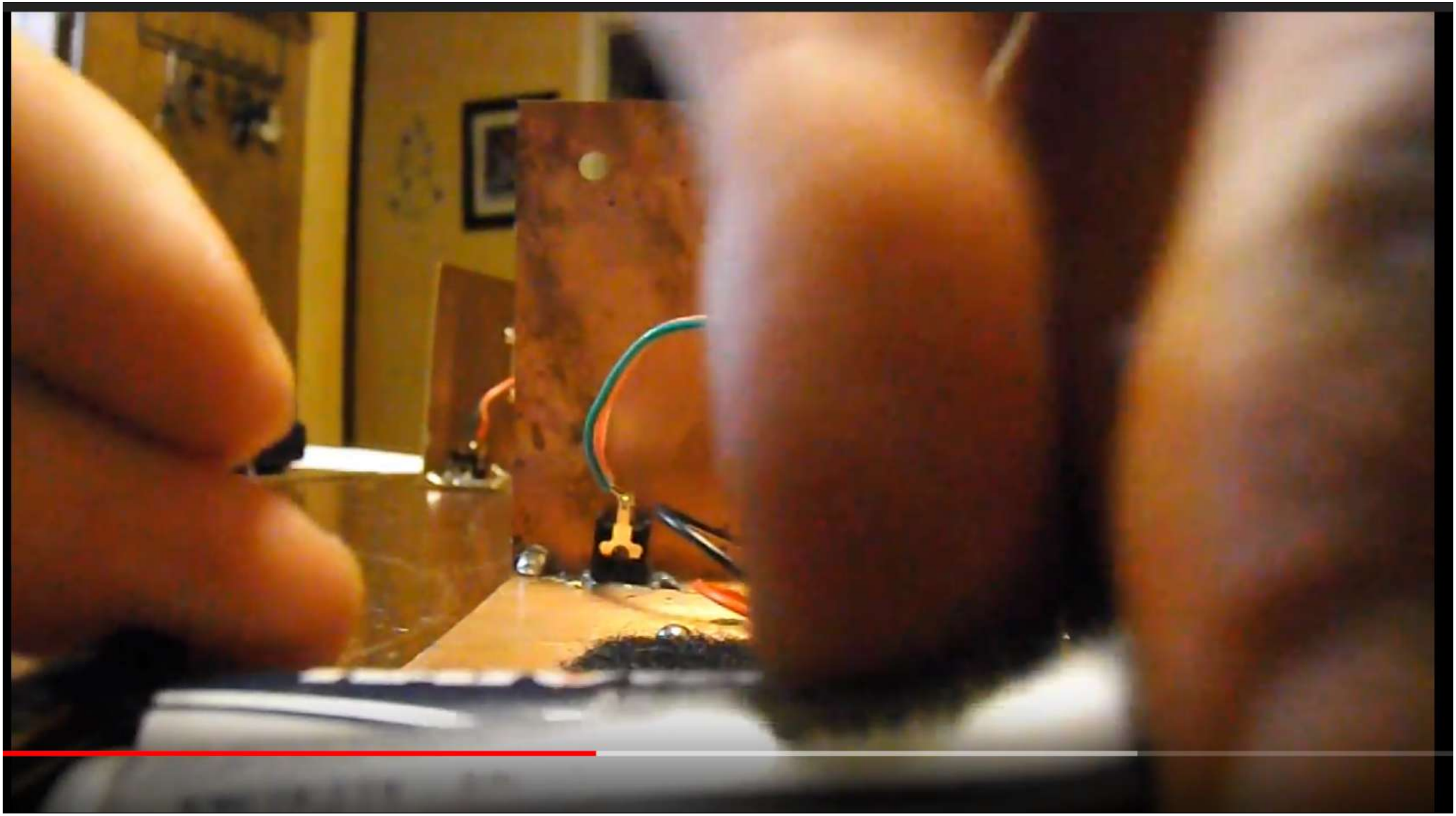


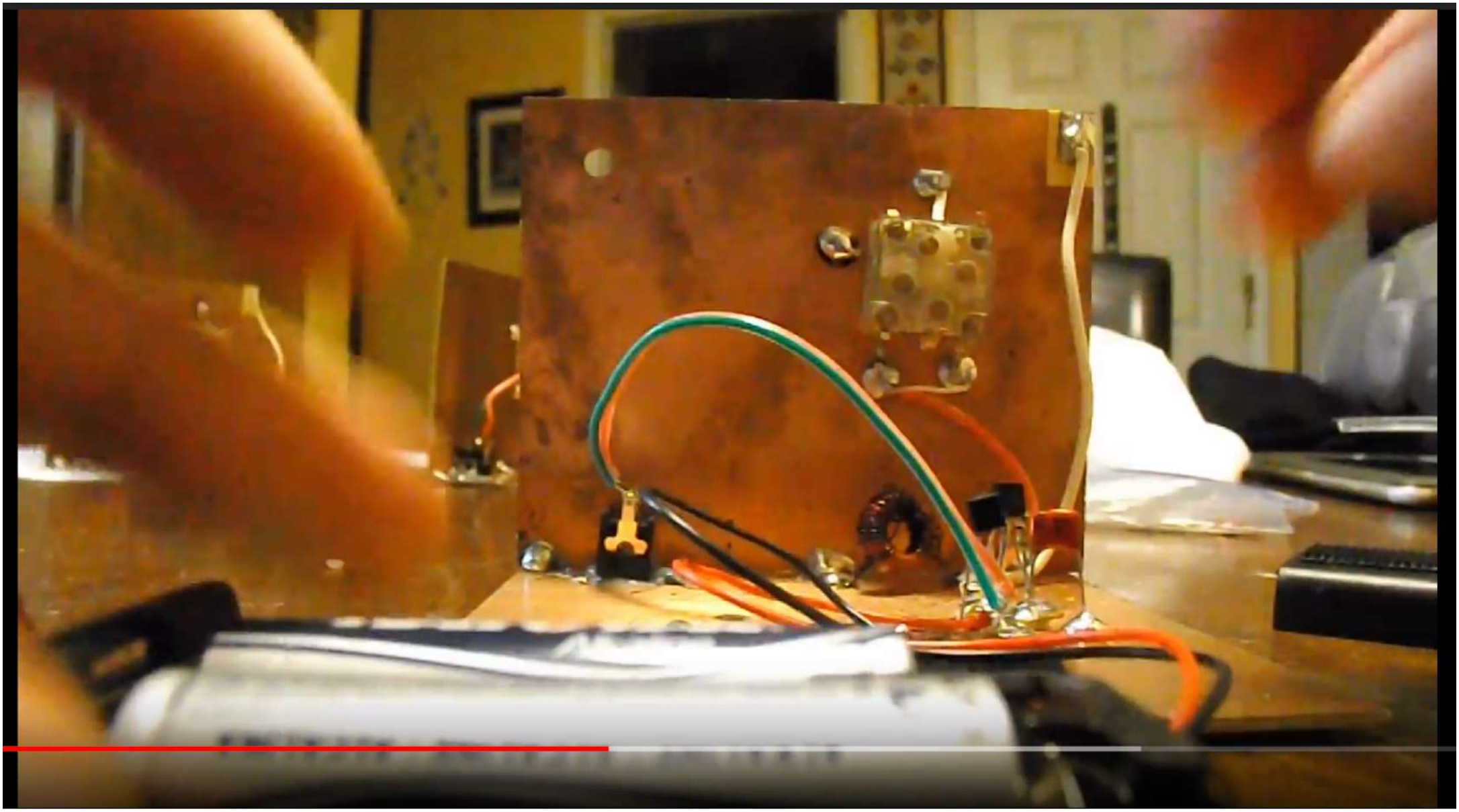


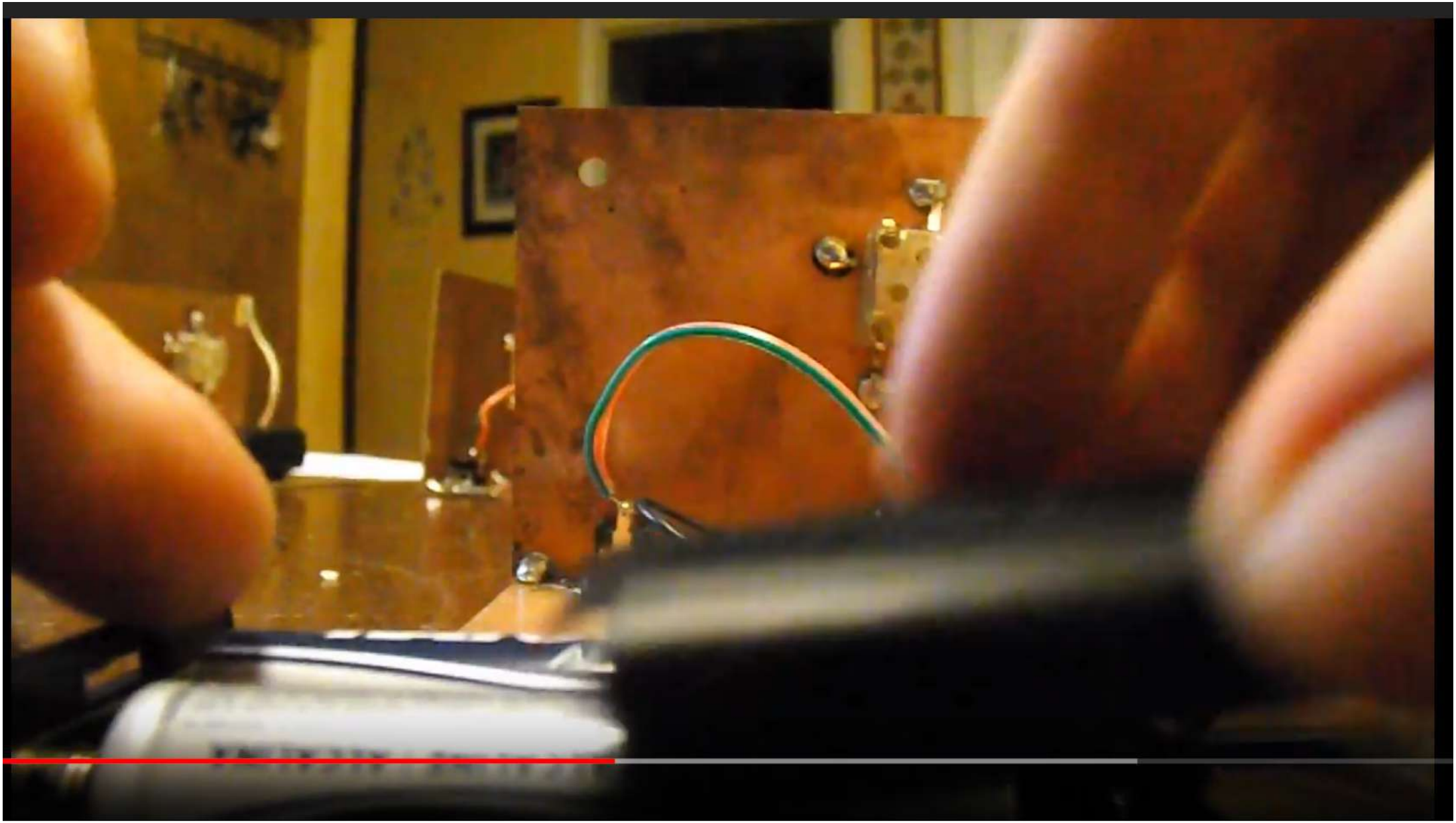


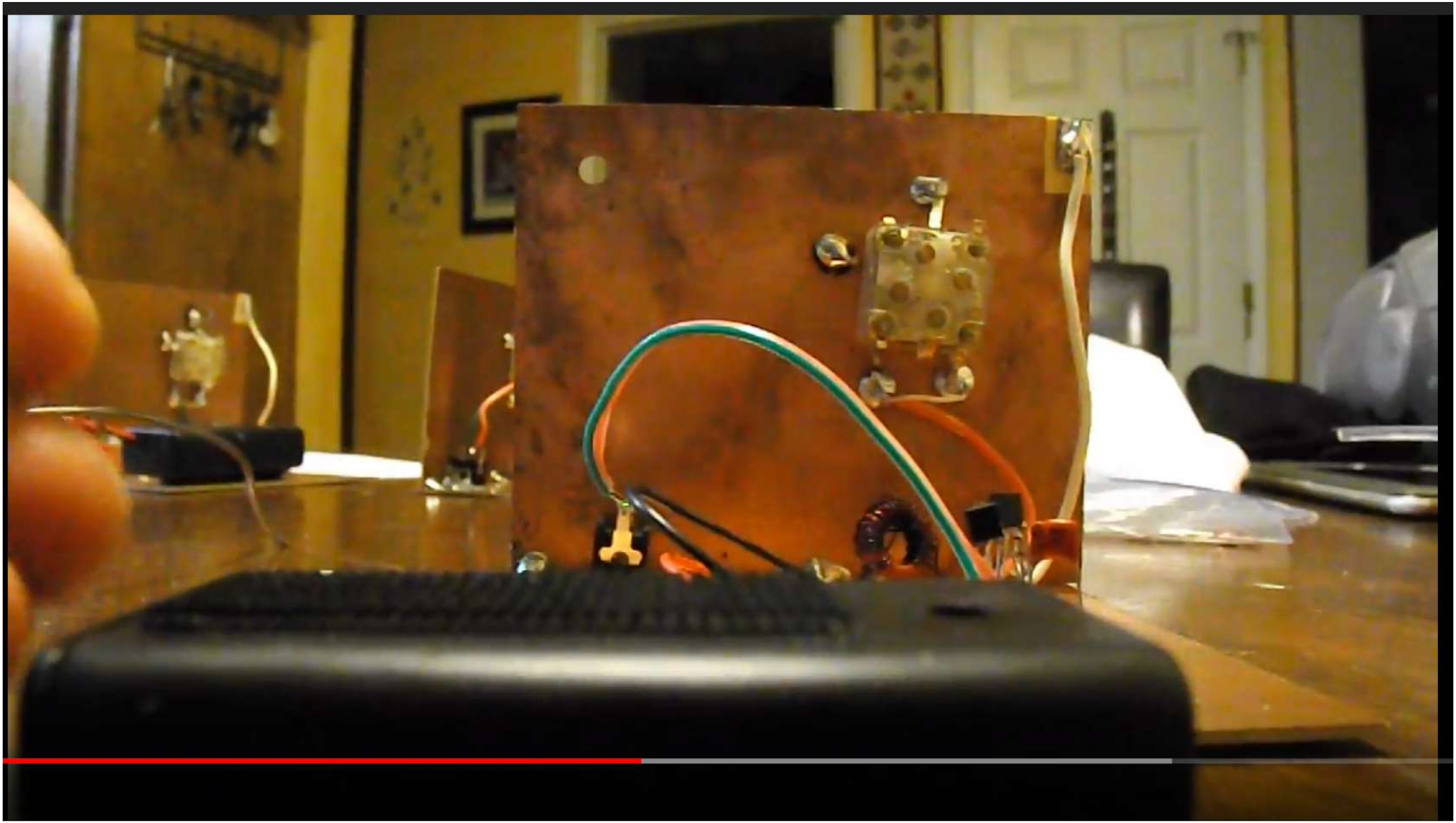


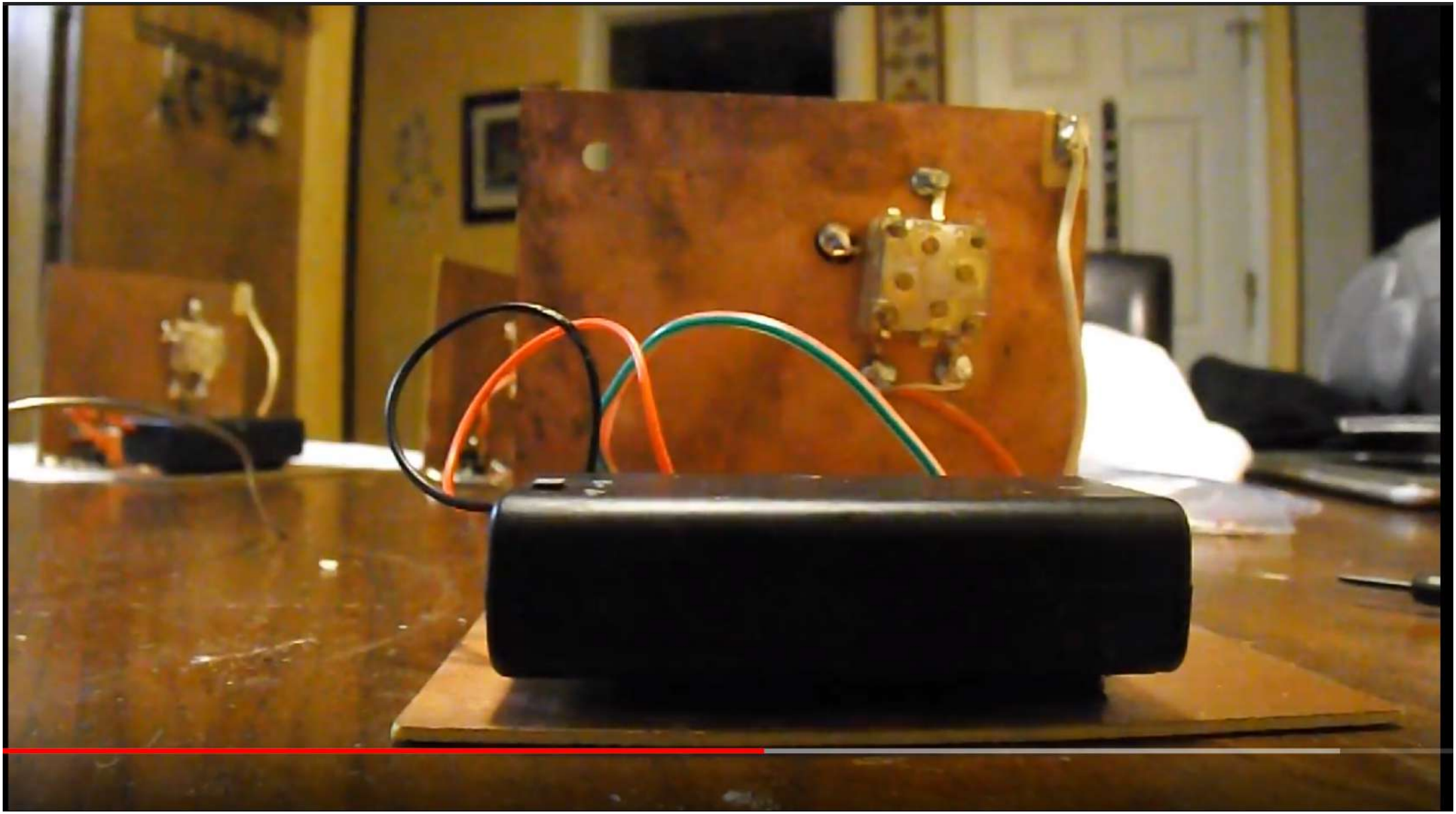




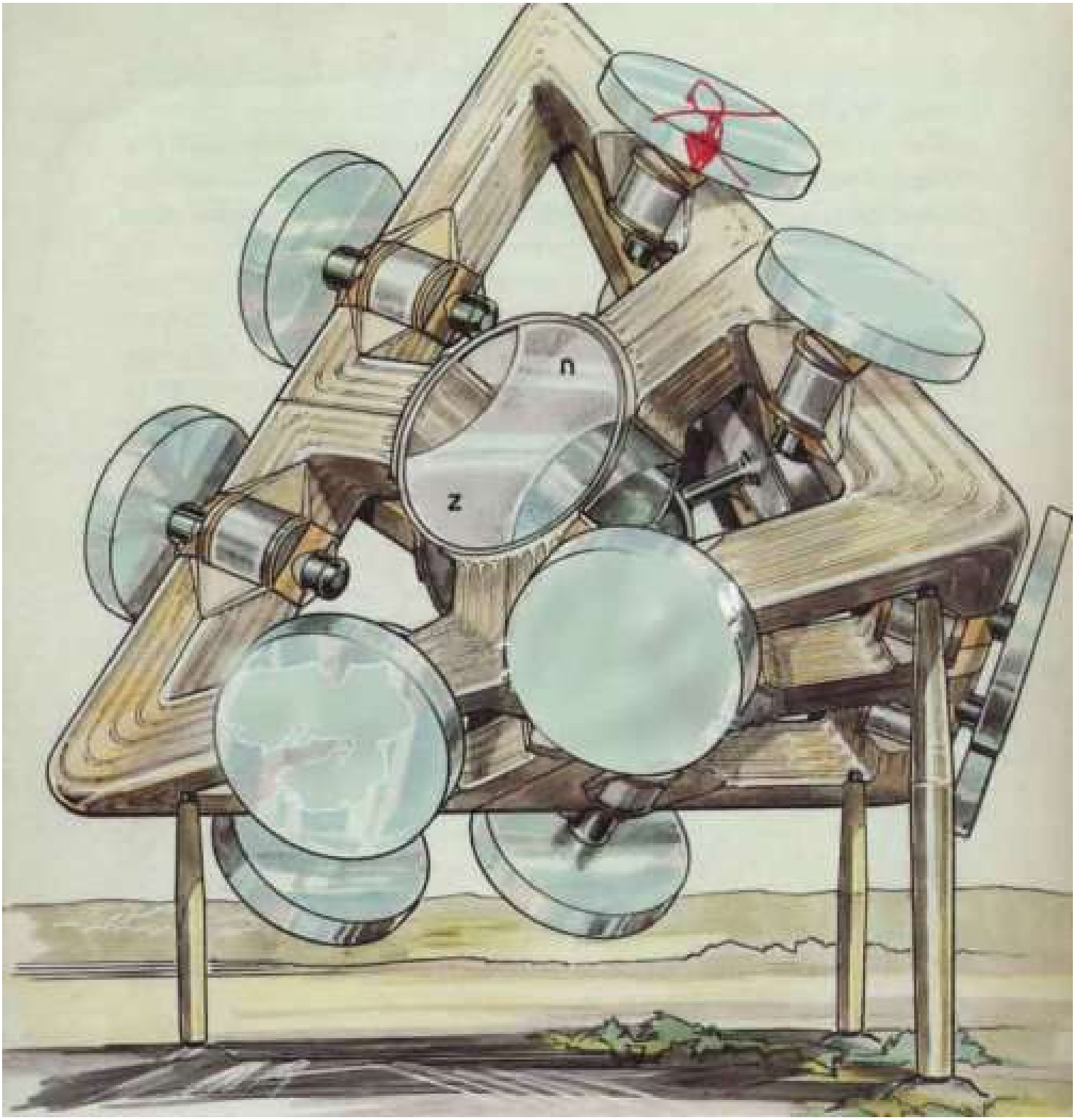






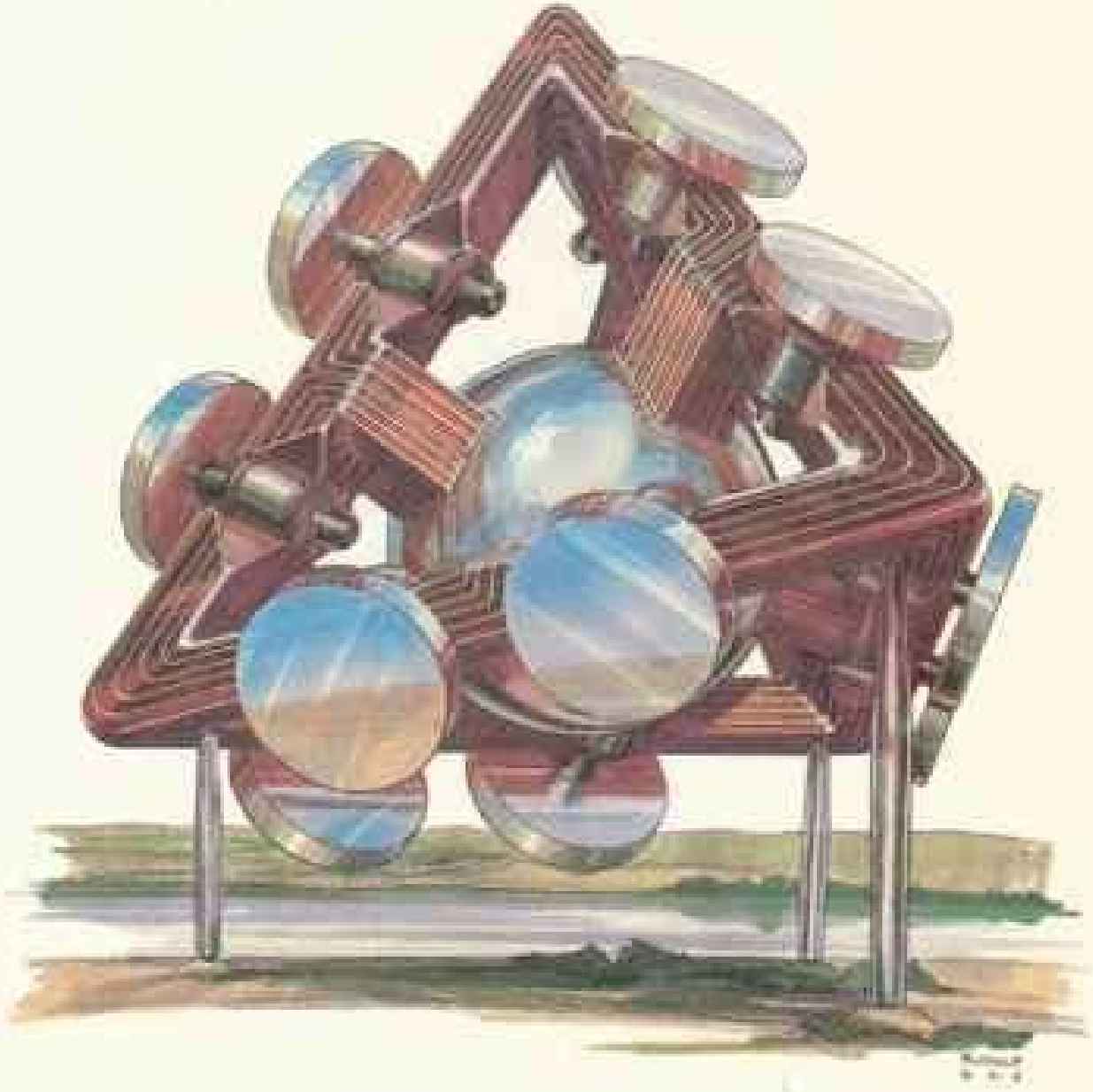





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Het draagveldparadigma



Stefan Denaerde

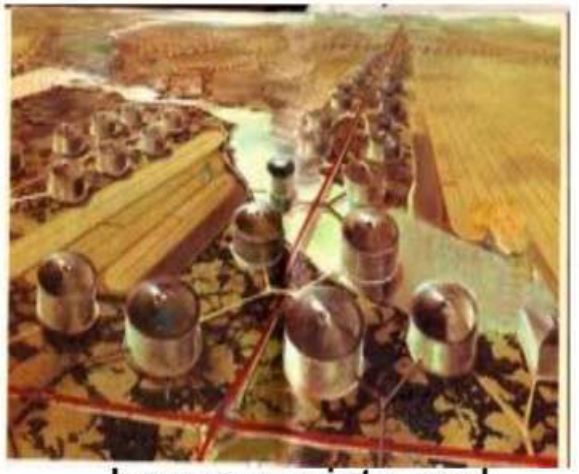
Meet The largans!



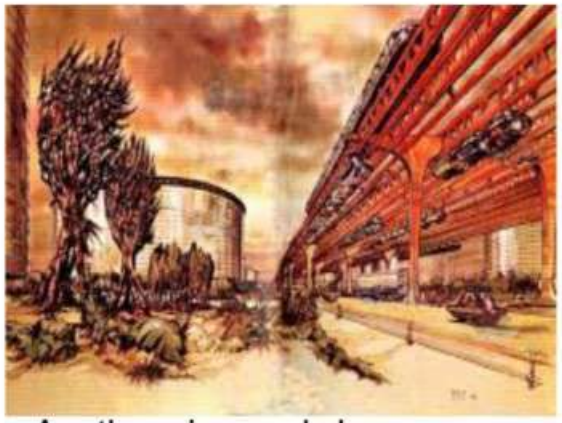
Typical largan



largan gets into photo
without being seen at
the time photo was taken!



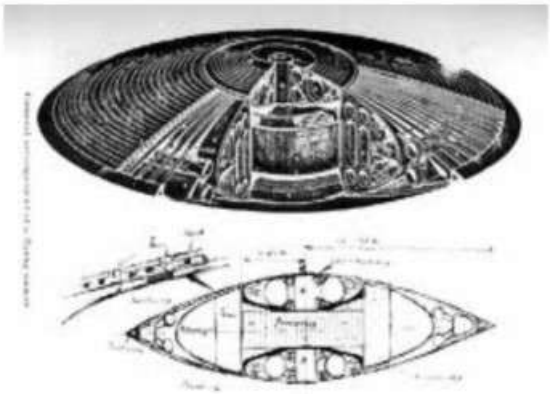
largan society and
transportation infrastructure
of housing units



Another view and close up
of cylinder which houses 10 people each!



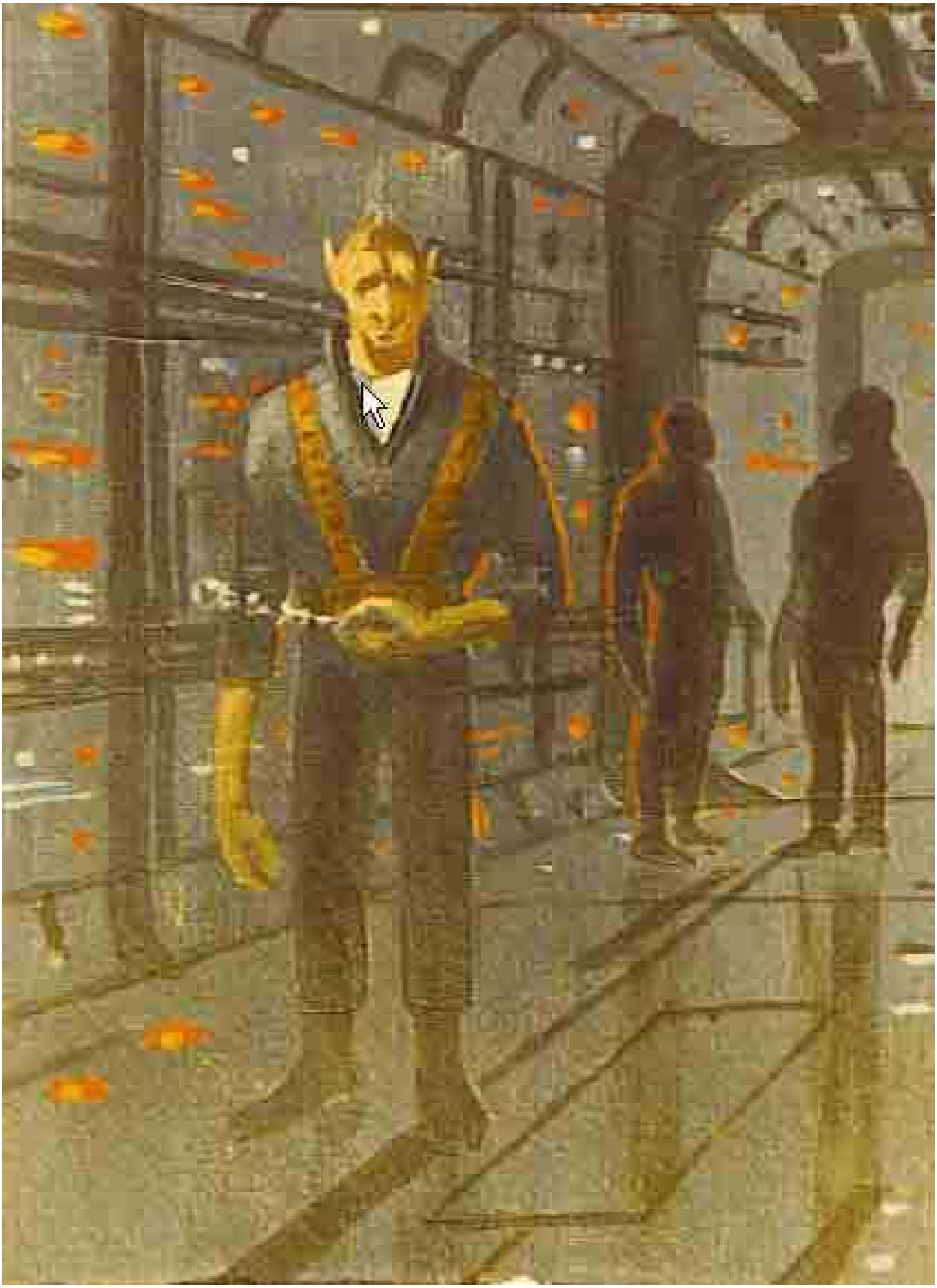
From Inside The Control Room

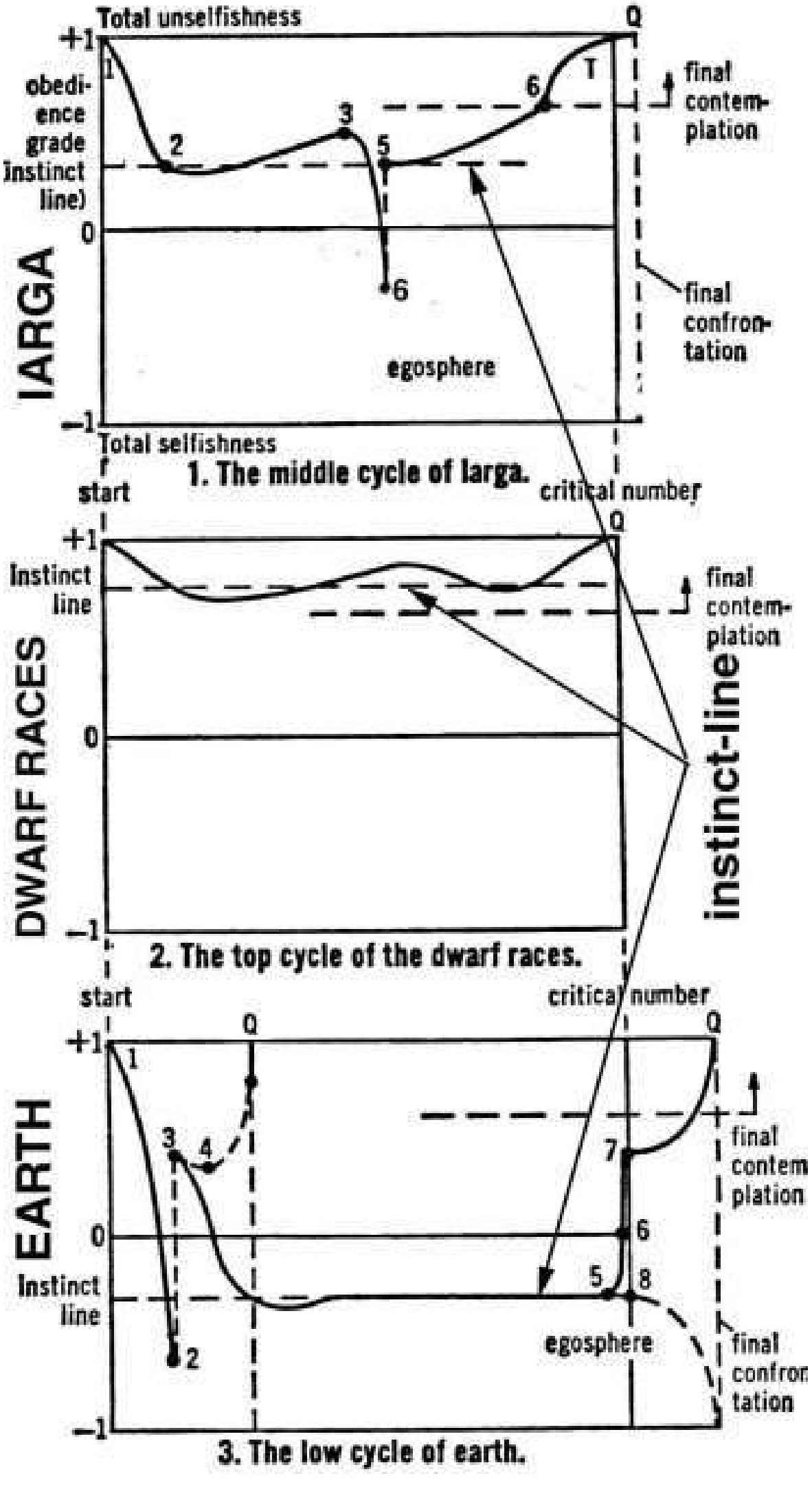


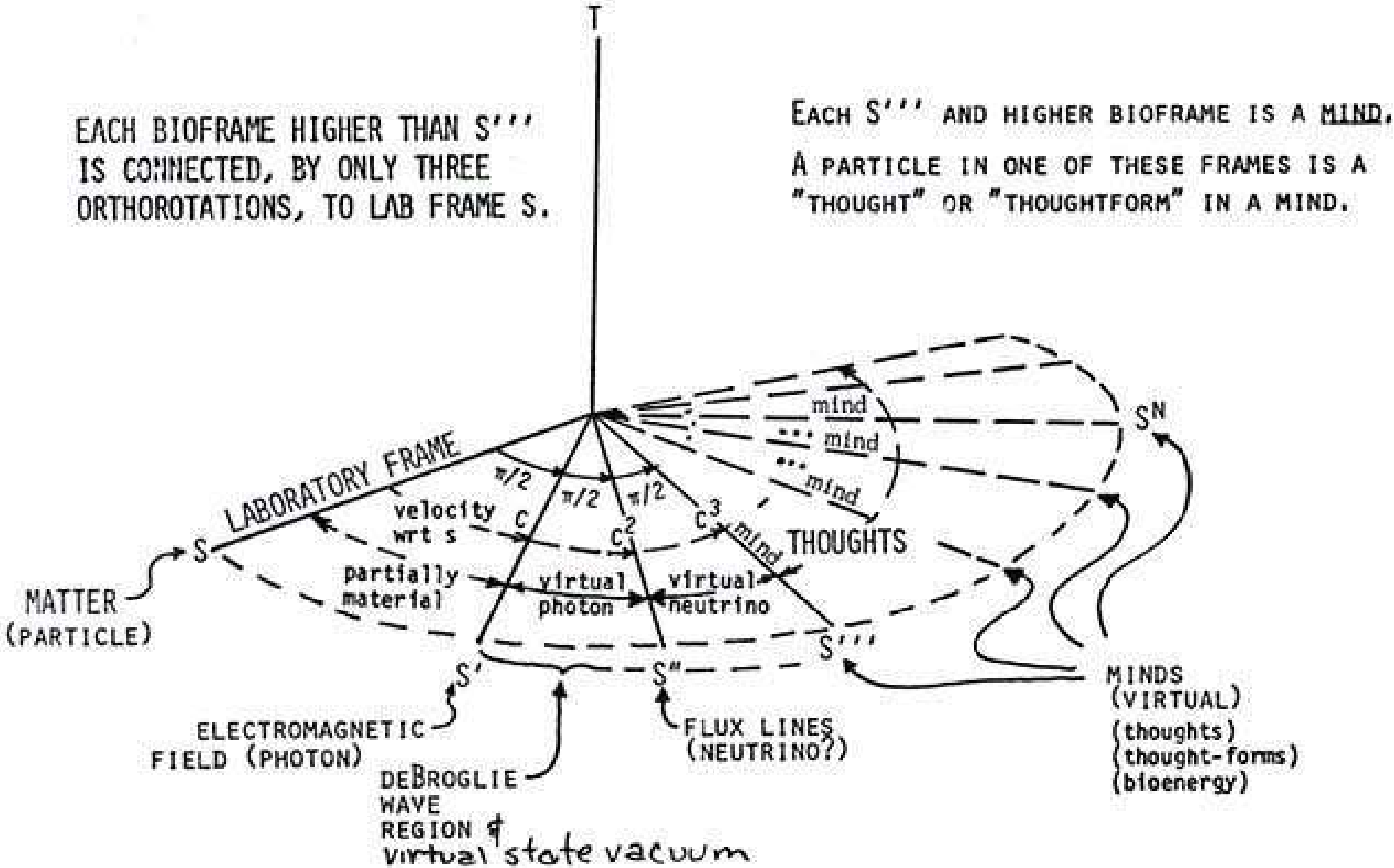
The blue print of a Sun wheel
which holds 10,000 people as well



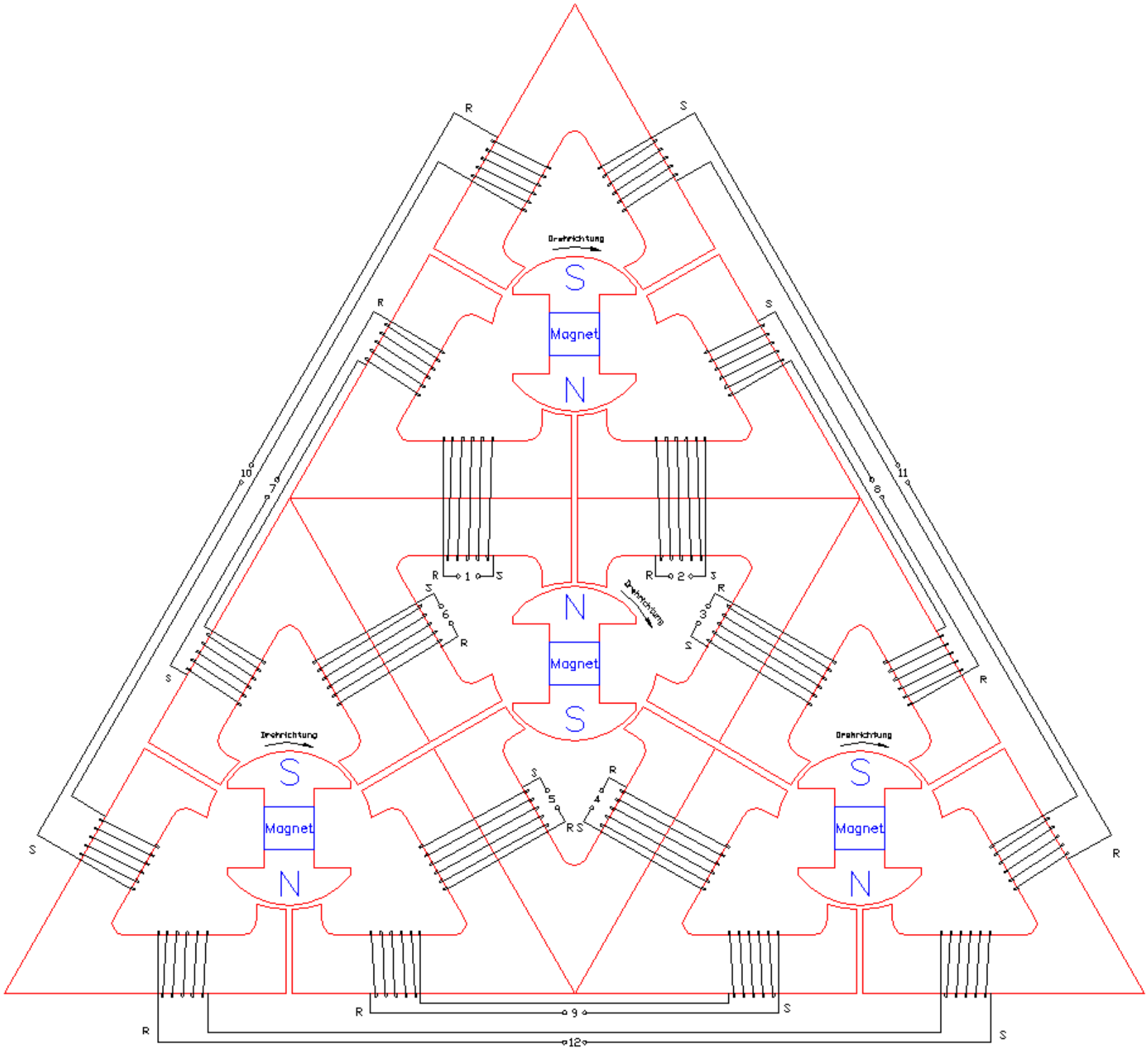

Rune Overby_2001

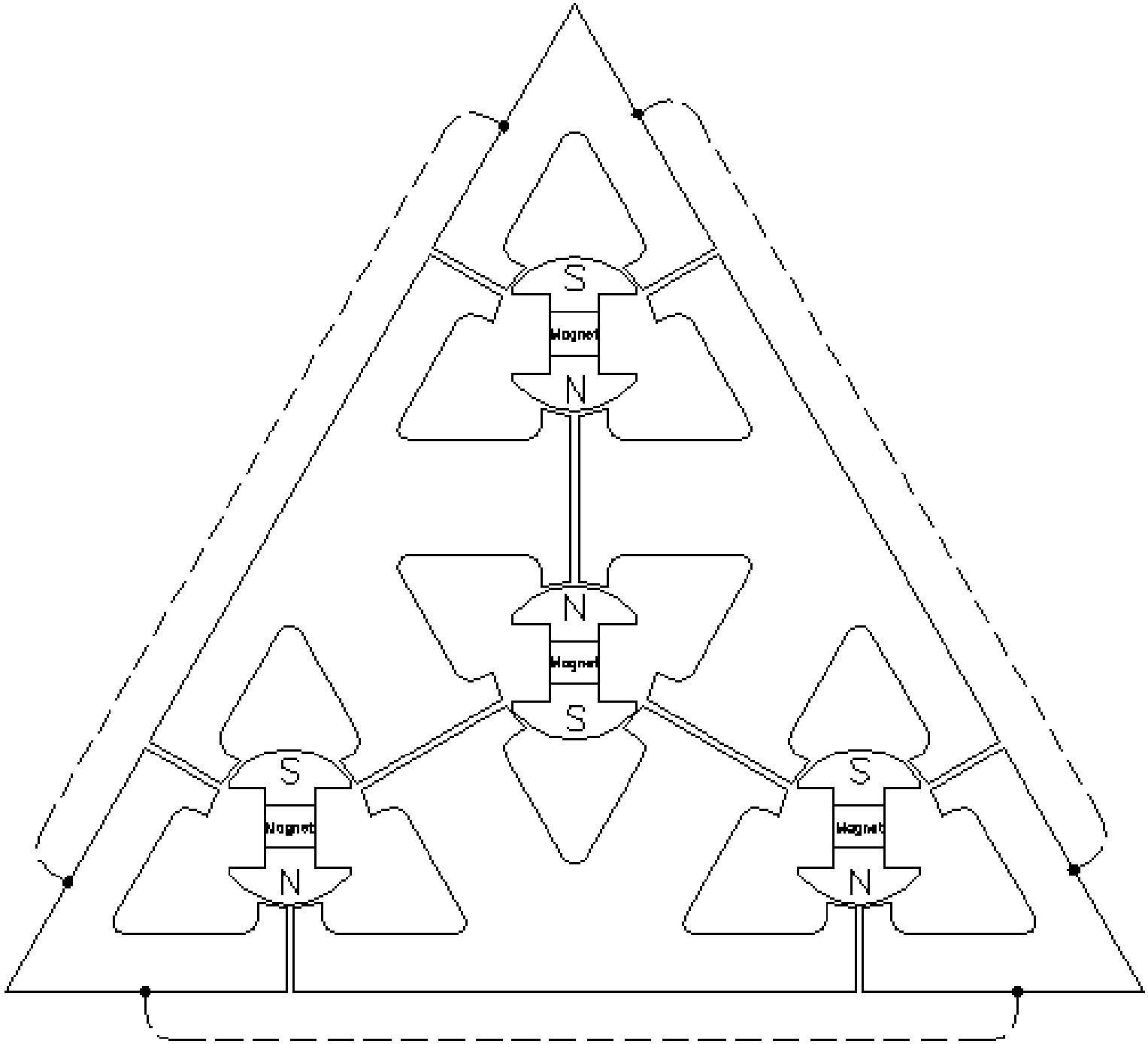


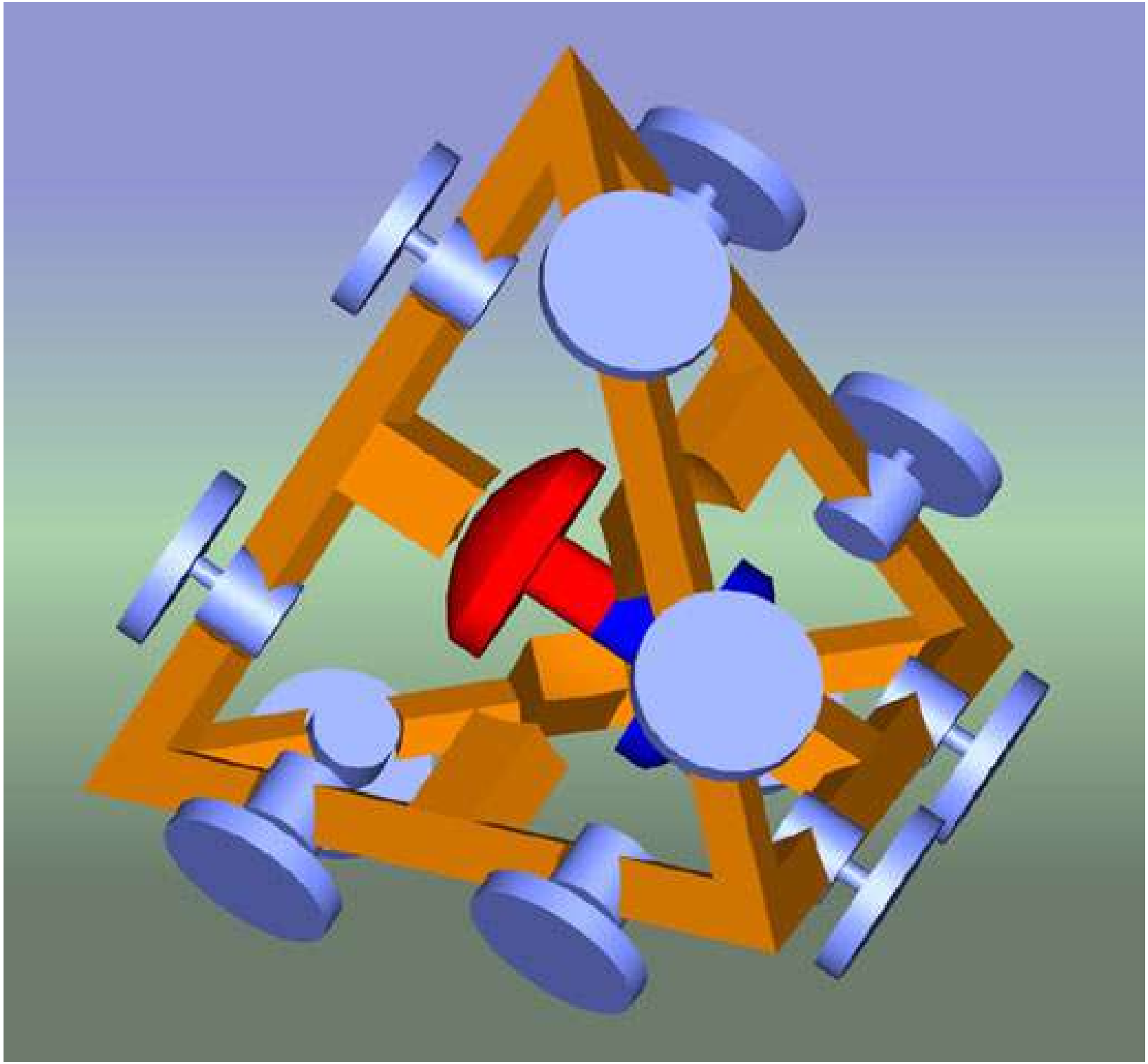

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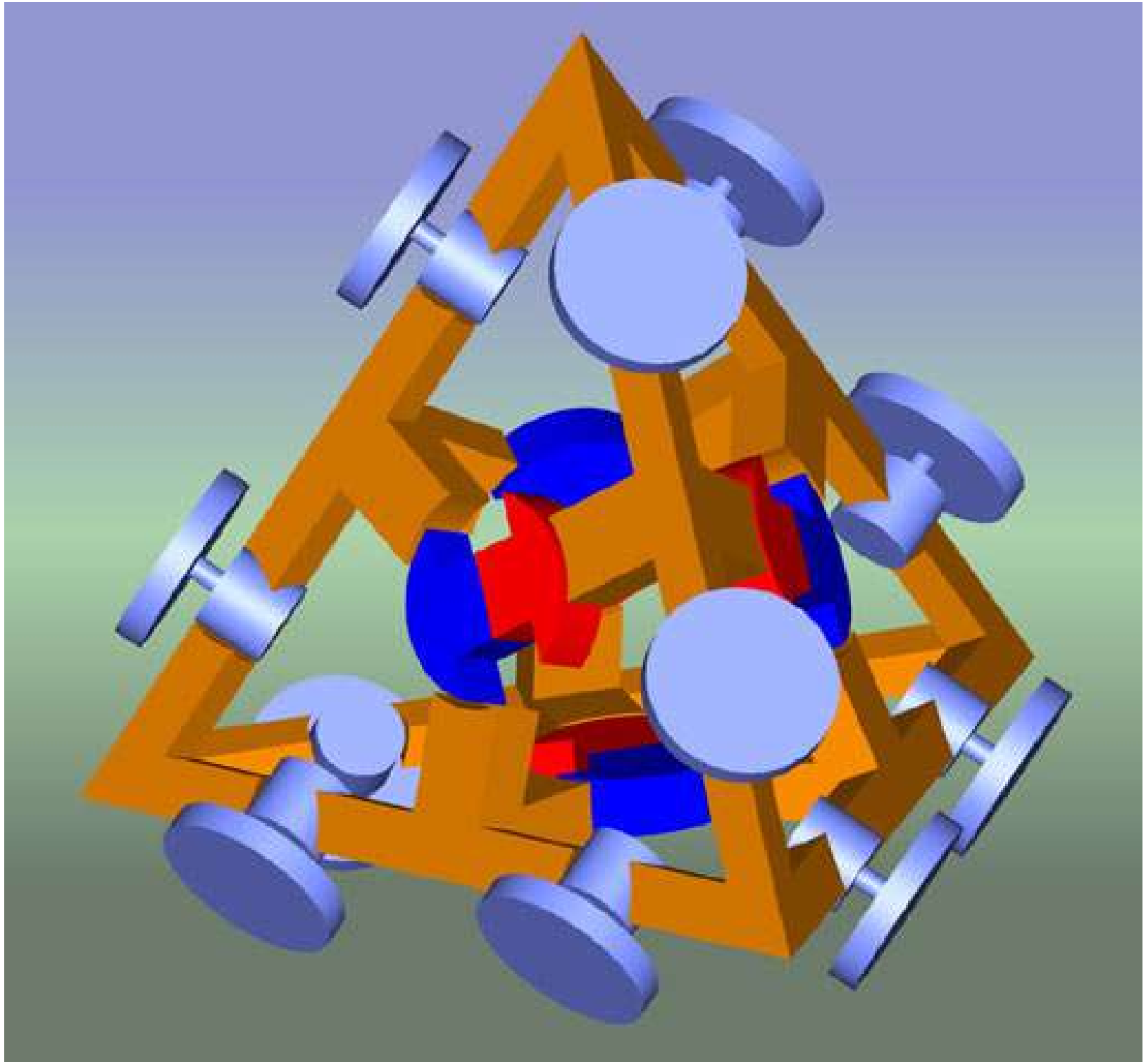

T
EACH BIOFRAME HIGHER THAN S''' IS CONNECTED, BY ONLY THREE ORTHOROTATIONS, TO LAB FRAME S.
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A PARTICLE IN ONE OF THESE FRAMES IS A "THOUGHT" OR "THOUGHTFORM" IN A MIND.
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partially material
virtual photon
virtual neutrino
MATTER (PARTICLE)
S'''
S'
S''
ELECTROMAGNETIC FIELD (PHOTON)
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MINDS (VIRTUAL)
(thoughts)
(thought-forms)
(bioenergy)

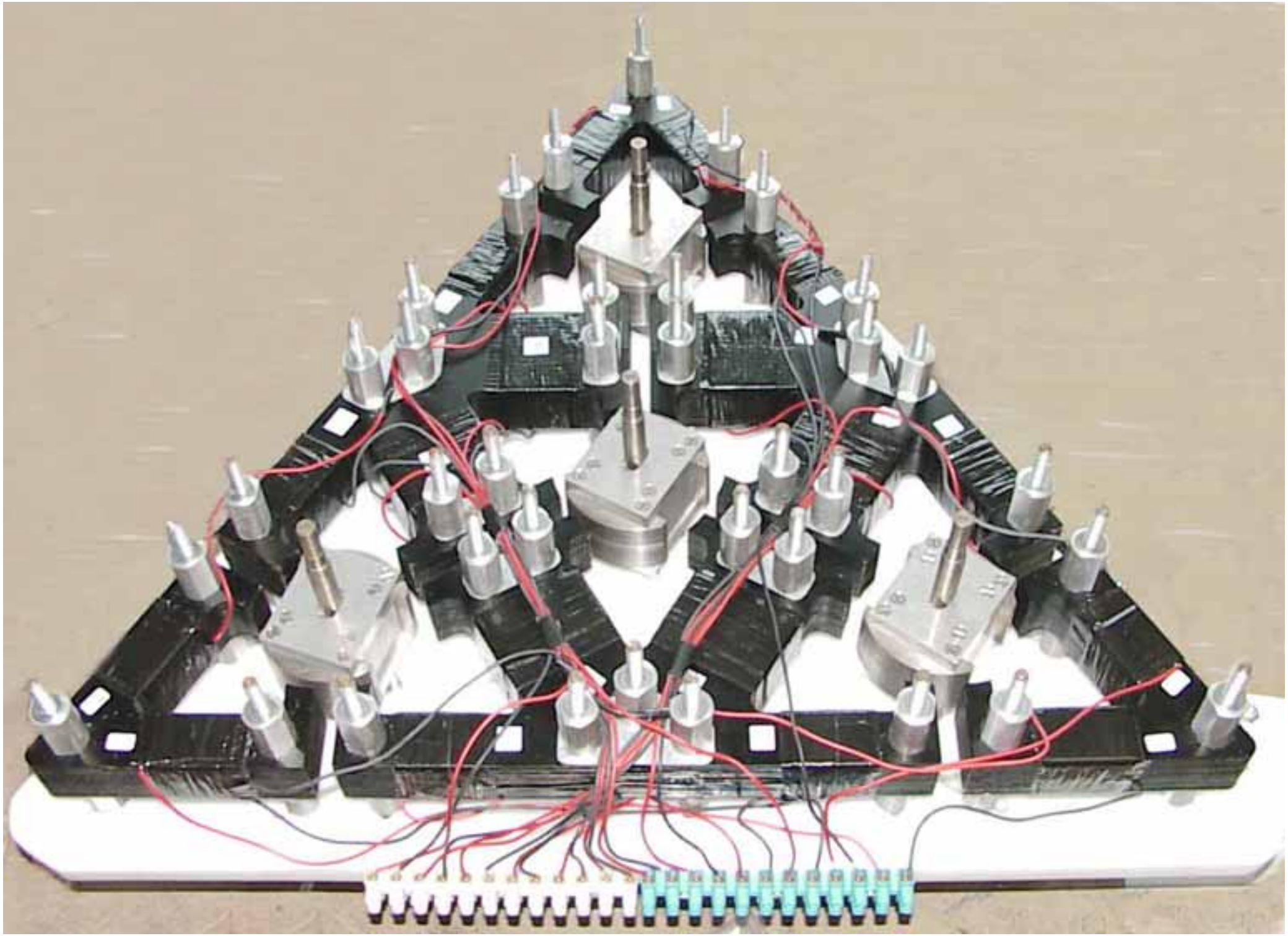


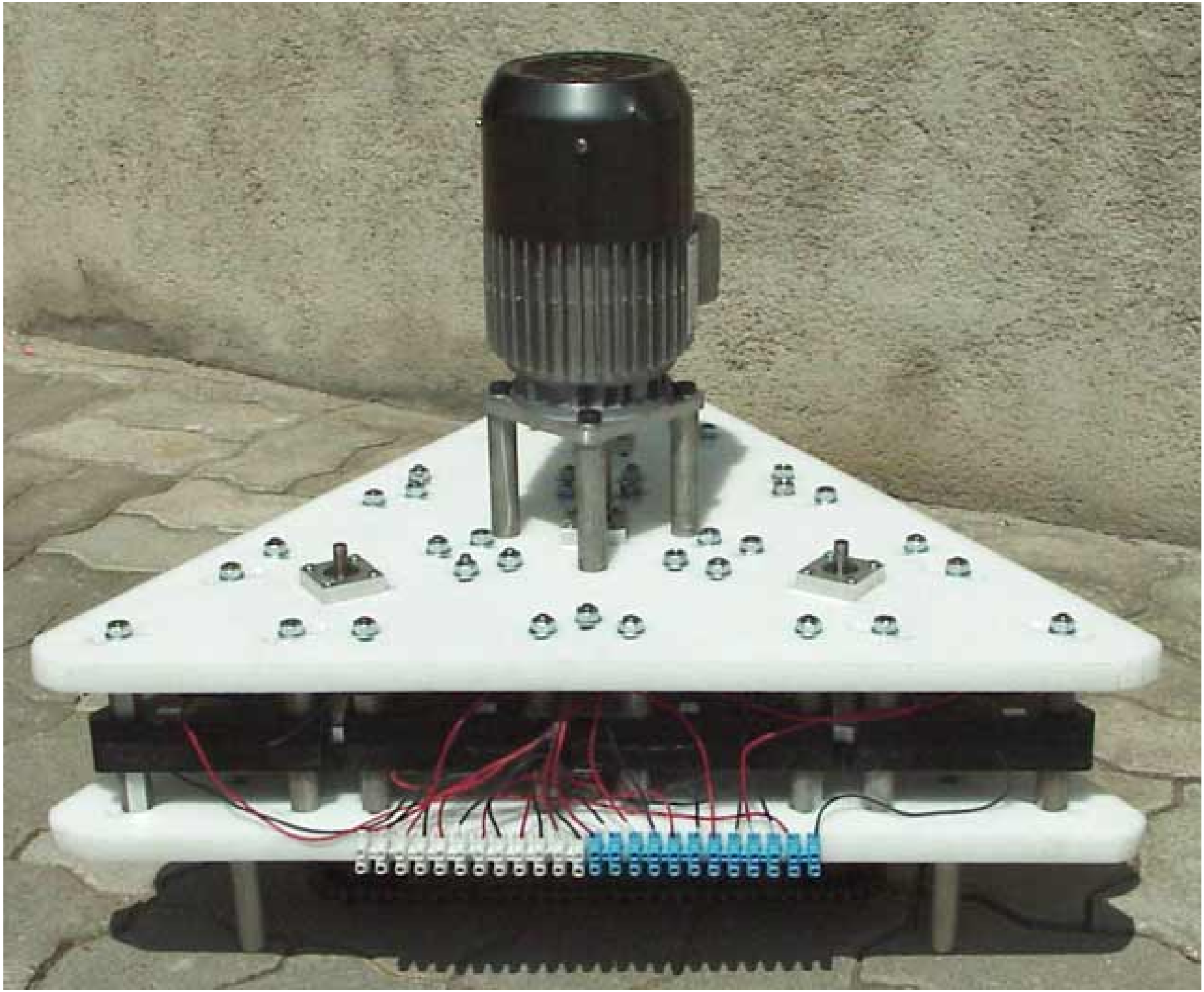

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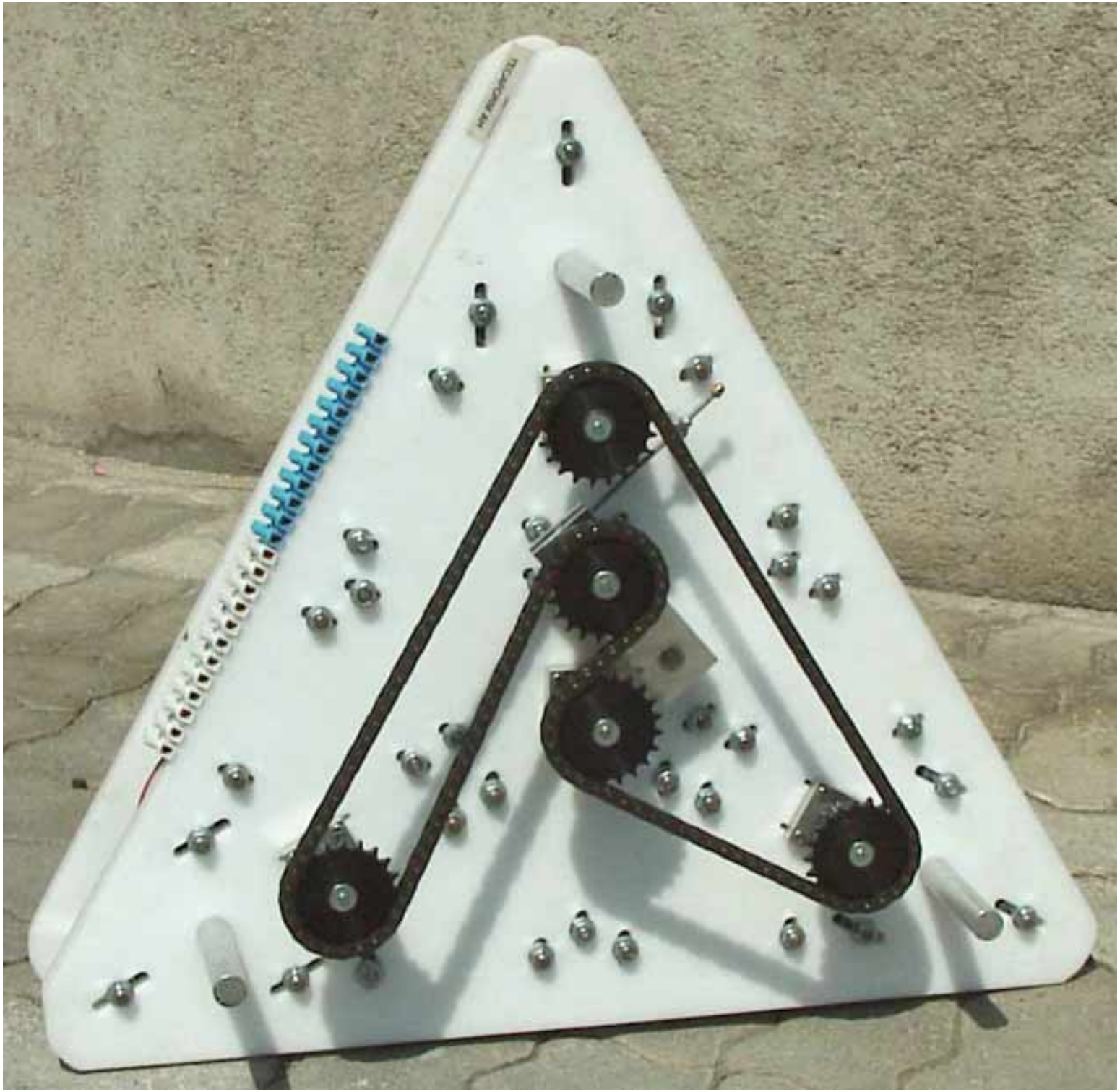

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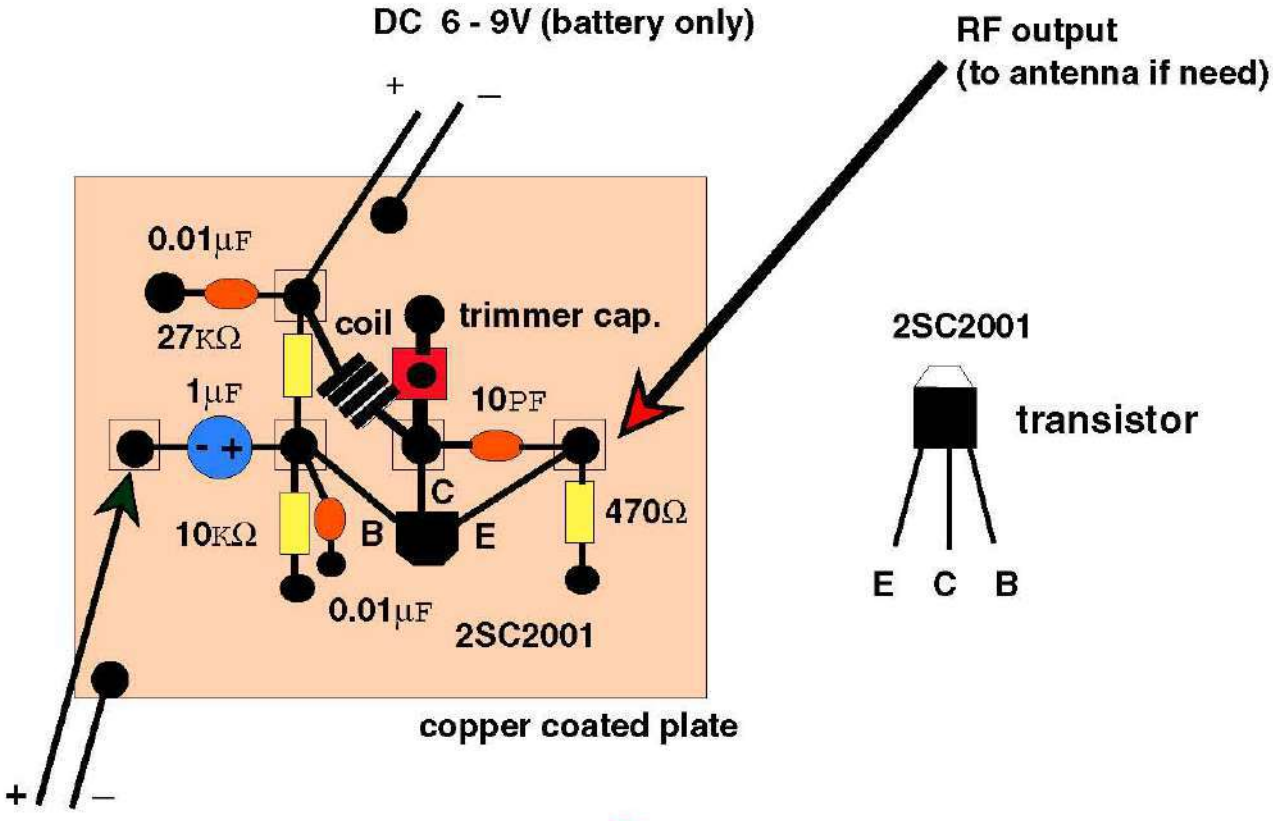








Making the simplest Transmitter



- soldered point:
  - : direct to the ground



  - : insulated from the ground



- coil
  3 - 4 turns by coated 0.8 mm wire


5 - 7mm

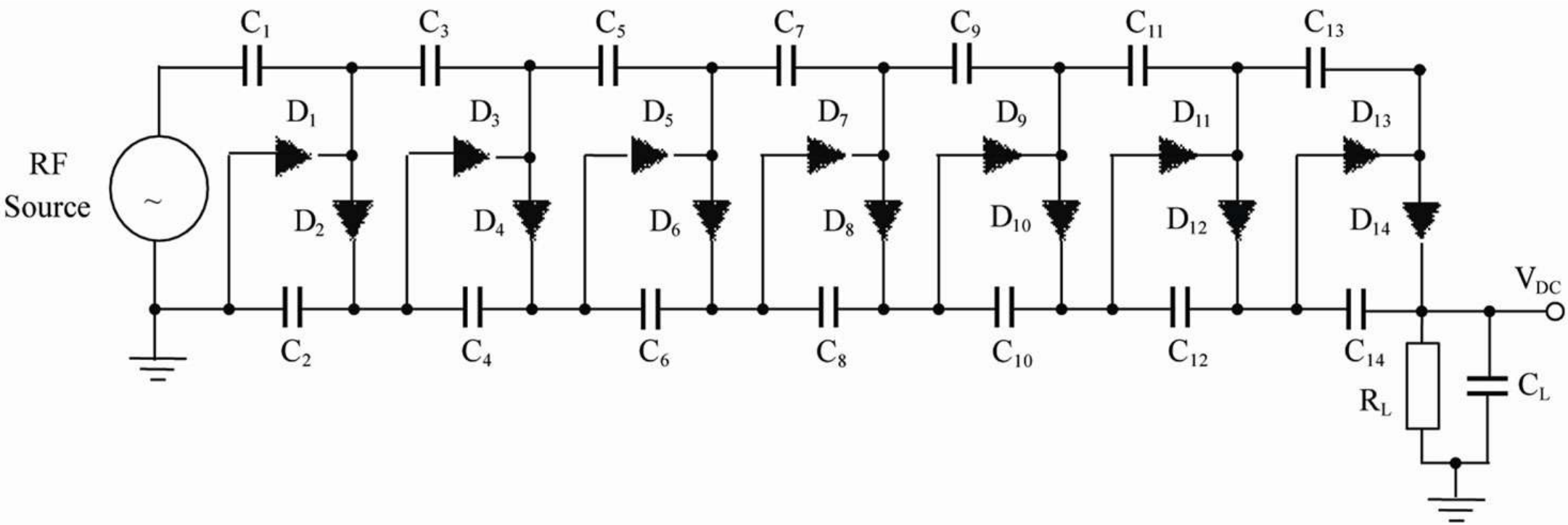


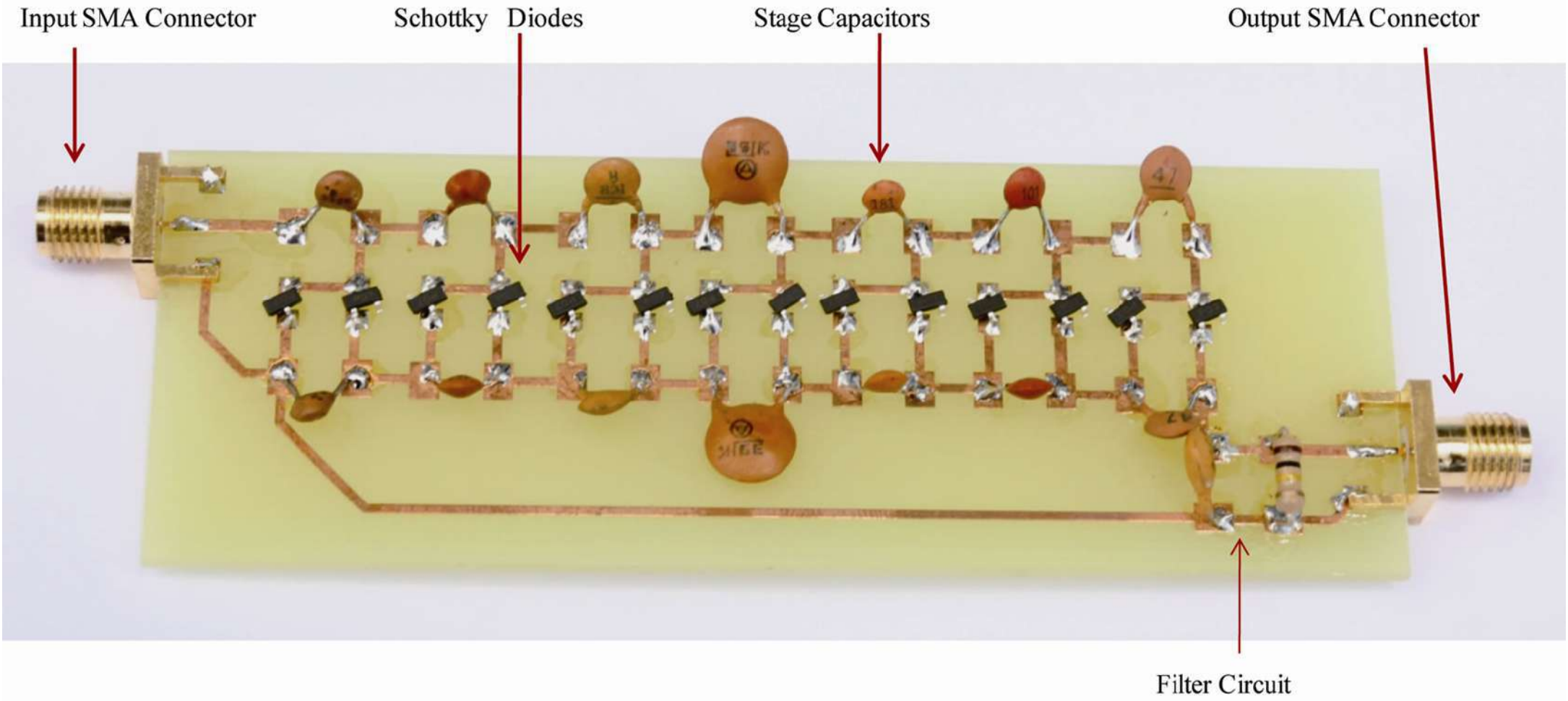
- registers
  470 Ω *(yellow-violet-brown)*
  10K Ω *(brown-black-orange)*
  27K Ω *(red-violet-orange)*

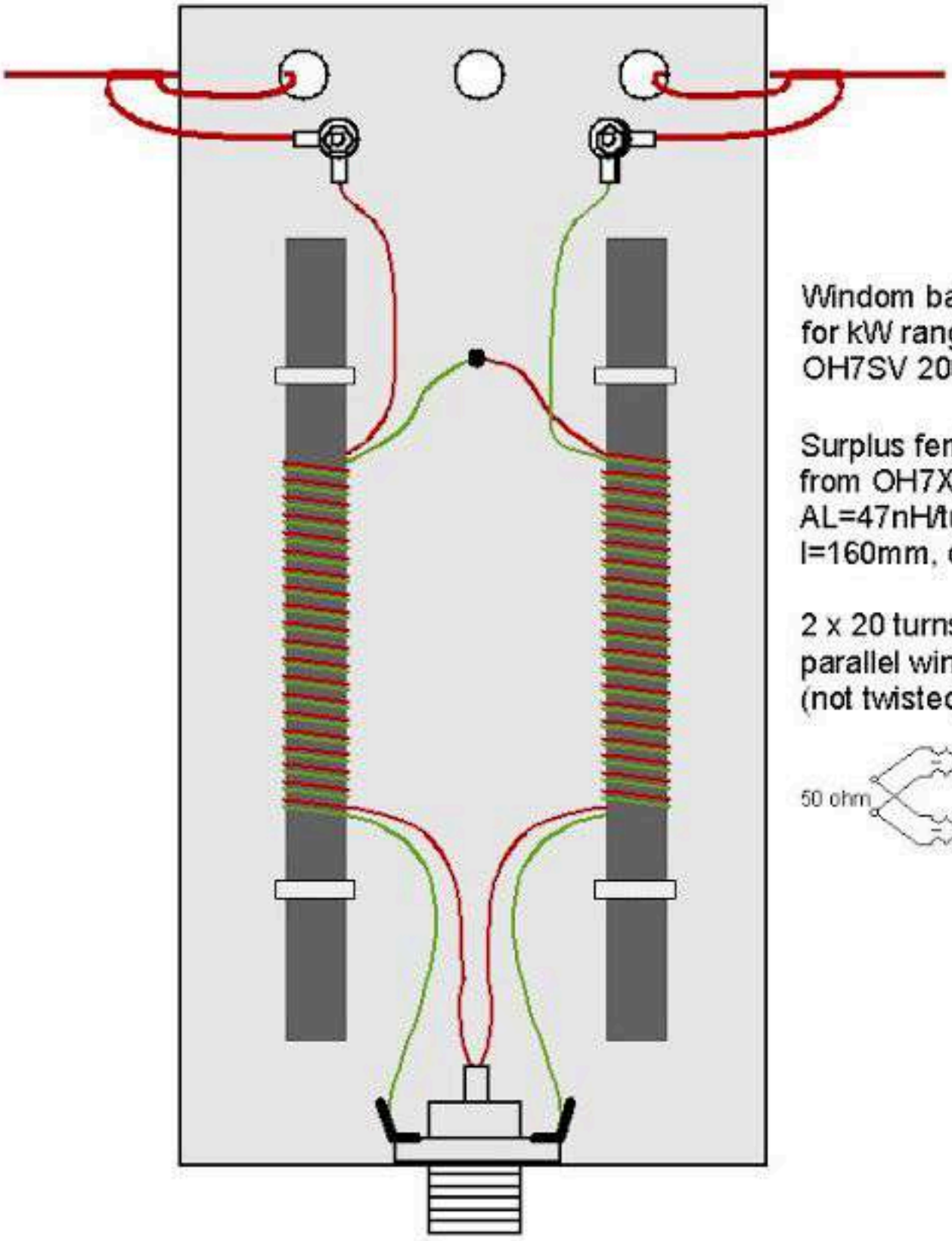
- capacitors
  10 PF
  0.01 μF *(103)*
  1 μF

- trimmer capasitor 20PF

2005-03-16 by Tetsuo Kogawa


C1
C3
C5
C7
C9
C11
C13
D1
D3
D5
D7
D9
D11
D13
RF
Source
~
D2
D4
D6
D8
D10
D12
D14
VDC
C2
C4
C6
C8
C10
C12
C14
RL
CL


Input SMA Connector
Schottky Diodes
Stage Capacitors
Output SMA Connector
Filter Circuit

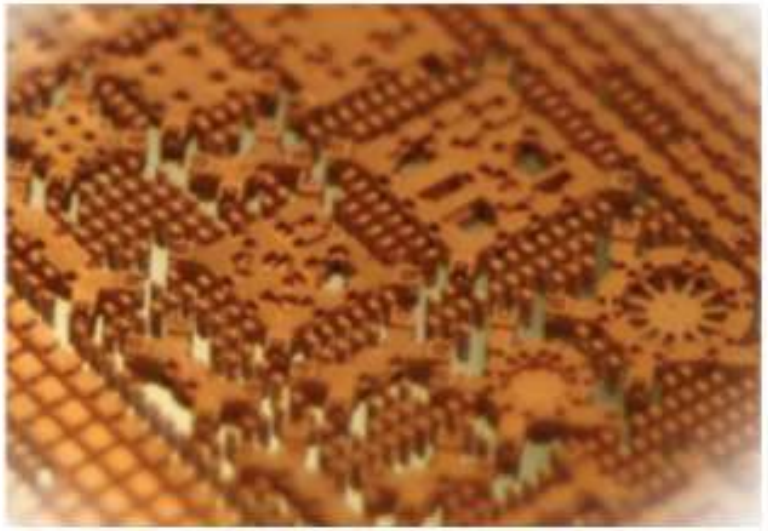


Windom balun
for kW range
OH7SV 2004-08-22

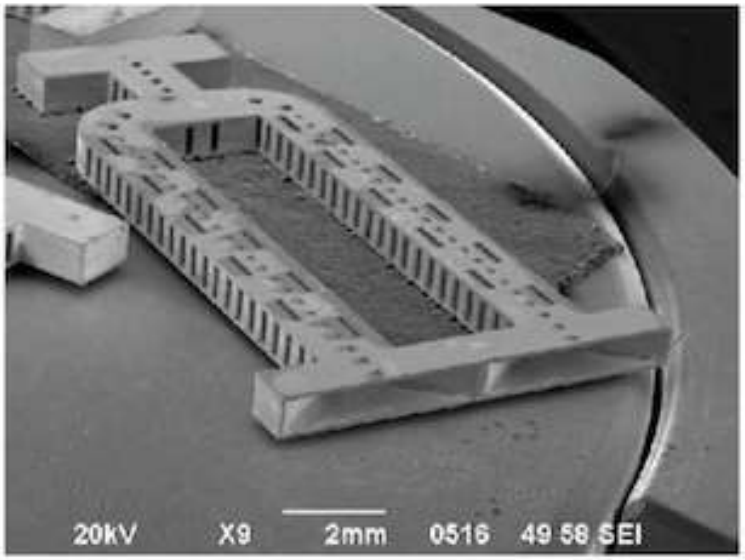
Surplus ferrite rod
from OH7XE
AL=47nH/turn
l=160mm, d=9mm

2 x 20 turns, 1mm cu
parallel winding
(not twisted)

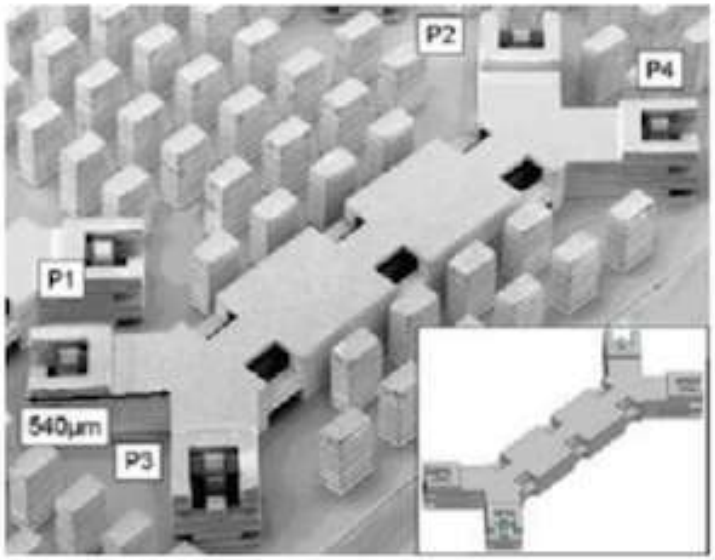
Three-dimensional micro-fabricated microwave and millimeter-wave circuits and antennas



Another active area of research has been in collaboration with Nuvotronics LLC (DAPRA and NASA) in the area of wafer-scale microfabricated coaxial lines and passive and active coaxial-based components. The advantages of these lines, fabricated by Nuvotronics, is extremely low loss into the millimeter-wave range, extremely good isolation of neighboring lines enabling high density circuits, broad bandwidth and low dispersion, and amenability for integration with passive and active surface-mount components. Our research goals are focused on design of completely new components in this technology, in order to push the bandwidth, power handling and flexibility for various communications and sensing applications. Some results include 22:1 bandwidth impedance transformers and 22:1 bandwidth power divider networks which operate up to millimeter-wave frequencies.





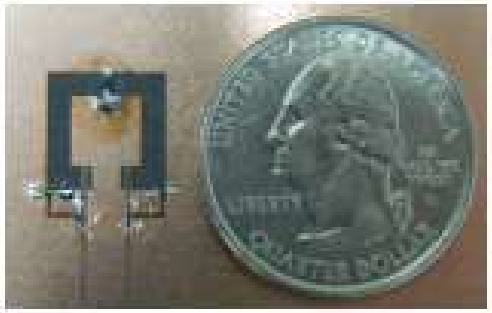


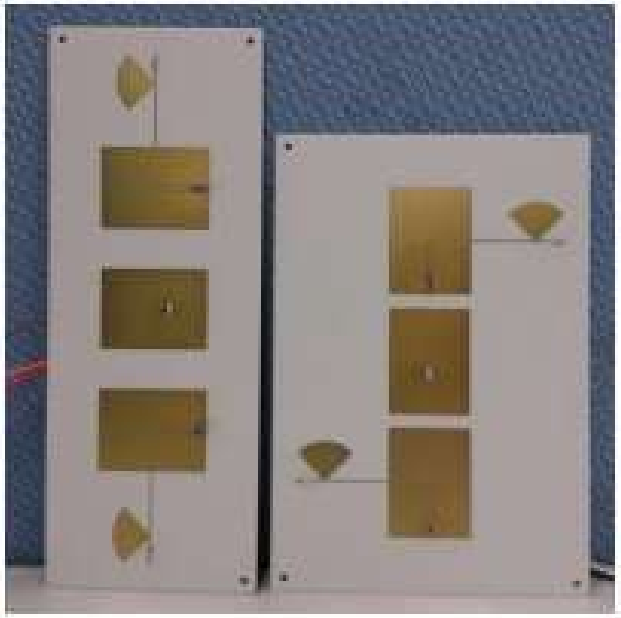
Wireless powering for battery-less sensors



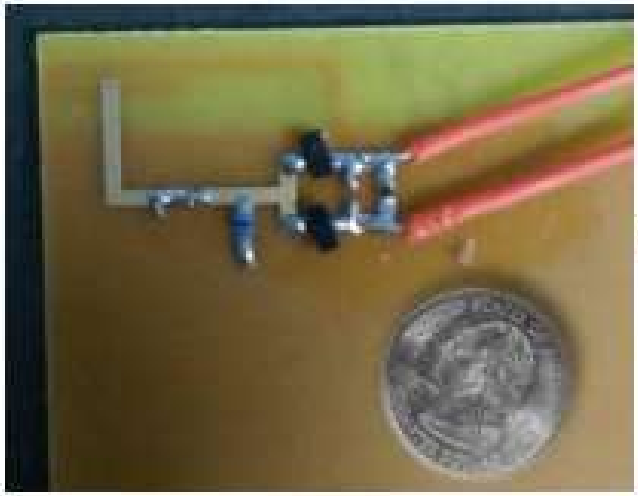
An area in which we have promising initial results, as well as a best paper award, is in RF energy harvesting and wireless powering of wireless sensors. This is an area with a strong collaboration with the Colorado Power Electronics Center (CoPEC), with strengths in low-power management design. The work resulted in a comprehensive patent application and licensing of the IP by several companies, e.g. Cymbet. The applications are for low-maintenance batteryless sensors for manufacturing environments, structural monitoring, and healthcare. We have shown that broadband statistically varying randomly polarized background microwave radiation can be efficiently rectified and the stray energy stored over time for useful electronic applications. We have also shown that FCC-compliant low-power transmitters can be strategically placed to enable constant very low power density energy delivery and storage. Our goals related to this research are to improve the integration of our current hybrid demonstrations, and to expand the circuit-antenna library so that we can address many concrete applications with the best-suited architecture.

- *Reconfigurable antennas*





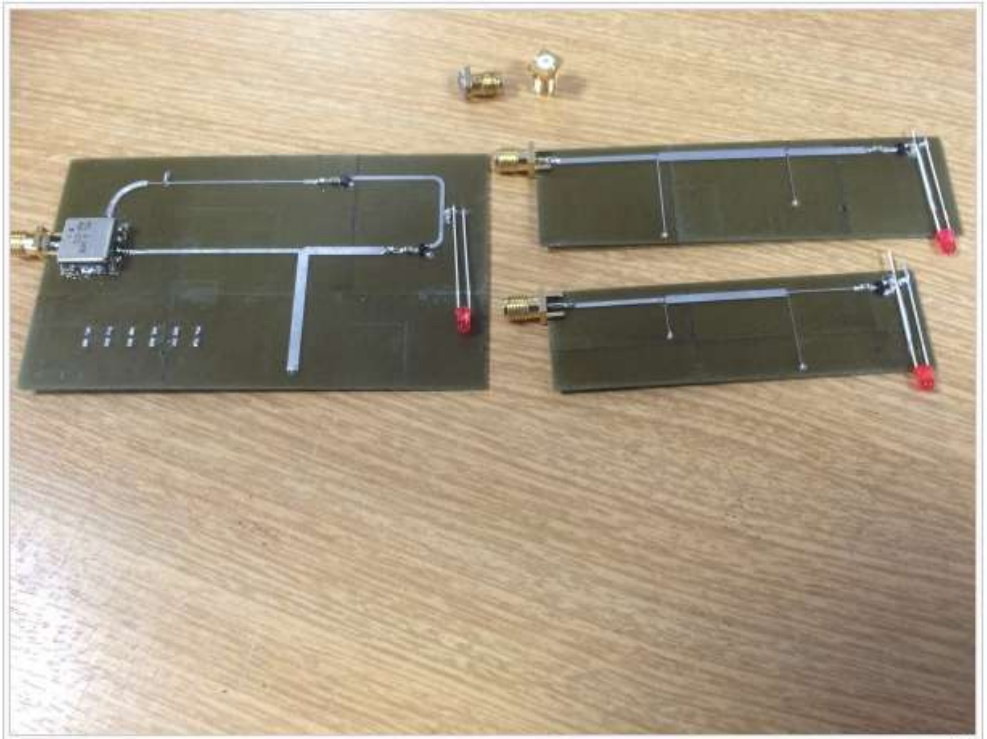
- *RF energy harvesting*



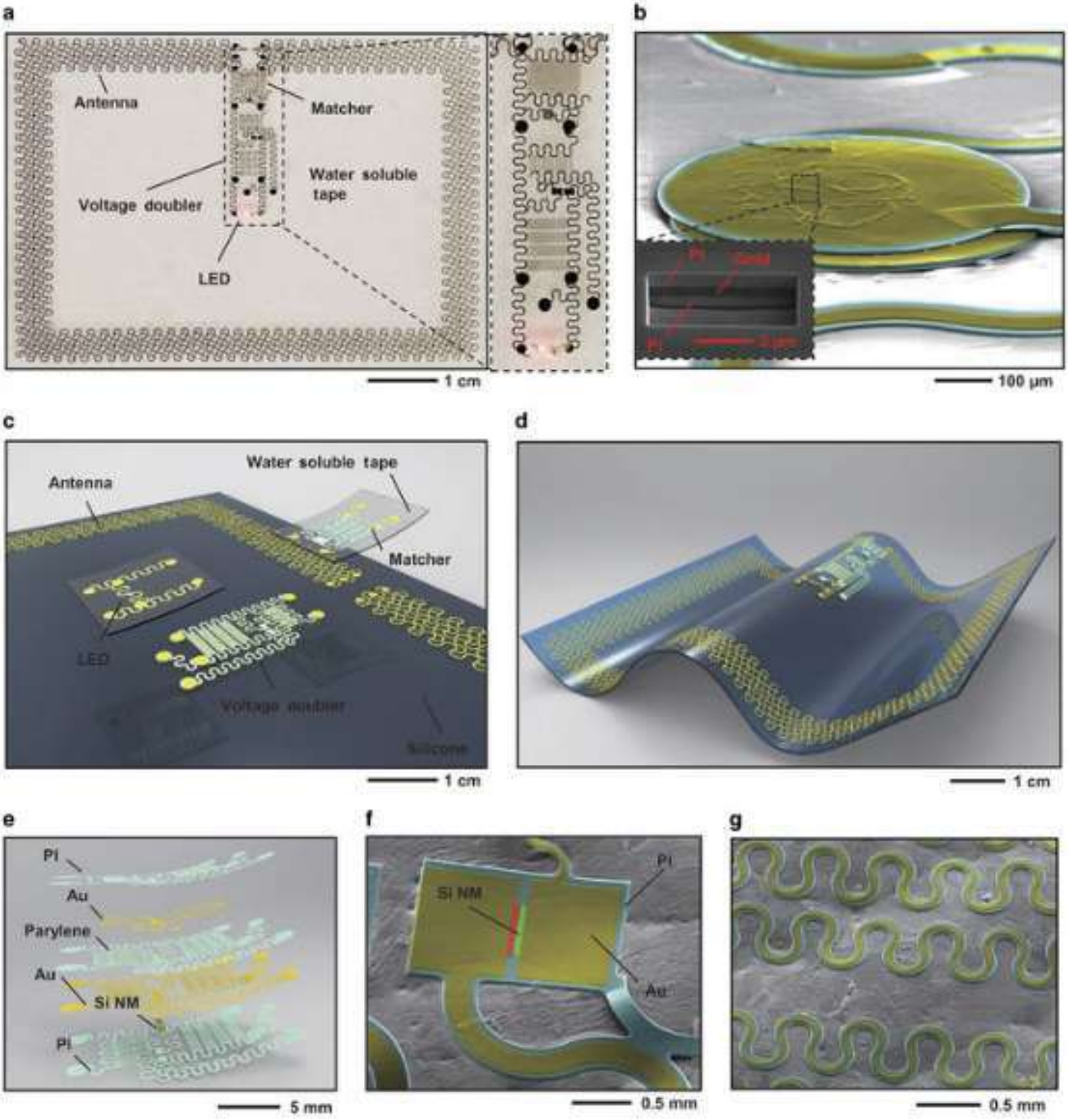


Rectifier Circuit

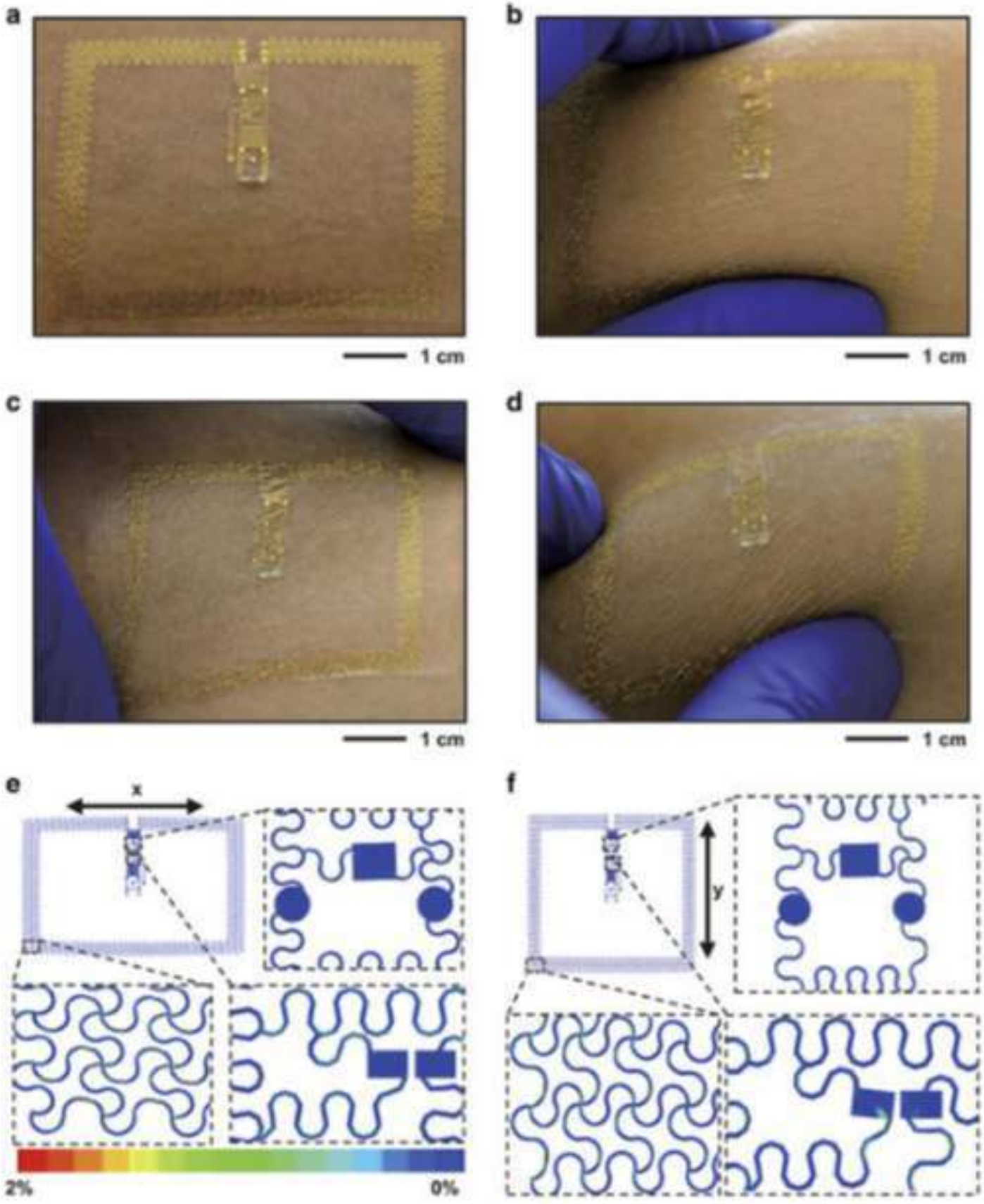
A RF-to-DC rectifier circuit converts collected RF energy to DC electricity. The designed circuit is a half wave voltage doubler circuit with a impedance matching network that matches the rectifier's input impedance to 50Ohms for maximum power transfer or minimum power reflection.



3 prototypes of rectifier circuit

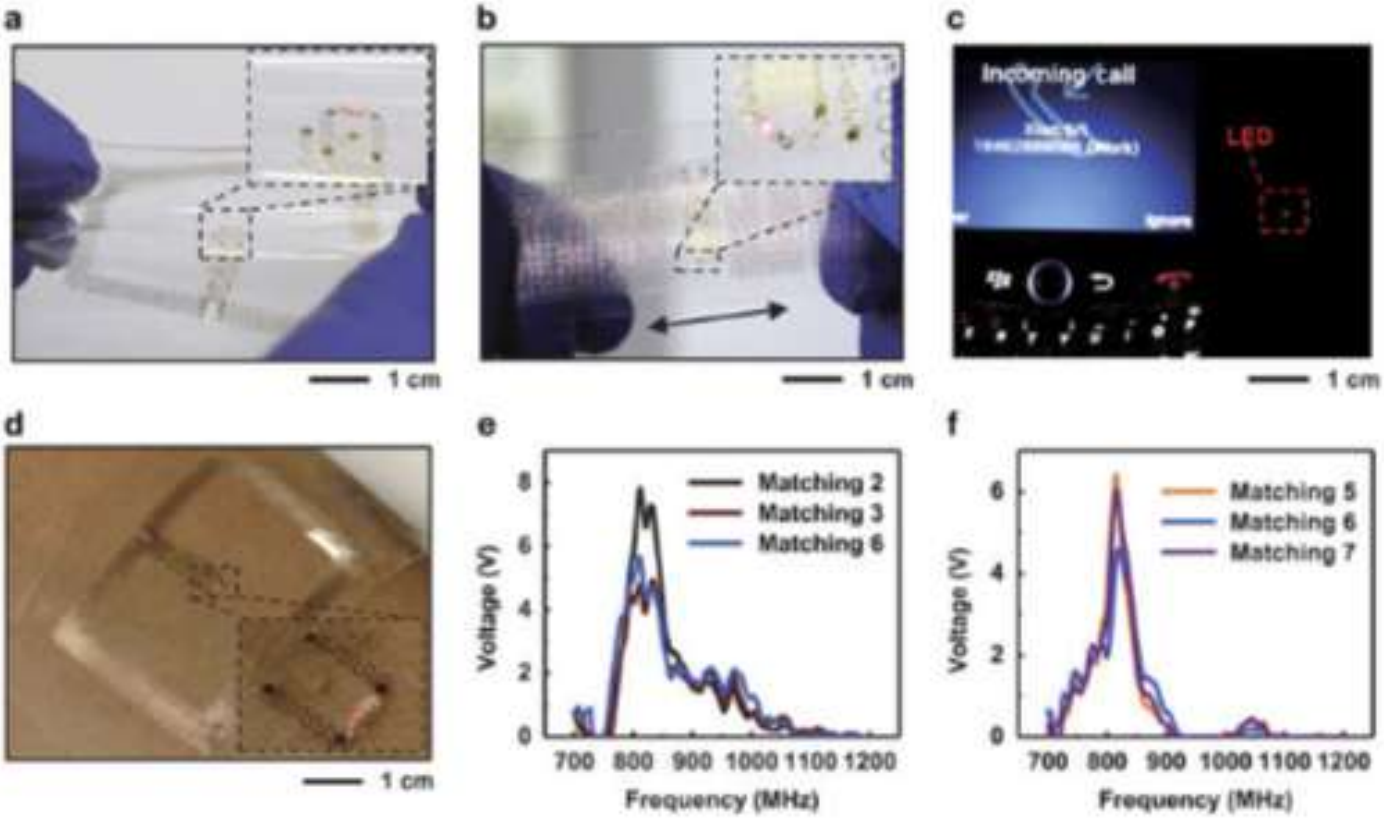


Schematic illustration and implementation of a modularized epidermal RF system for wireless power transfer. (**a**) Image of device while operating an integrated LED via power delivered by a remote RF source (15 W, 1.5 m). The loop antenna, formed with serpentine conductive traces in a square layout, spans the perimeter. The inset on the right highlights the collection of active components. (**b**) Top view SEM image of aligned gold pads whose



Mechanics of an epidermal RF system. Pictures of an epidermal RF system integrated on the skin (**a**) in its native state, (**b**) during compression by pinching (**c**) under uniaxial stretch and

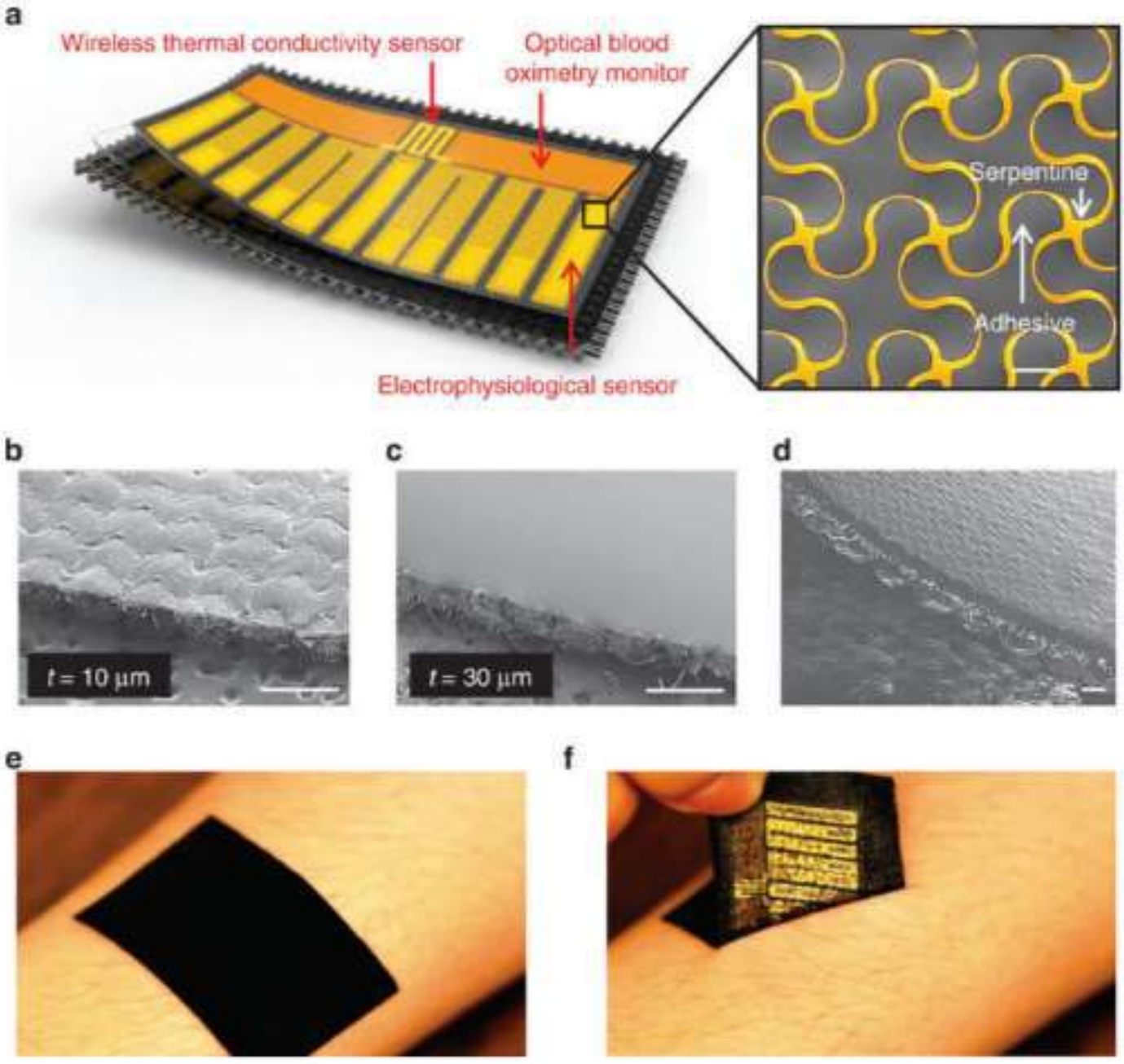
Figure 5



Demonstration of RF wireless power transfer. Epidermal RF system operating while (**a**) twisted and (**b**) repeatedly stretched. (**c**) Demonstration of the use of an epidermal RF system to capture RF output from a cell phone to supply power to an LED. (**d**) Epidermal RF system powering a red LED while on the skin using RF transmitted by a remote source (15 W, 1.5 m, 700 MHz–1.5 GHz). Open-circuit voltage output (**e**) in air and (**f**) on skin when implemented with different matching components.

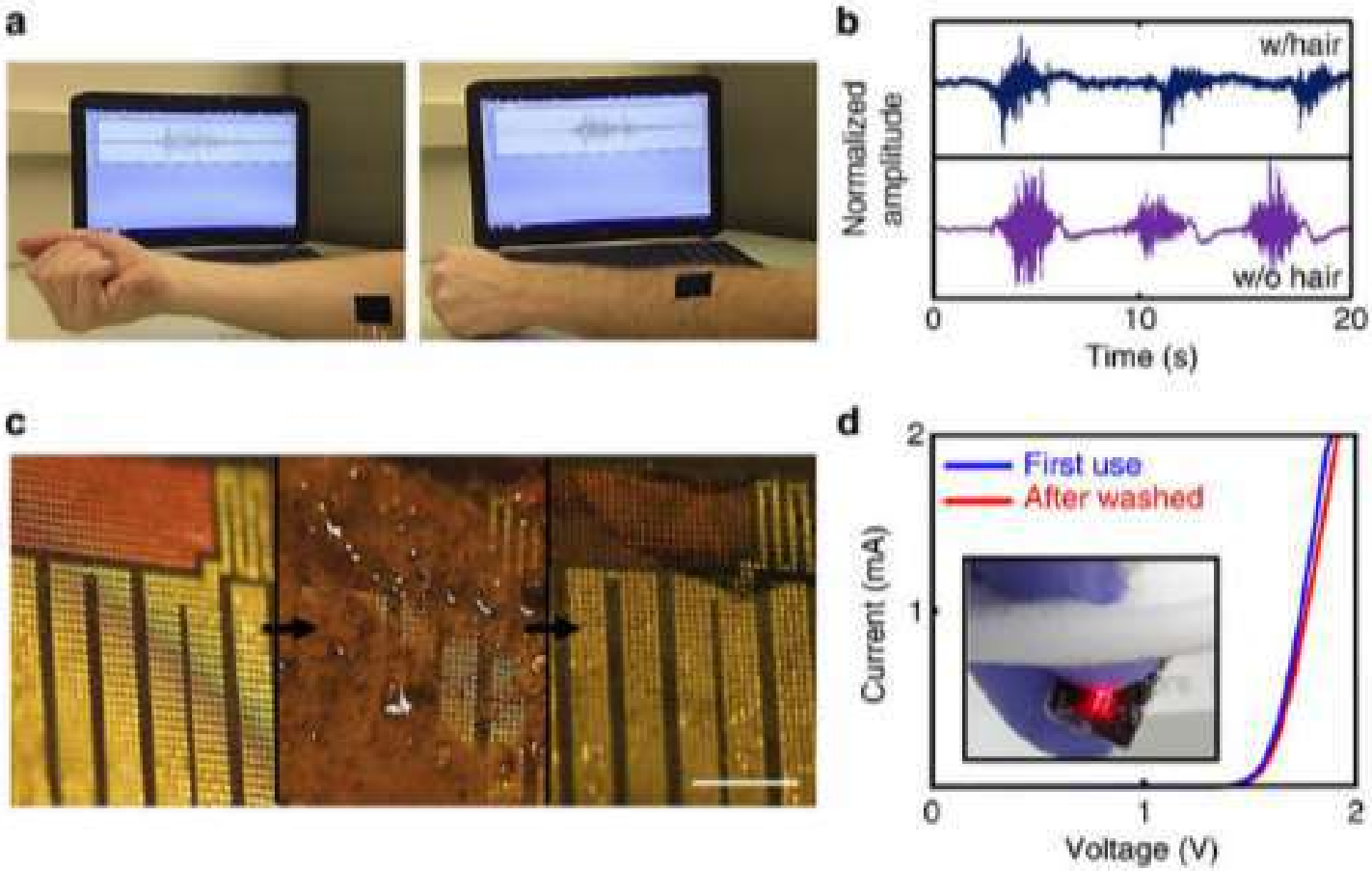
Full size image »

stretchable electronic systems.

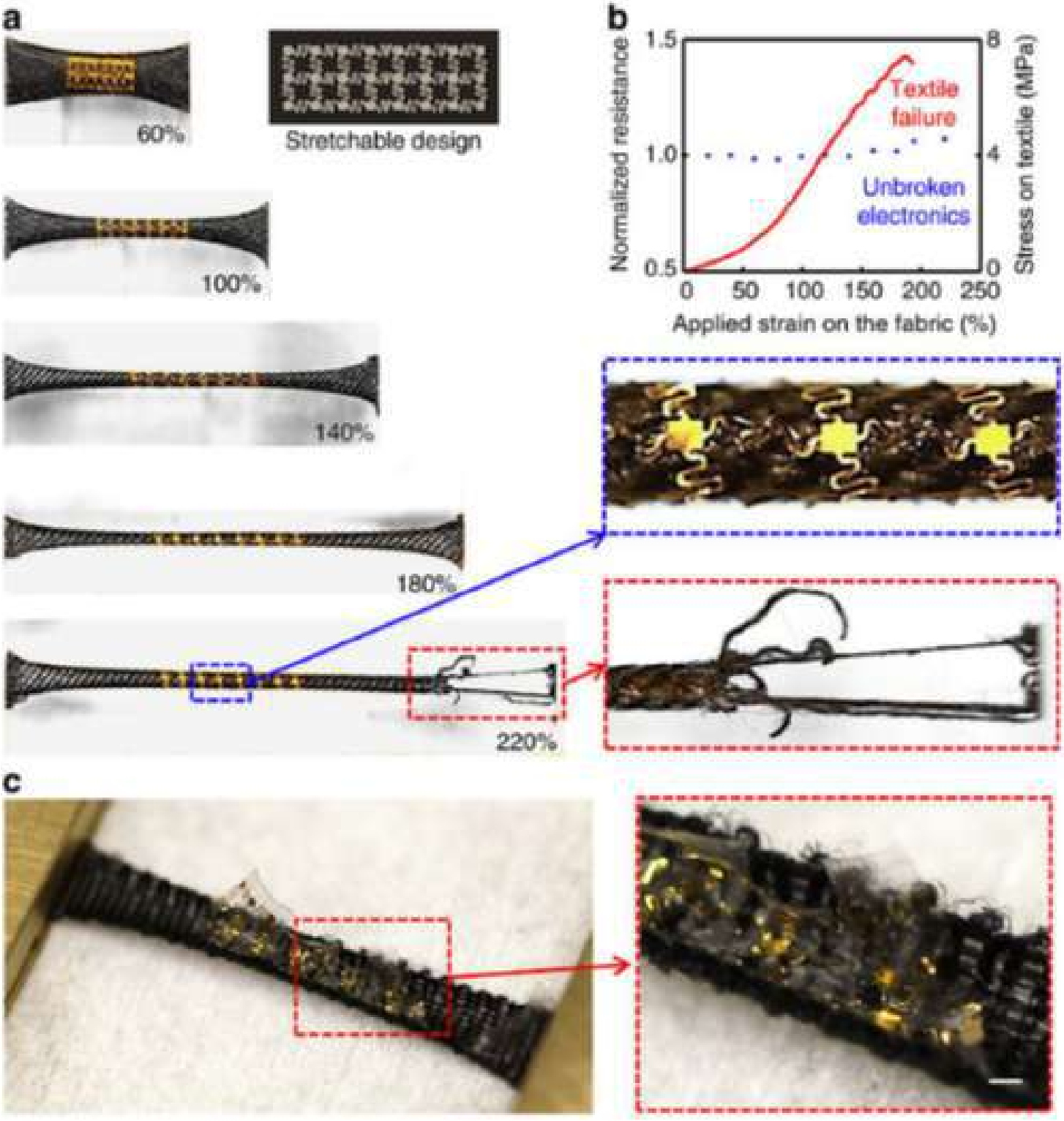


(a) Illustrations of the various layers in a representative system, including the active electronics (~5 μm thick), an ultralow modulus elastomer coating (~100 μm thick) and a stretchable fabric (~1 mm thick; 90% nylon, 10% spandex). The active electronics layer includes a wireless thermal conductivity sensor, a blood flow monitor and an EP sensor. The magnified view shows the FS structure of part of an EP sensor, as a coloured scanning electron micrograph (SEM; gold corresponds to the conducting traces, scale bar, 100 μm).

Figure 2: Capabilities for applying device to the skin with hairs and washing.

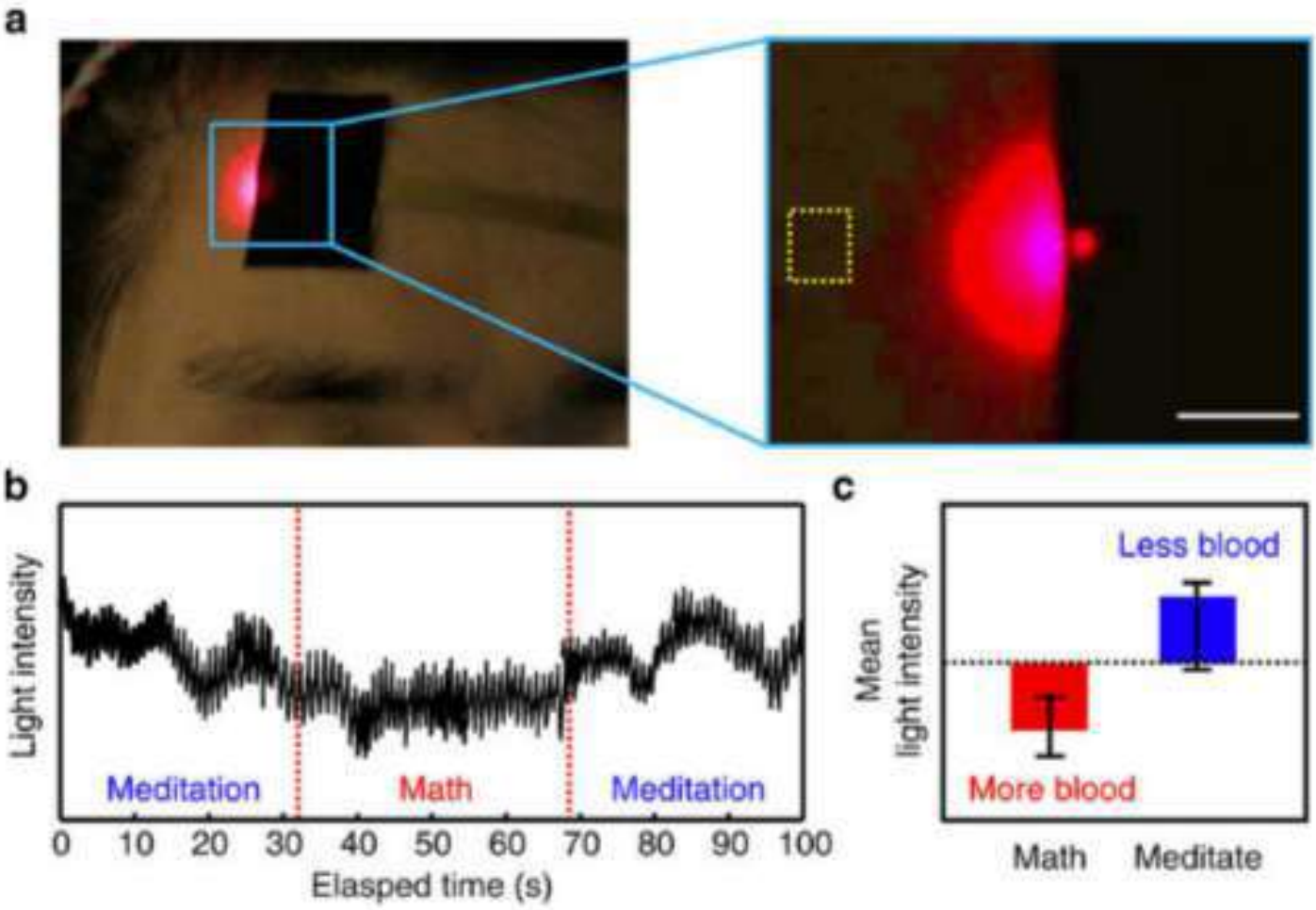


EMG measurement setup (**a**) and data (**b**) from inside (w/o hair) and outside of the forearm (w/hair). (**c**) Optical images (scale bar, 1 mm) of cleaning with soap and water: as-fabricated device (left), after contamination with dirt (center) and after washing with soap and water (right). (**d**) Current–voltage characteristics of an AlInGaP microscale inorganic LED module associated with the blood flow monitoring after first use and after washing. The image in the inset shows the device immersed in soapy water.



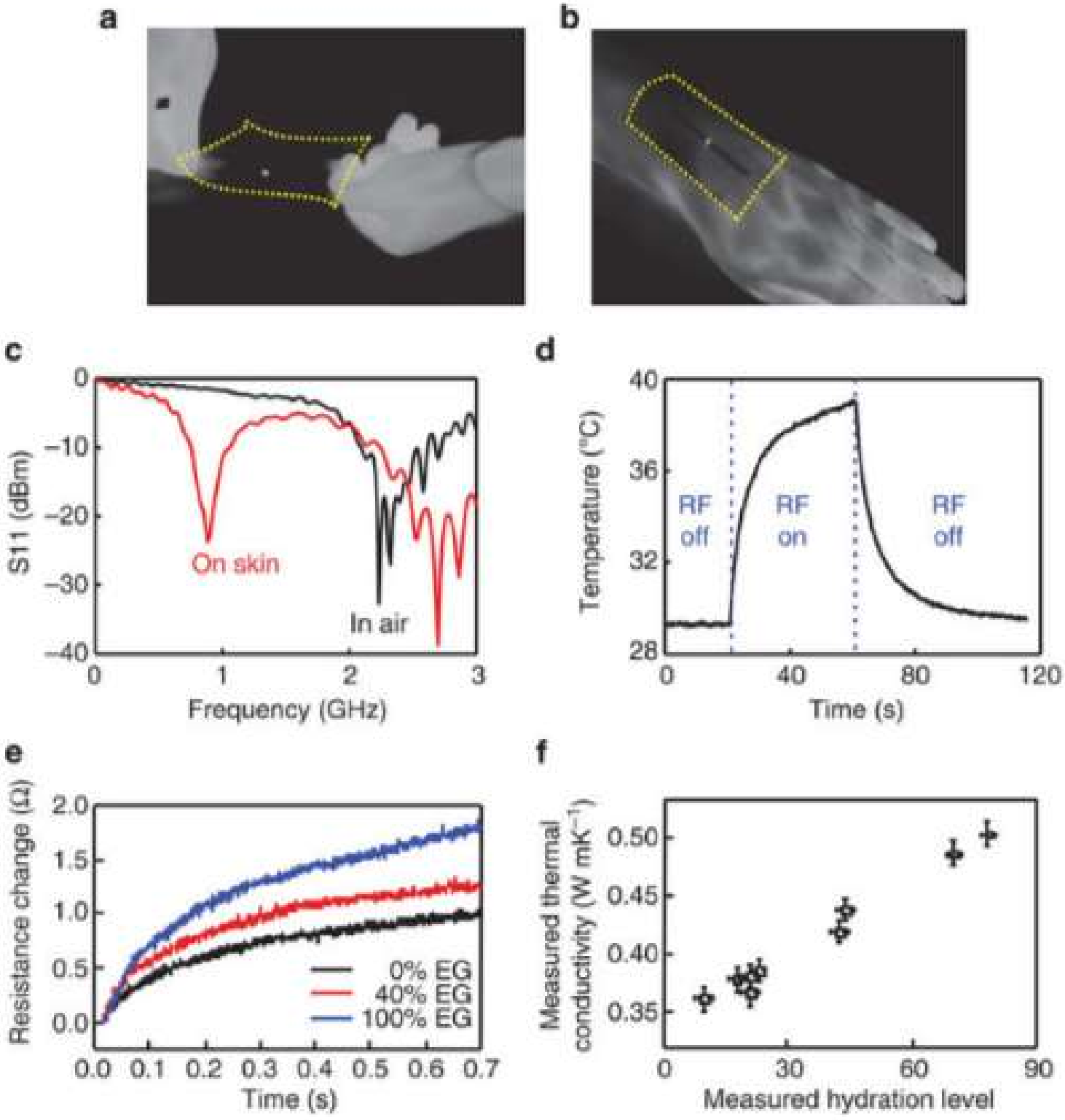
(**a**) Device integration with UL-Sil coating (E=3 kPa), Optical images of a stretchable electronic test structure (thickness ~2 μm) at increasing levels of uniaxial stretching. Magnified views of unbroken electronics (blue dotted box) and torn fabric (red dotted box) observed at an applied strain of 220%. (**b**) Normalized electrical resistance (left y axis) and

Figure 6: Functional demonstration of cerebral oximetry.



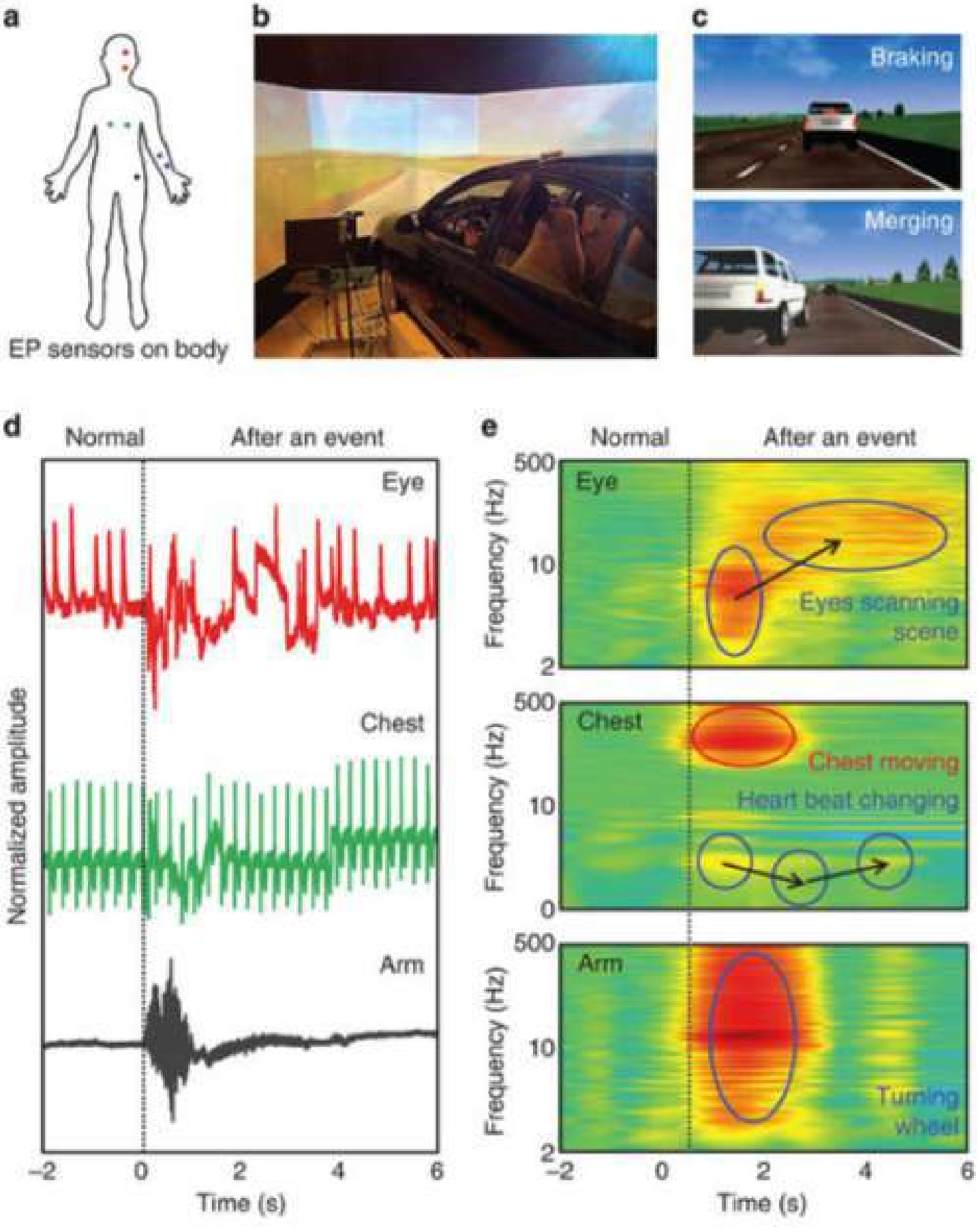
(**a**) Image of a device laminated on the skin of the forehead, with an operating μ-ILED (wavelength 650 nm) under room light illumination and in the dark. Scale bar, 1 cm. Light intensity integrated over the region indicated by the yellow dotted box of the right frame of (**a**), plotted as a function of time (**b**). (**c**) Scattered light intensity during mental math and rest, mean centred, smoothed with a moving window and averaged over time for each condition. Error bars denote +/−1 s.d. of the signal over time in each condition. Reduced intensity during mental activity is consistent with increased light absorption induced by additional blood flow in the cerebral cortex.

Figure 7: Wireless evaluation of skin thermal properties.



IR images of a wireless heating device, collected during exposure to RF energy, in a free-standing state (**a**) and mounted on the wrist area (**b**). (**c**) S_{11} coefficient measured from the wireless heating element, evaluated in air and on human skin. (**d**) Transient control of temperature on the skin using the wireless heating element, and measured using an IR

Figure 8: EP monitoring of a human subject in a driving simulator.



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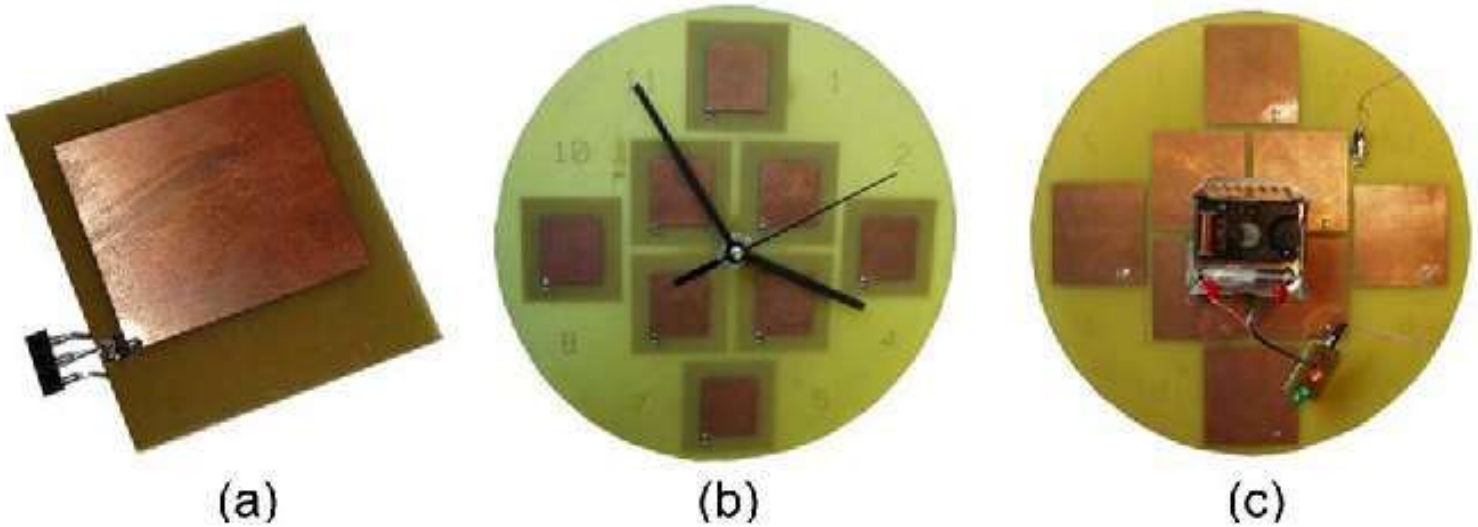


Fig. 16. Wirelessly RF powered wall clock. (a) Rectenna element. (b) Front view of the clock with eight rectenna elements. (c) Back view of the clock showing the separate rectenna element's ground planes.

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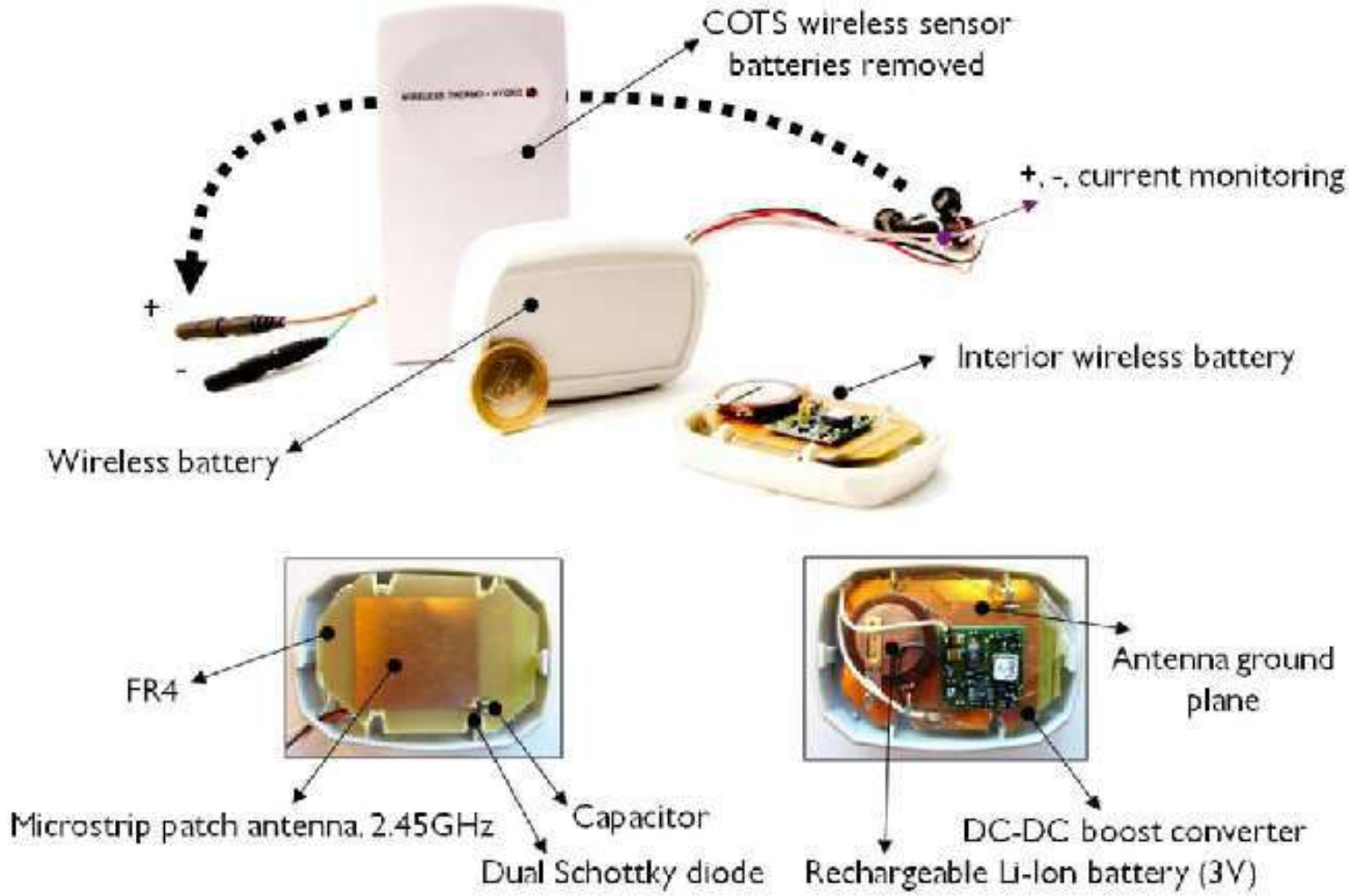


Fig. 20. Packaged 2.45-GHz remote RF battery charger and COTS 433-MHz temperature and humidity sensor. 433-MHz base station not shown.

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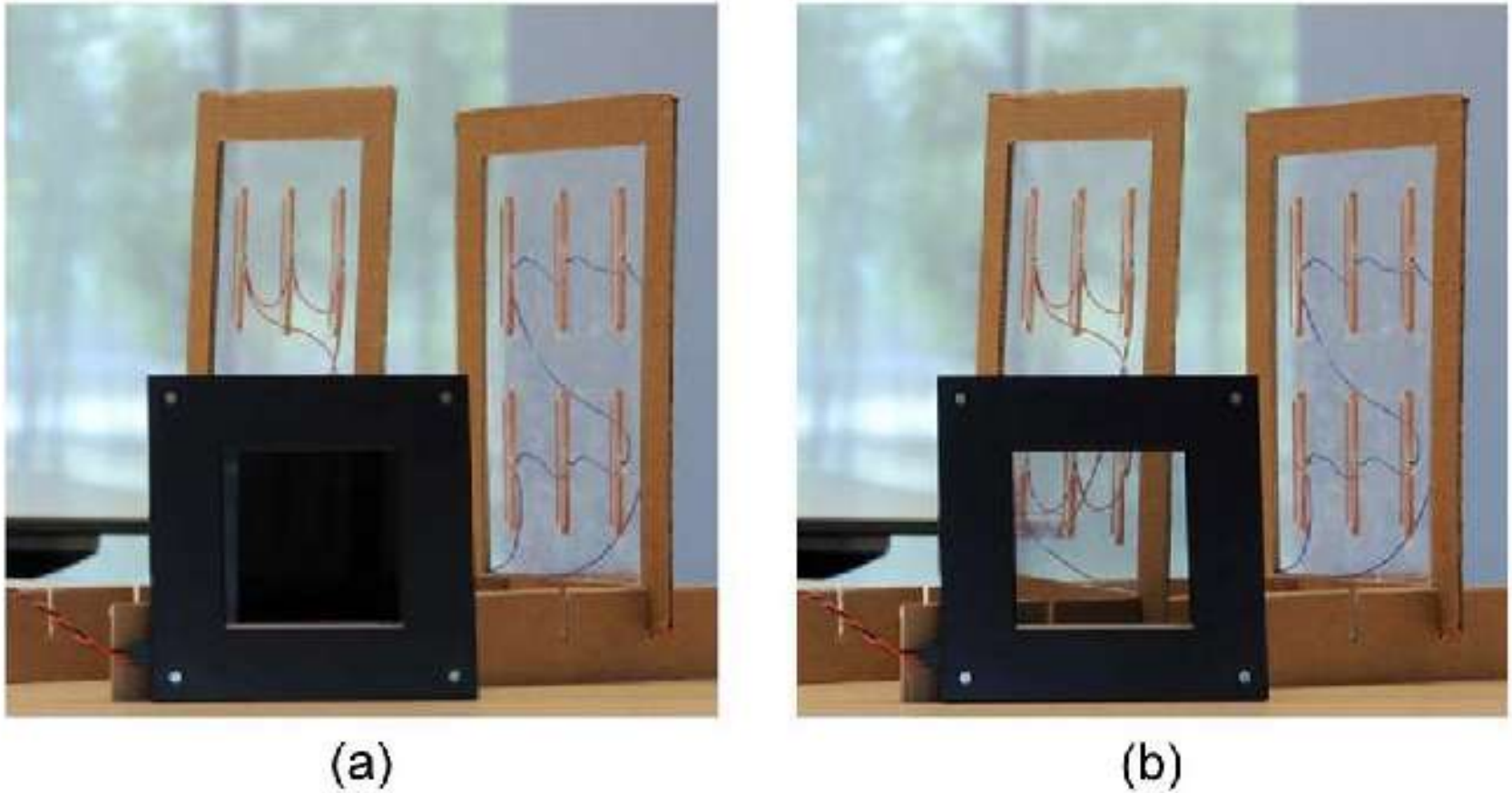


Fig. 17. E-skin. (a) No voltage supplied: E-skin panel is opaque. (b) Voltage supplied: E-skin panel is optically transparent.

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Fig. 21. Wireless energy transport measurement setup. By optimizing the receiver location, a battery may be charged up to 18 m from the source.

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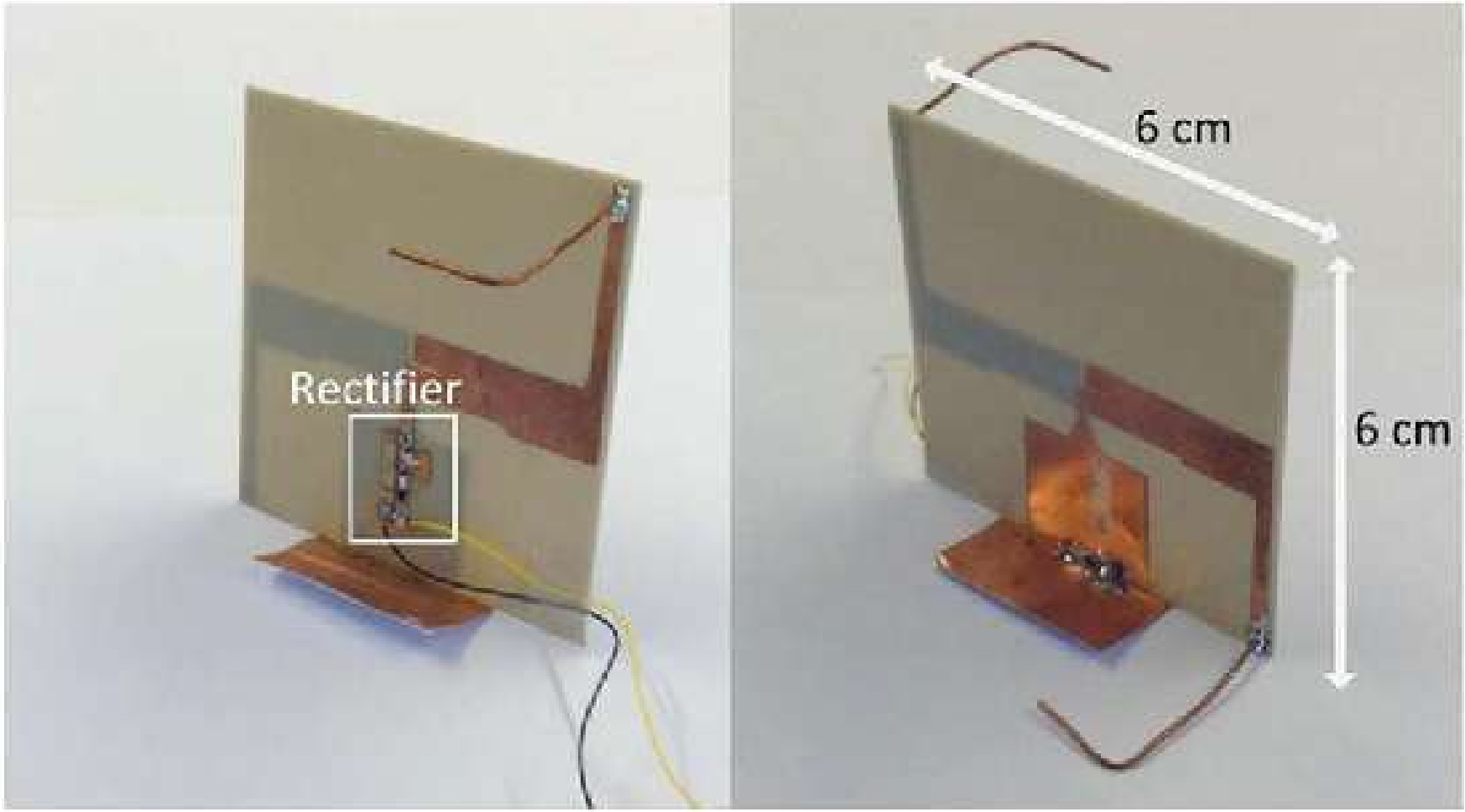
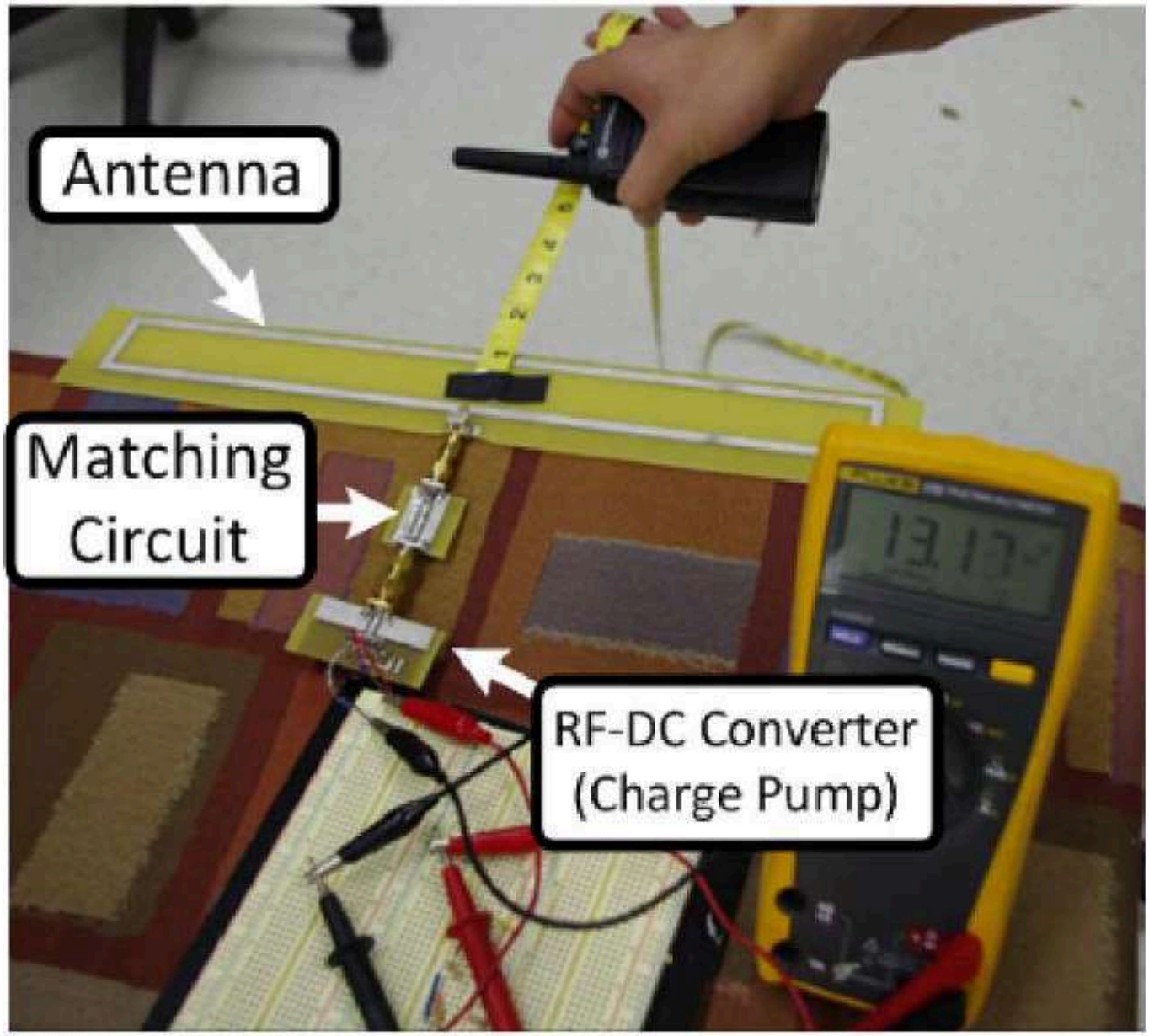
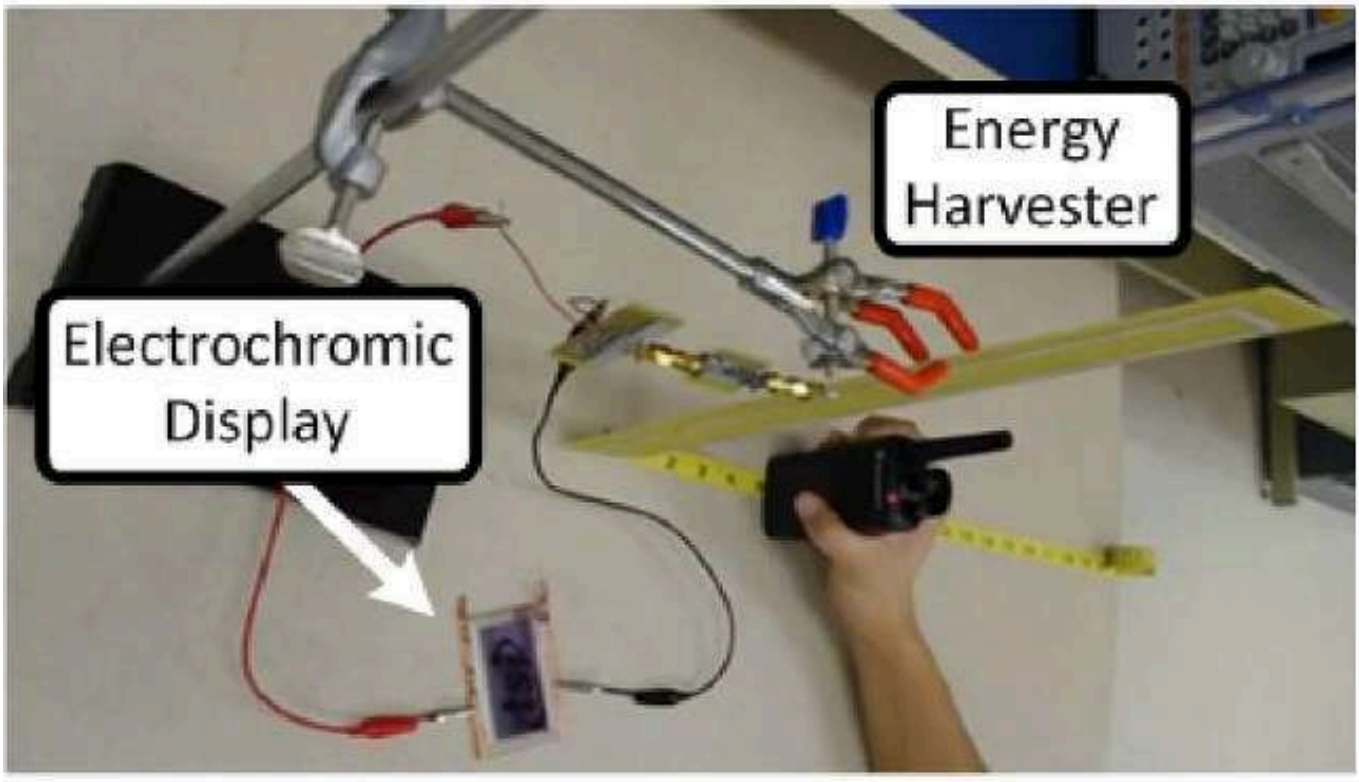


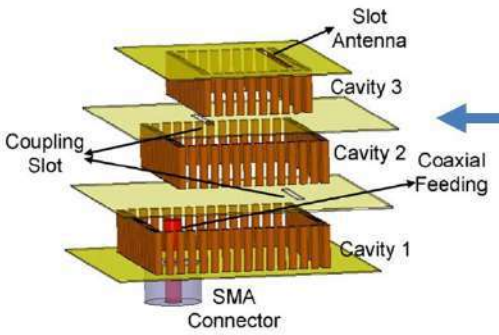
Fig. 16. Fabricated dual-band rectenna prototype [17].


Antenna
Matching Circuit
RF-DC Converter (Charge Pump)

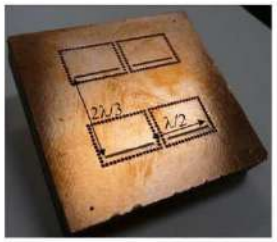
(a)

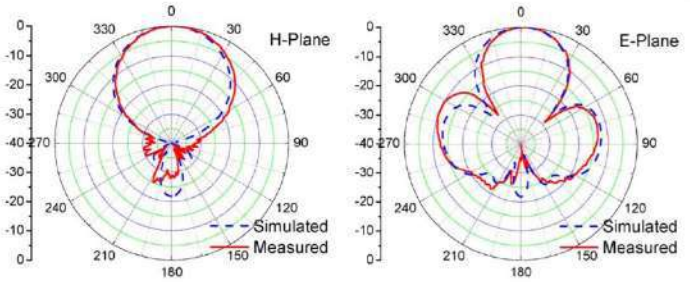

Energy Harvester
Electrochromic Display

(b)



Filter/Slot antenna Integration







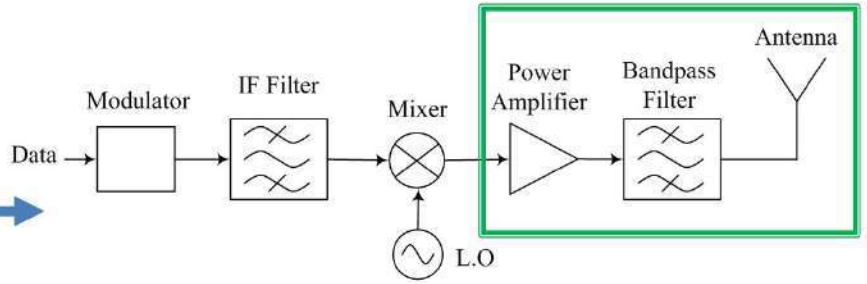


Goal:

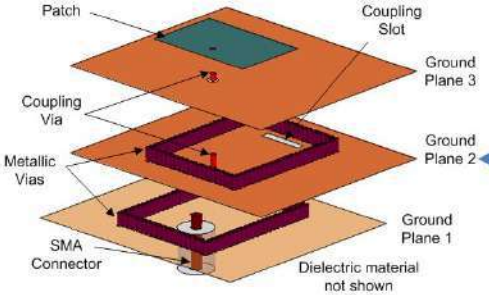
Reduced size, high-Q and high-efficiency RF front-ends

Highlights:

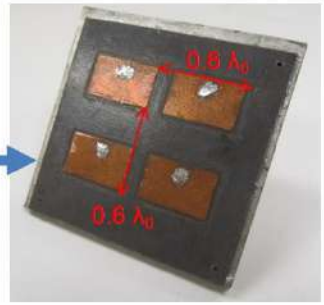
No 50-Ohm transmission line transitions

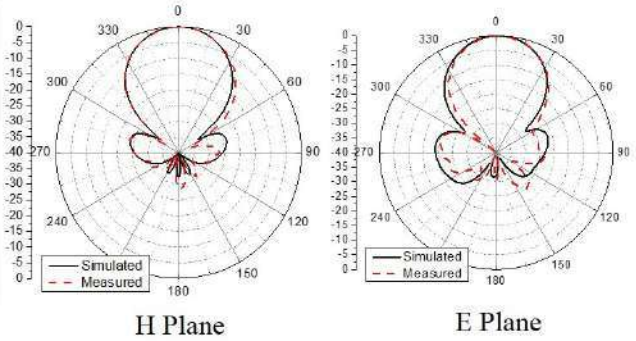


Great potential for high-level integrated and tunable RF front-ends



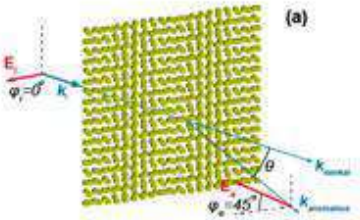
Filter/Patch antenna Integration



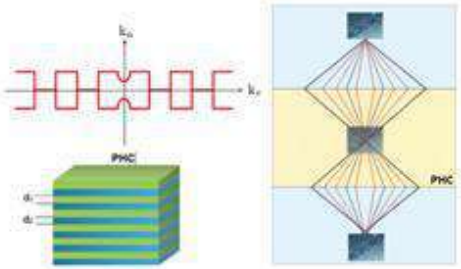


Recent Collaboration In Computational Nanophotonics at Purdue and Beyond

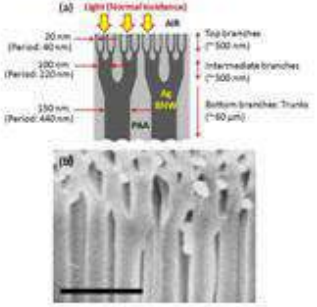
Chiral Metasurfaces for Optical Activity (the Shalaev group)



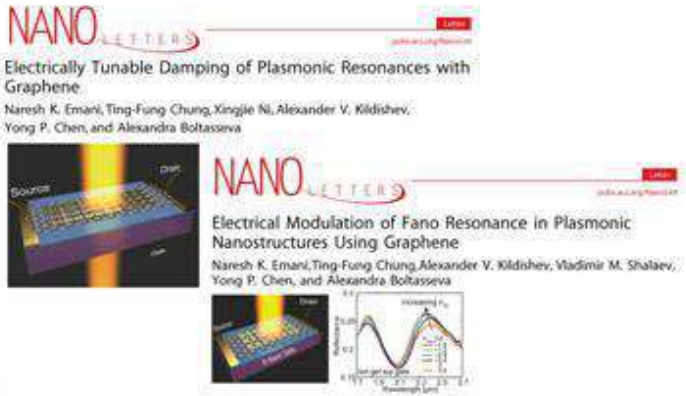
Nano-imaging and Nanoscope
Narimanov (Purdue)
Pendry (Imperal College)
Zhang (UC Berkeley)
Liu, UCSD



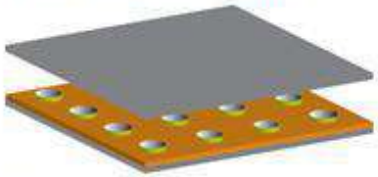
Optics of Branched Silver Nanowires (the Janes group)



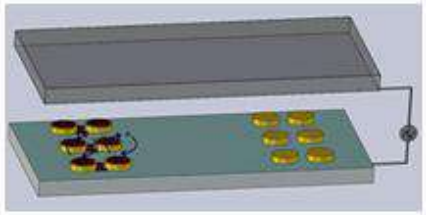
Dynamic Plasmonics with Graphene (the Yong Chen group, the Boltasseva group)



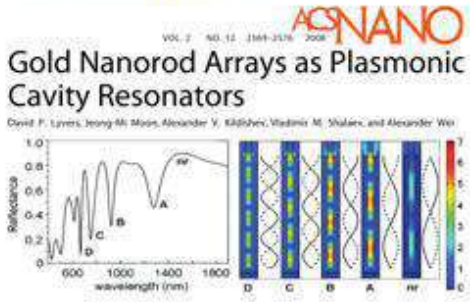
Compact Cavities and Waveguides using Reflecting Metasurfaces (the Shalaev group)



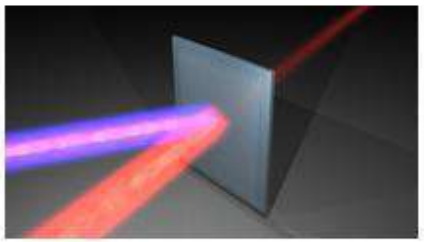
Hybrid Electro-Plasmonic Tweezers (the Wereley and Boltasseva groups)



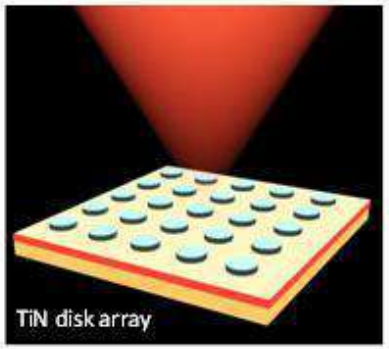
Au Nanorod Plasmonics (the Wei group)



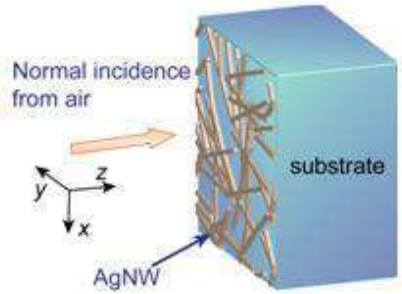
Dynamic Metamaterials and Devices (the Boltasseva group)



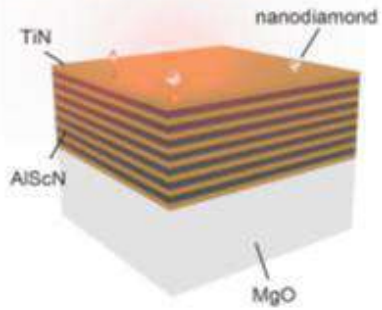
High temperature thermal emitter for thermo-photovoltaics (the Shalaev, Shakouri, Sands, and Bermel groups)



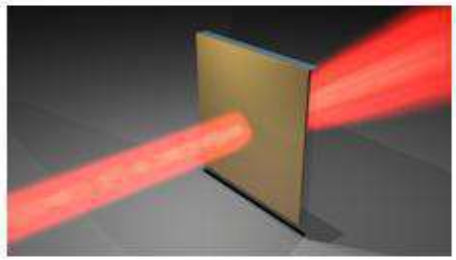
Ag nanowires-graphene transparent conducting electrodes (the Janes group)



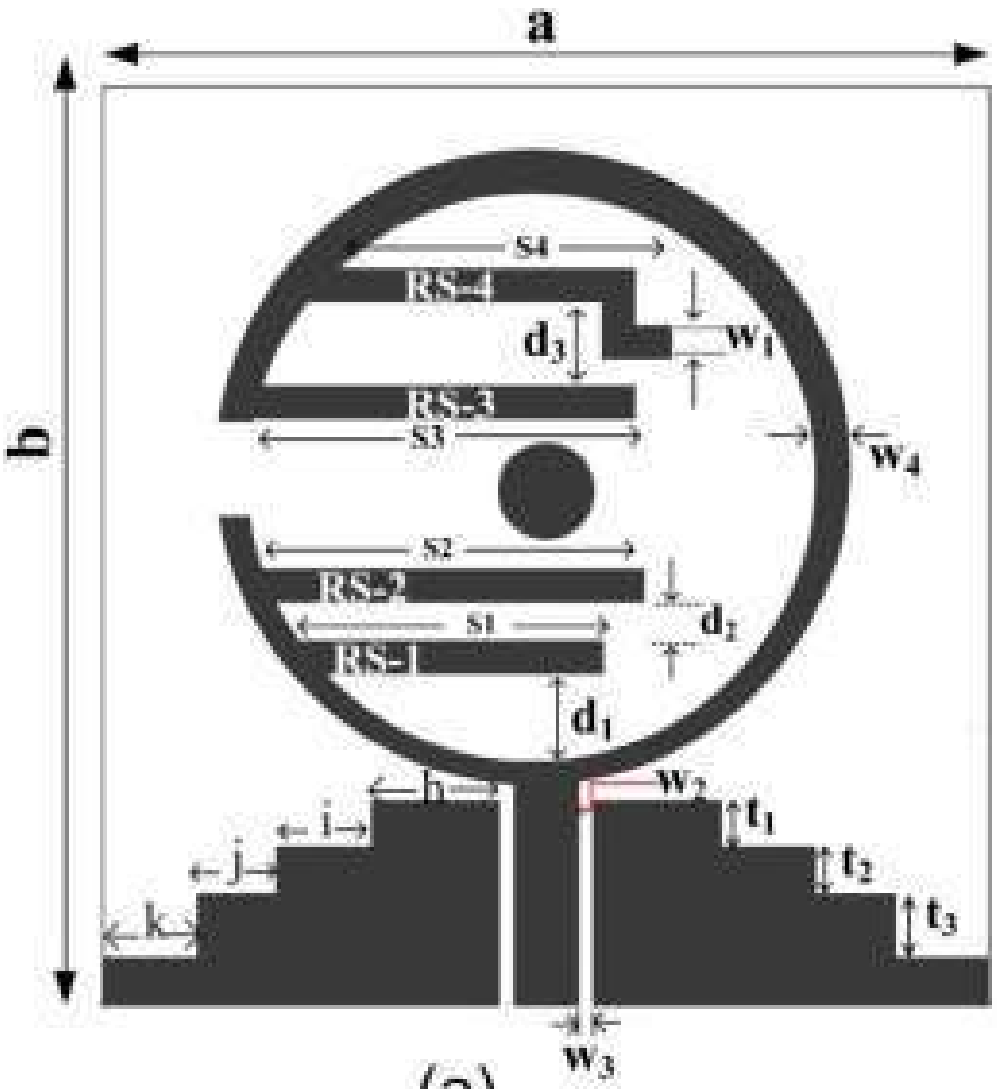
Enhanced single-photon sources based on NV centers and metamaterials (the Shalaev group)



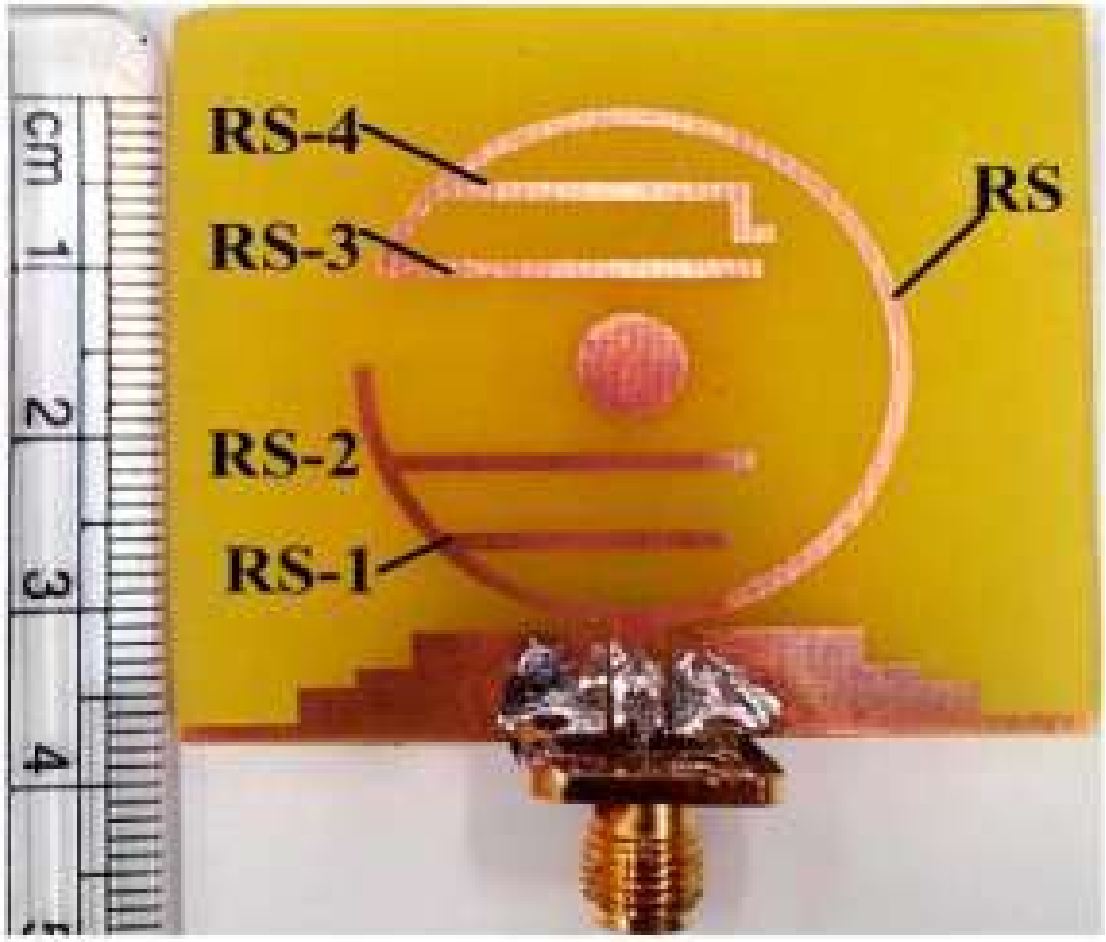
Nonlinear Optical Properties of Alternative Plasmonic Materials
Bonner, Gavrilenko (NSU) with the Boltasseva and Shalaev groups




Tego Power Harvest Technology
Passive LED
P68143
Tego Power Harvest Technology
Passive LED
P68143
Tego Power Harvest Technology
Passive LED
127.0.0.1
6:02
Stop Reading
Tag Events
NONE
EPC ID
Ant
Ct
E2817023D0201203I9EEA404
1
491
E2817023D0201203I9EEA405
1
492
E2817023D0201203I9EEA401
1
492
Read

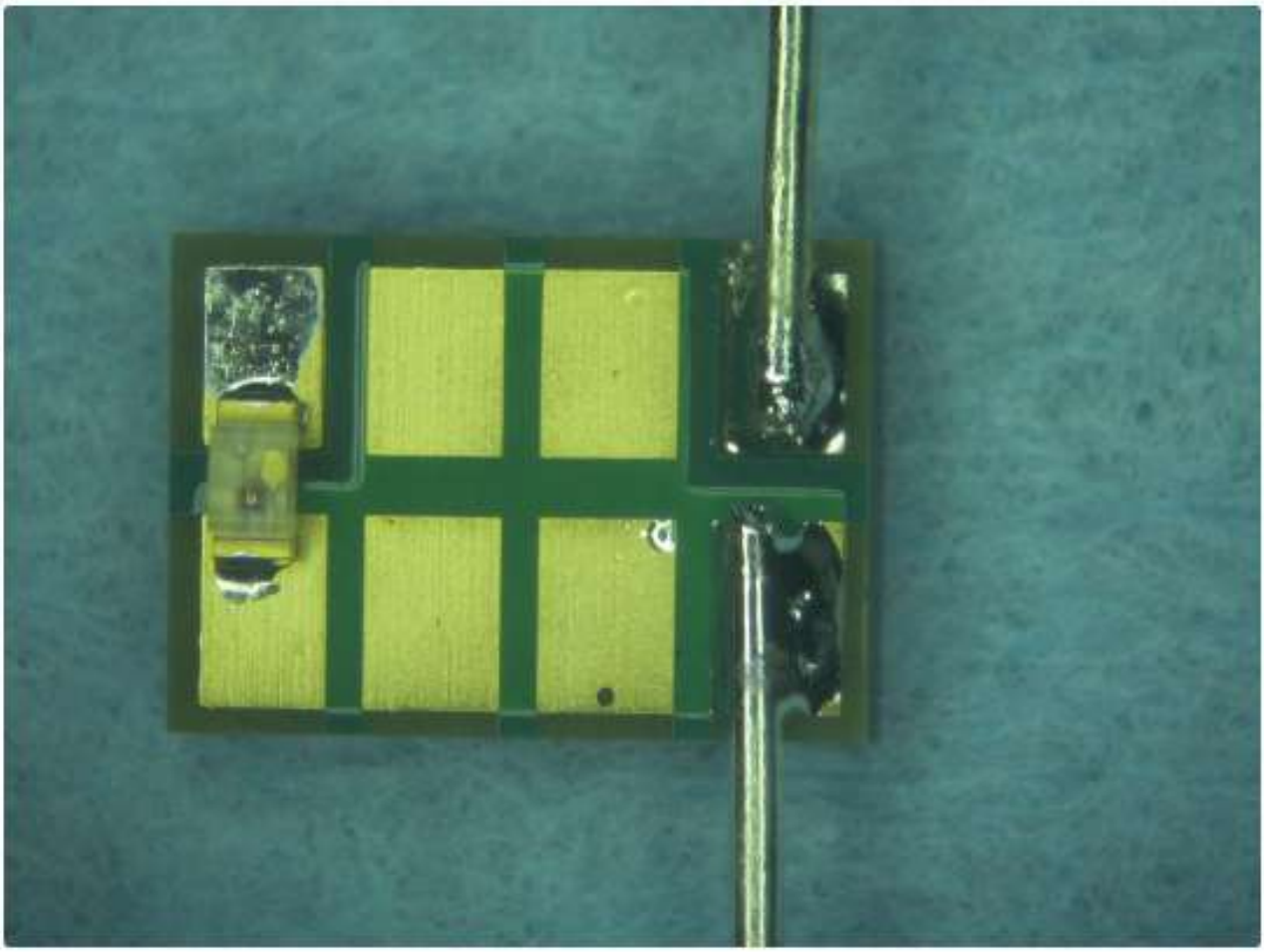

a
b
S4
RS-4
d3
w1
RS-3
S3
w4
S2
RS-2
d2
S1
RS-1
d1
h
w2
t1
i
j
t2
k
t3
w3

(a)


RS-4
RS-3
RS
RS-2
RS-1
cm
1
2
3
4

(b)

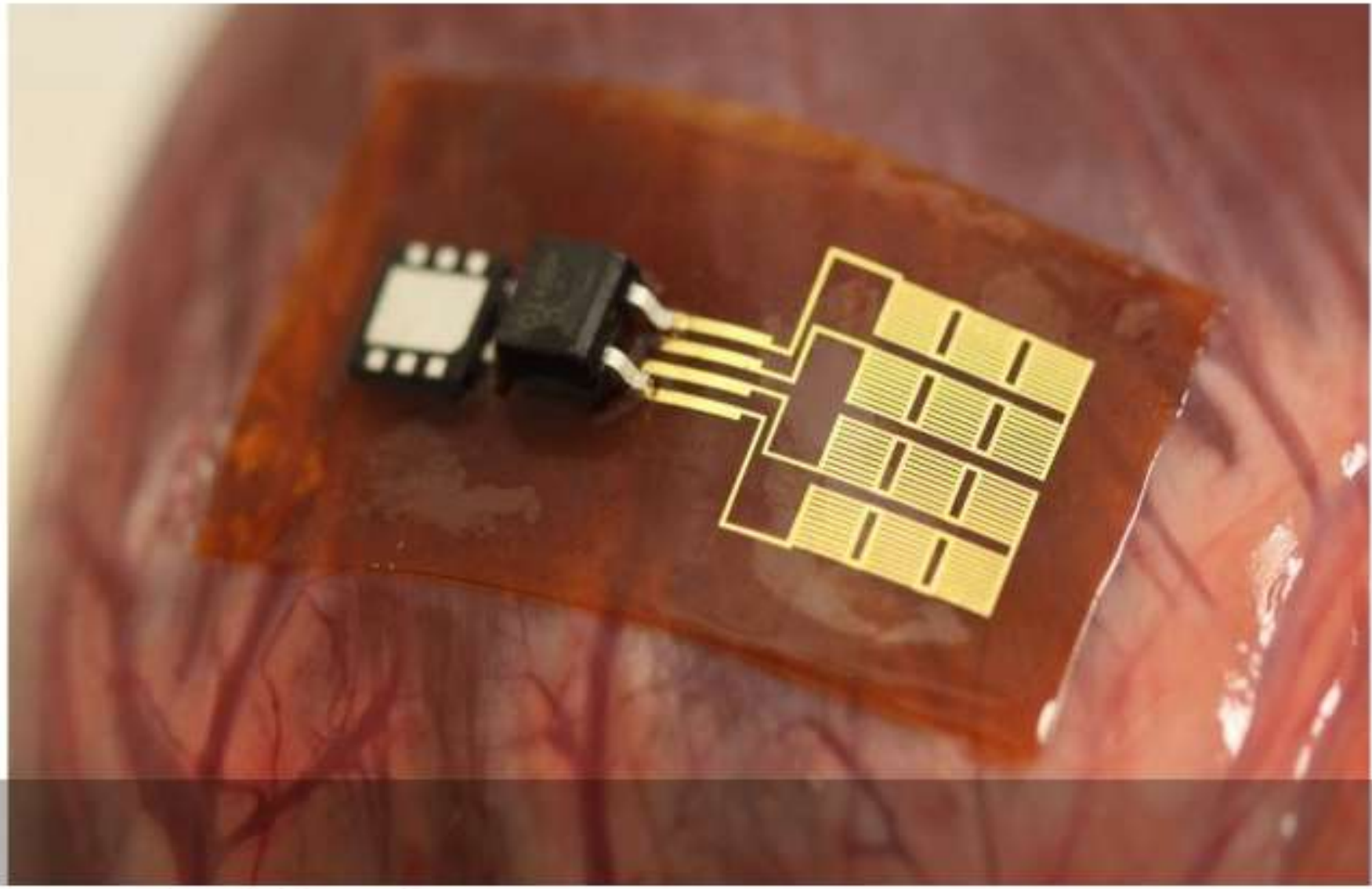
Step 1: Assembly Instructions



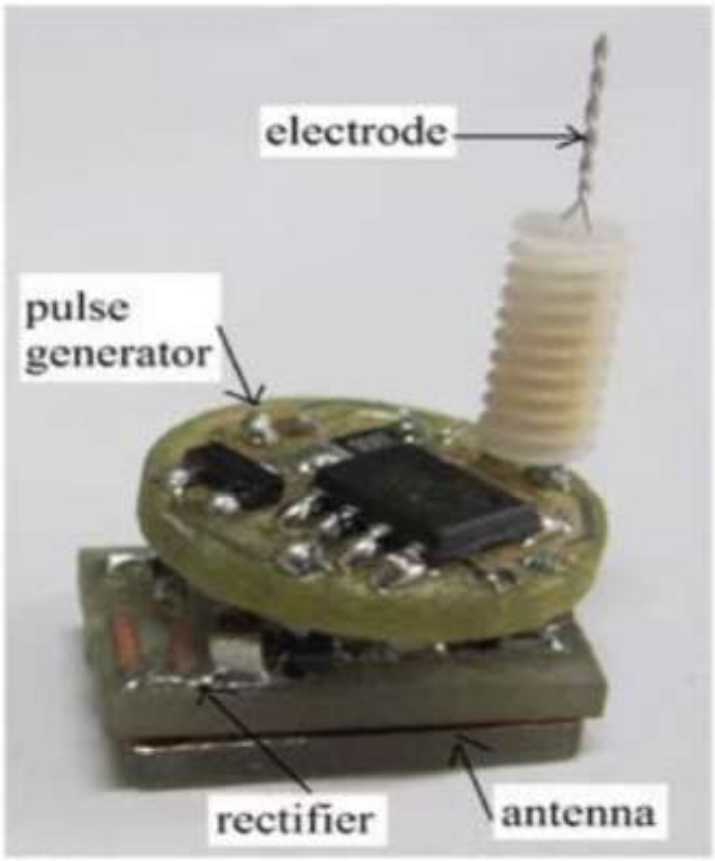
Cut the resistor wires off next to the resistor. These are just the right size at 1 1/8" long for a 2.5GHz dipole. Throw away the resistor and keep the wires.

Put solder paste on the module at pins 1 & 8 and at pins 4 and 5.Place the wires on pins 4 and 5 and solder carefully using tweezers to hold the wires (it will burn you otherwise). Solder at the lowest soldering temperature possible to avoid damaging the module. If the iron is too hot then you may damage the internal connections inside the module. Use a minimum of time for soldering (<10secs). The wires work as a dipole antenna to collect the 2.5GHz energy into the RF (Radio Frequency) Input of the module.

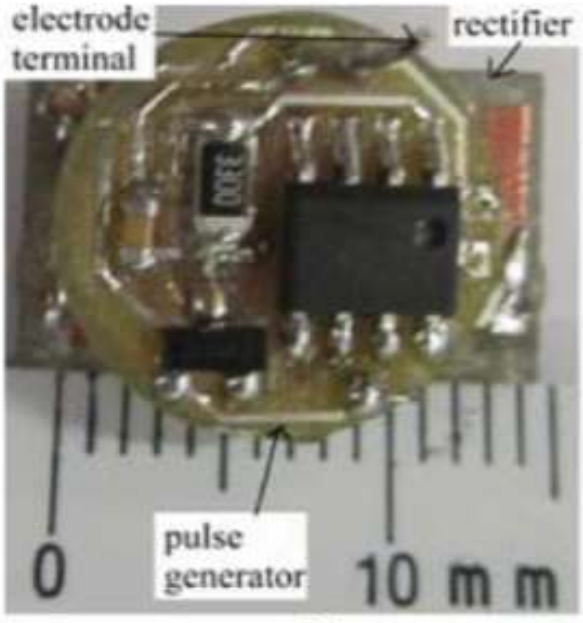
Place the LED with the anode (positive side) onto pin 1 and the cathode (negative side) on pin 8 and solder carefully. For those not familiar with LEDs, the triangle symbol of the diode should point to the ground pin of the module (pin 8). Your final microwave harvester should look like figure 2



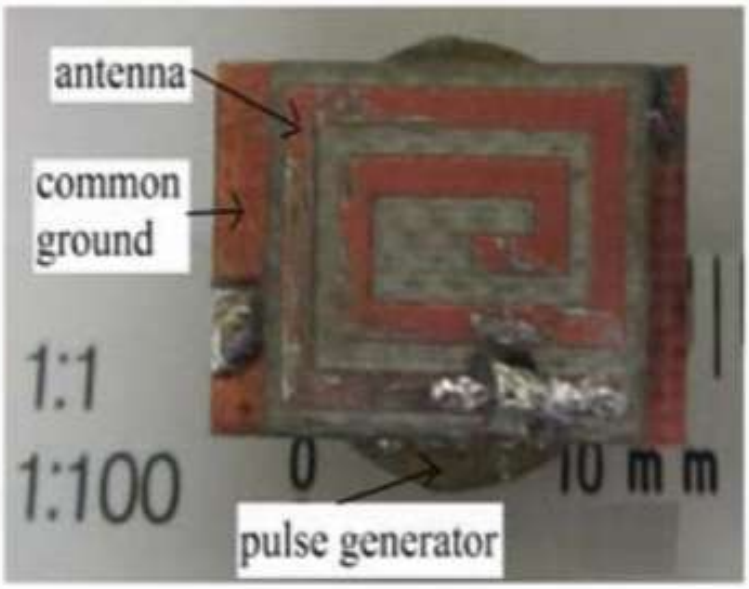
The implant mounted on the heart of a cow


electrode
pulse
generator
rectifier
antenna

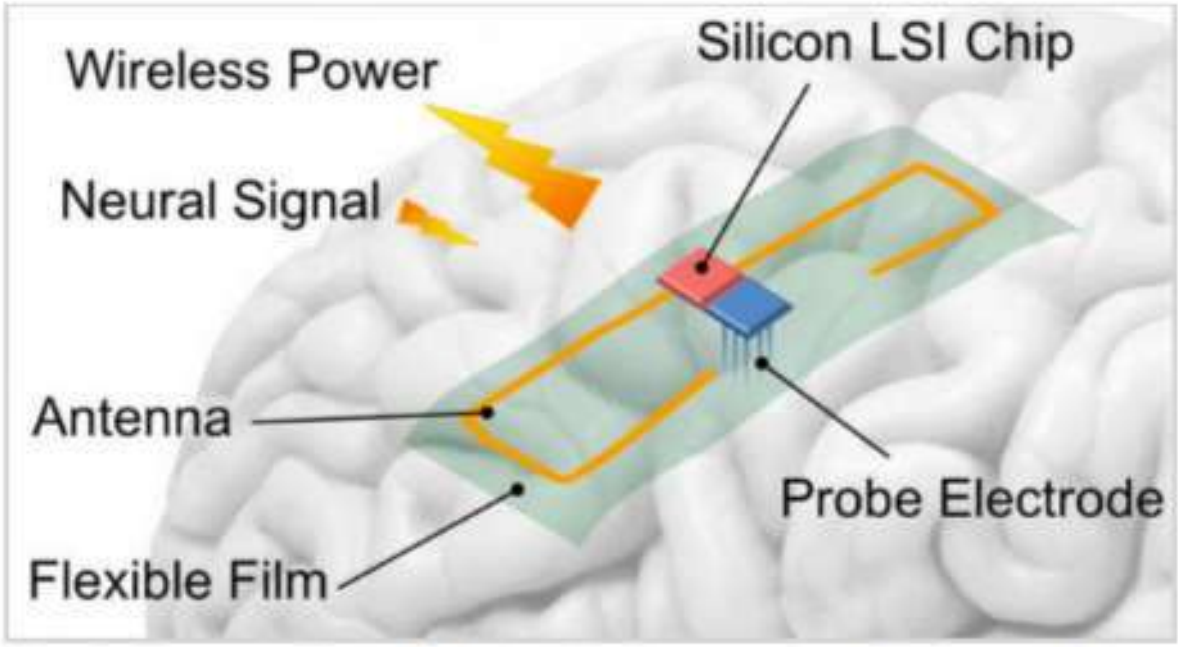
(a)


electrode
terminal
rectifier
pulse
generator
0
10 m m

(b)


antenna
common
ground
1:1
1:100
0
10 m m
pulse generator

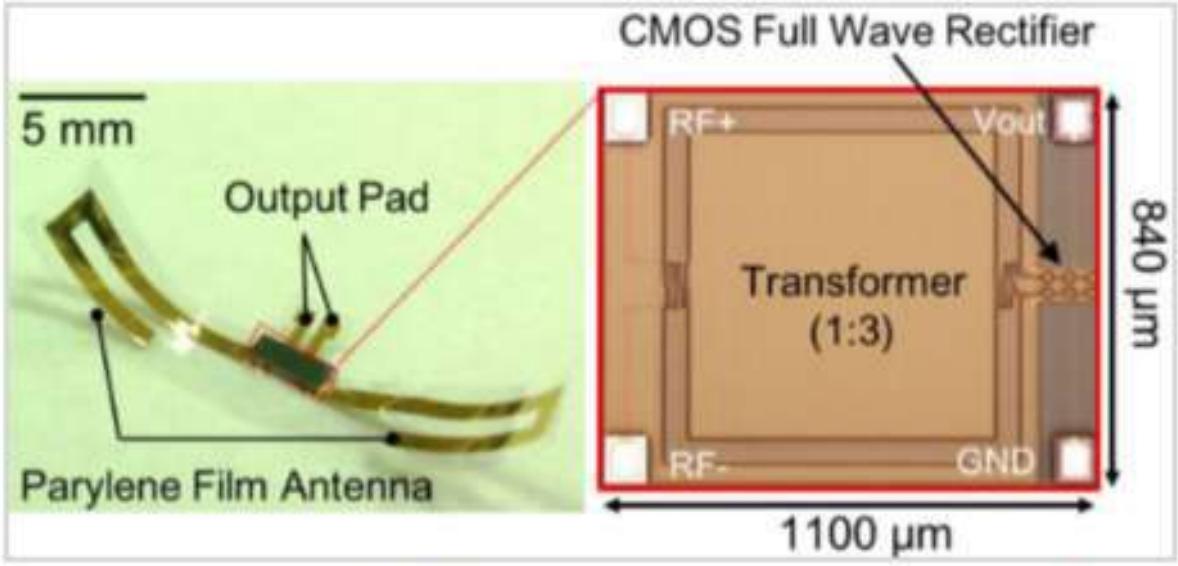
(c)



Schematic of proposed architecture of an implantable wireless-powered neural interface system that can provide power to implanted devices. Adding a transmitter chip could allow for neural signals to be transmitted via the antenna for external processing. (credit: Toyohashi University Of Technology)

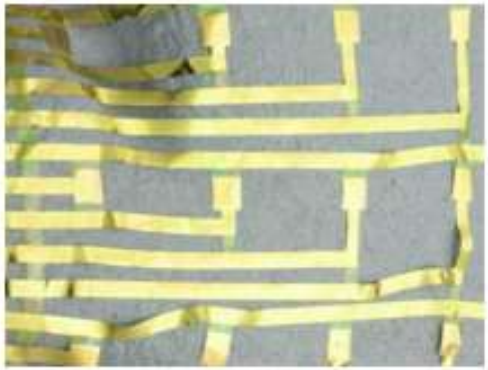
A research team at Toyohashi University of Technology in Japan has fabricated an implanted wireless power transmission (WPT) device to deliver power to an implanted neural interface system, such as a brain-computer interfa (BCI) device.

Described in an open-access paper in *Sensors* journal, the system avoids having to connect an implanted device to a external power source via wires through a hole in the skull, which can cause infections through the opening and risk o infection and leakage of the cerebrospinal fluid during long-term measurement. The system also allows for free-movi subjects, allowing for more natural behavior in experiments.

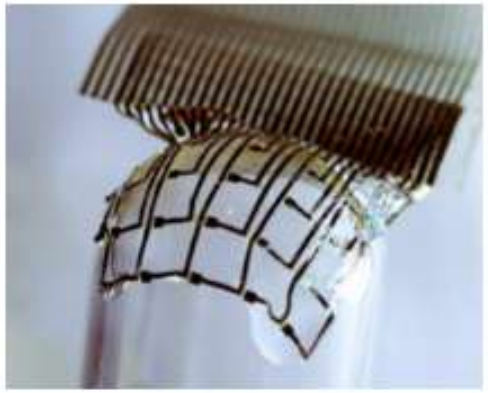


Photographs of fabricated flexible antenna and bonded CMOS rectifier chip with RF transformer (credit: Kenji Okabe et al./Sensors)

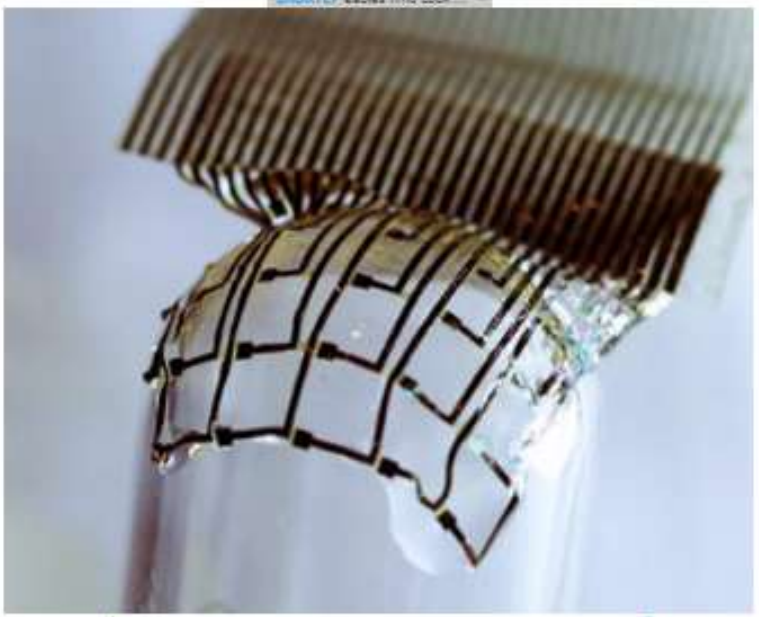




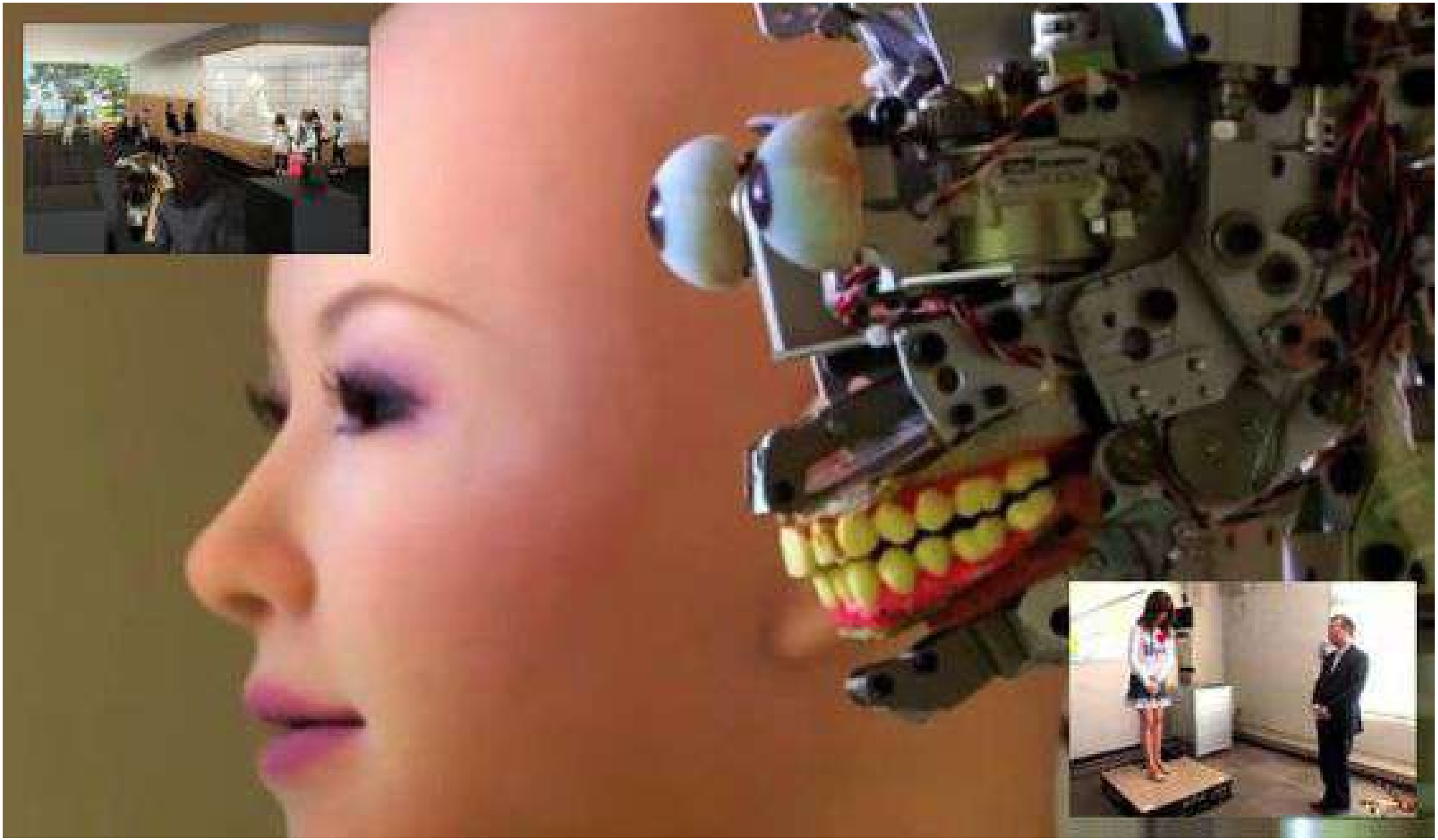


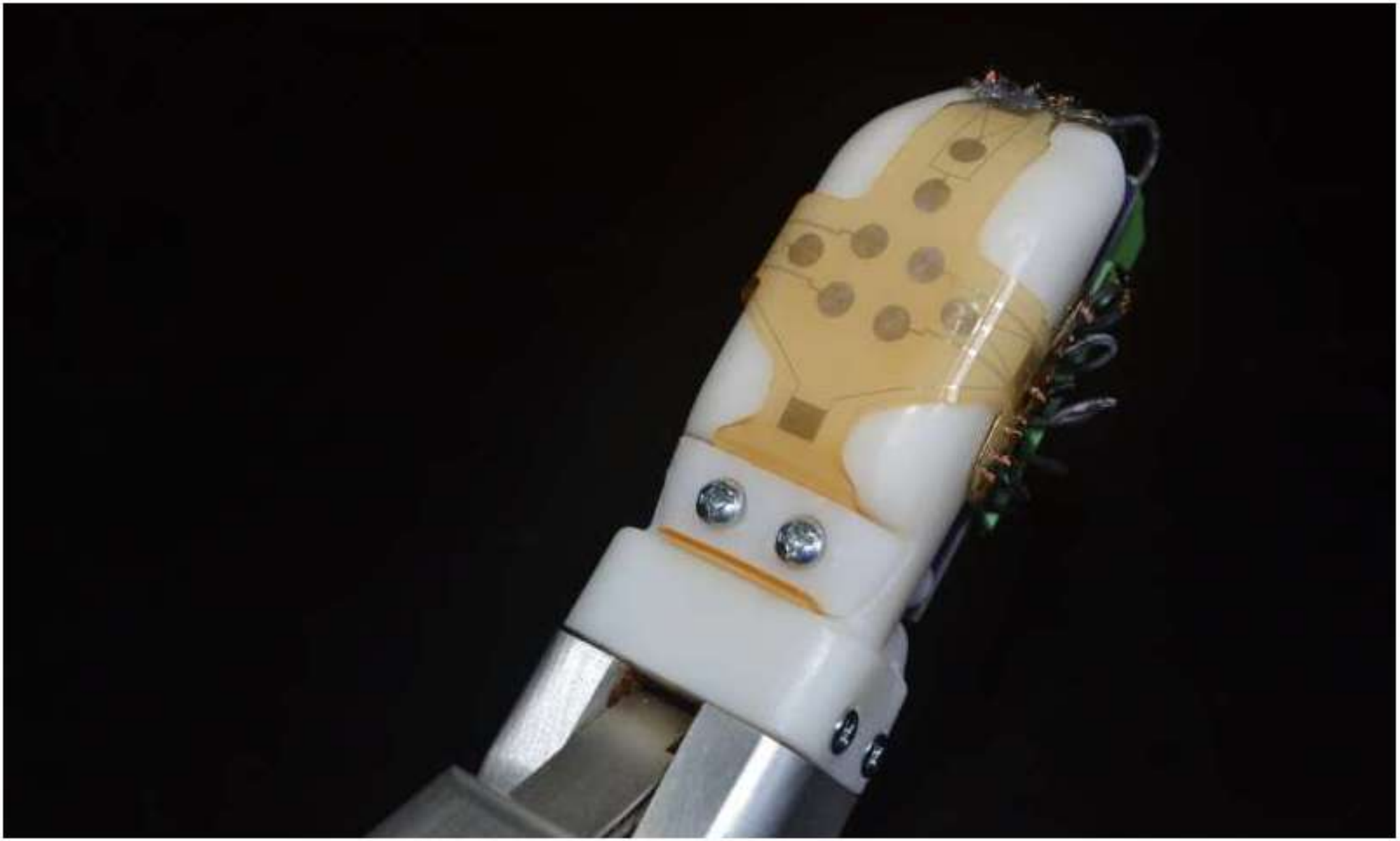



IN TECHNOLOGY





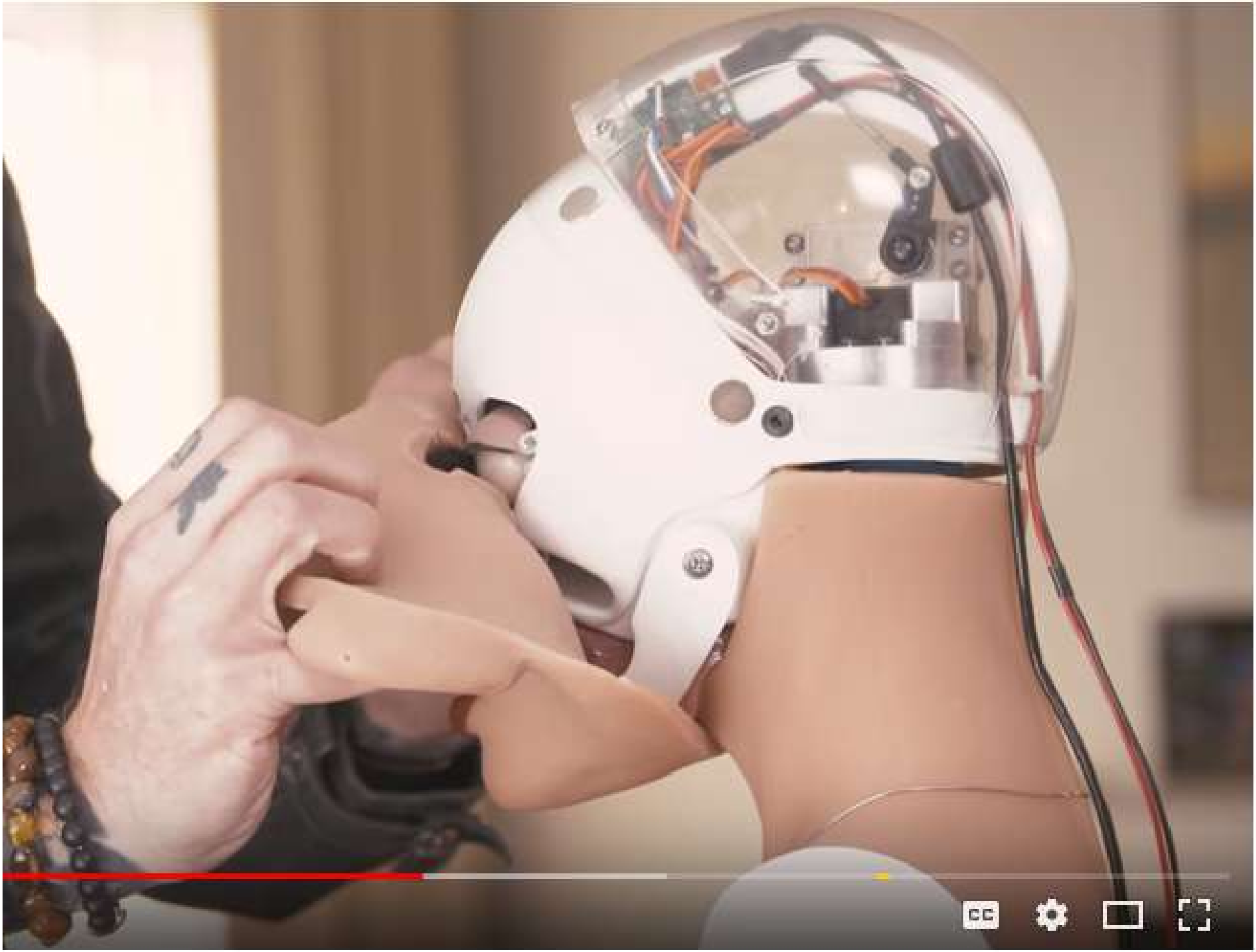




The bio-inspired sensor skin developed by University of Washington and UCLA engineers can be wrapped around a finger or any other part of a robot or prosthetic device to help convey a sense of touch. Credit: UCLA



Fully functioning sex robots are coming to the UK and their creator is promising "an experience like no other."



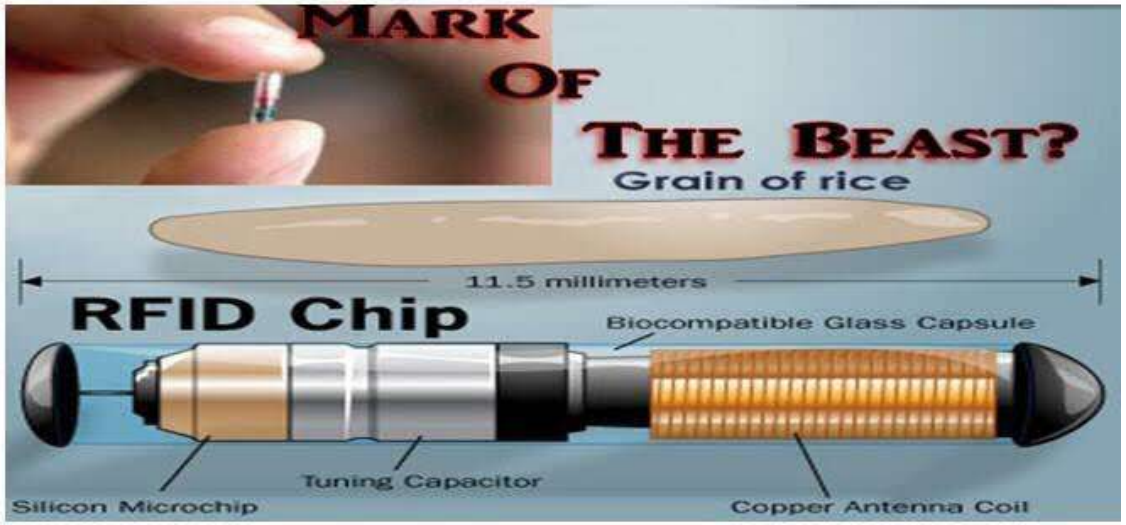
MARK OF THE BEAST 666 TECHNOLOGY IS HERE



6 6 6

The miniaturized radio frequency bar code strip is injected under the skin.





He causes all, both small and great, rich and poor, free and slave, to receive a mark on their right hand or on their foreheads, 17 and that no one may buy or sell except one who has the mark or the name of the beast, or the number of his name.

Revelation 13:16, 17





634 × 351 - Images may be subject to copyright

Man moves his robotic arms with his MIND:

Daily Mail

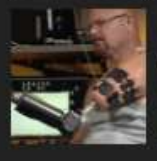
The new system replaces the need for harnesses when working with the Modular Prosthetic Limb (

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There's a new gadget called the "Microwave Regenerative Converter" from Nihon Dengyo Kosaku Co Ltd that

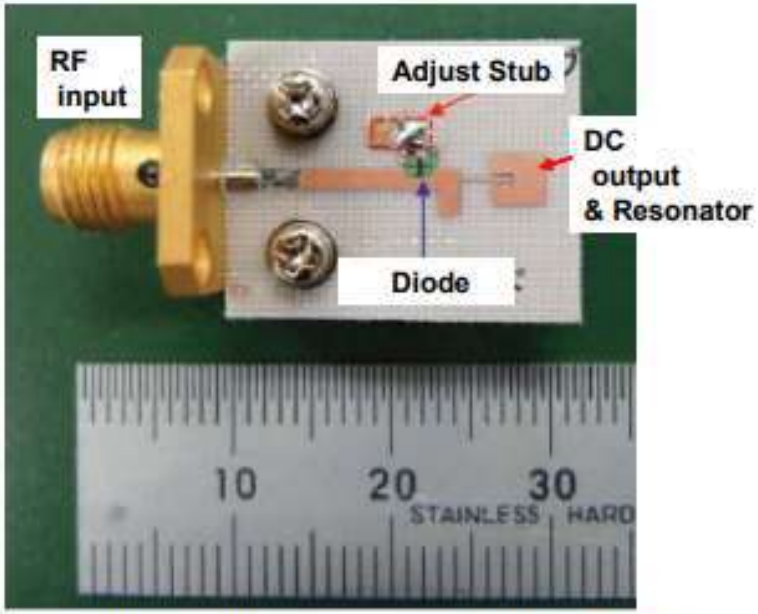


Fig.7: Revised low power 24GHz rectenna

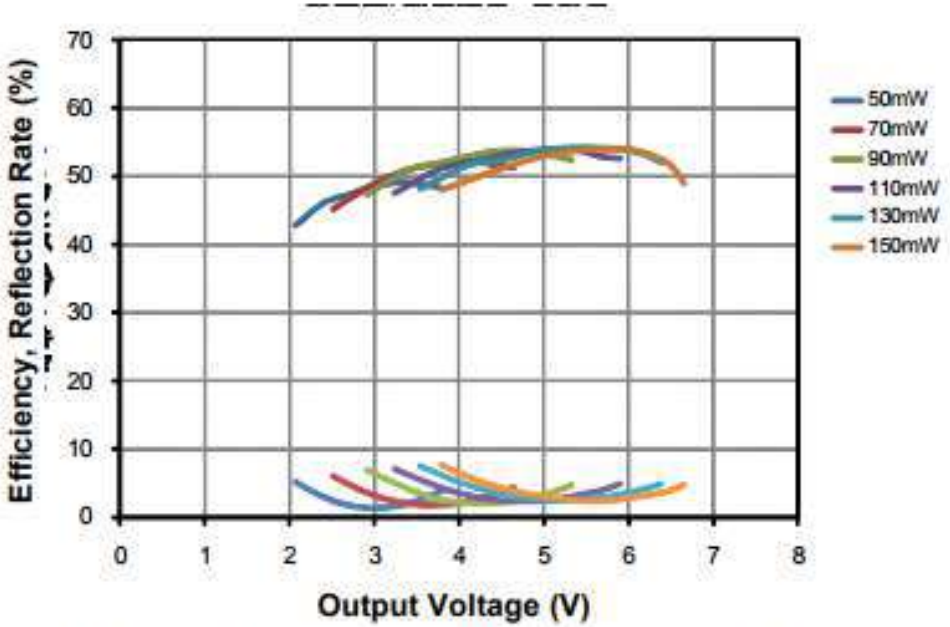
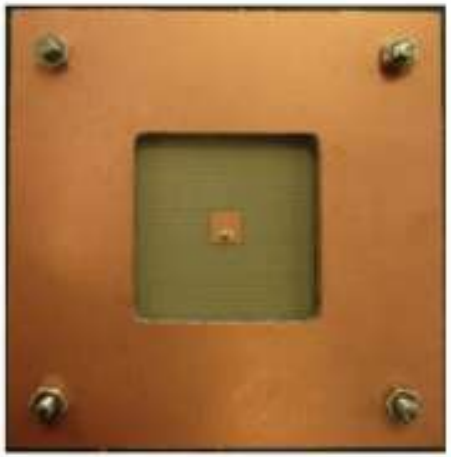


Fig.8: RF-DC conversion efficiency of revised rectenna



Antenna (Front)



12-way Power Divider
+ 12 Rectifying Circuits (Back)

Fig.9: High power 24GHz rectenna

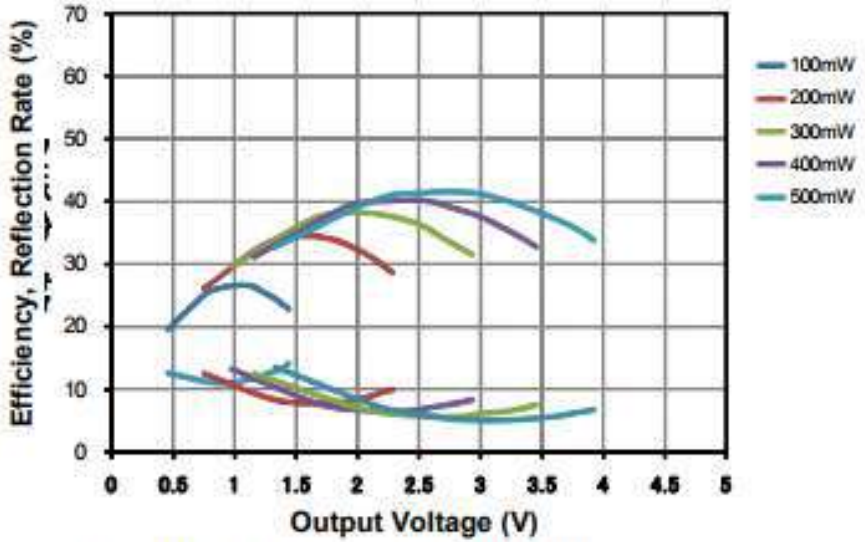


Fig.10: RF-DC conversion efficiency of high power rectenna

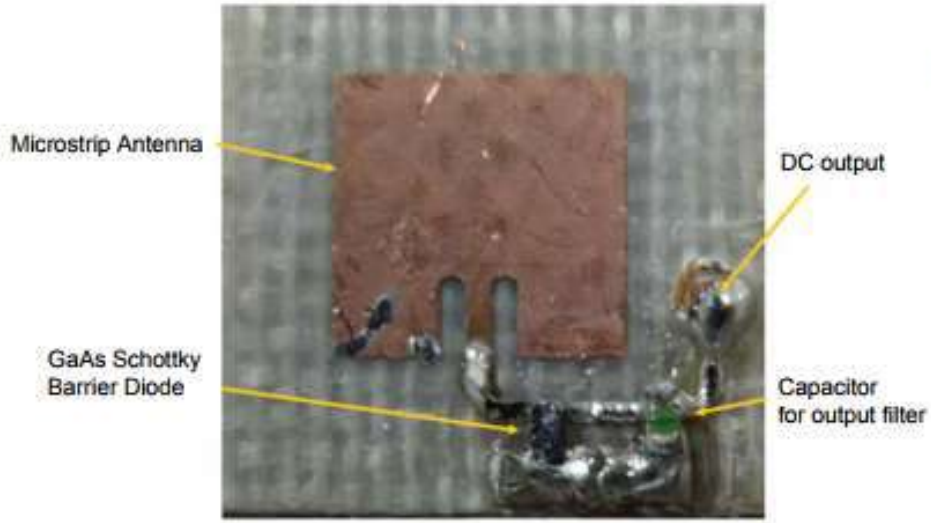


Fig.3: ordinary power rectenna at 24GHz

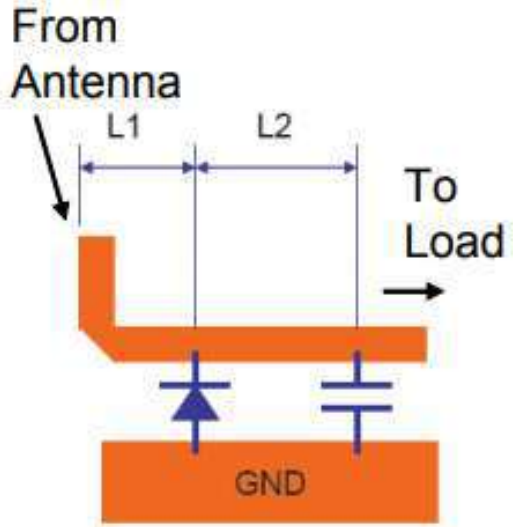


Fig.4 Rectifying Circuit

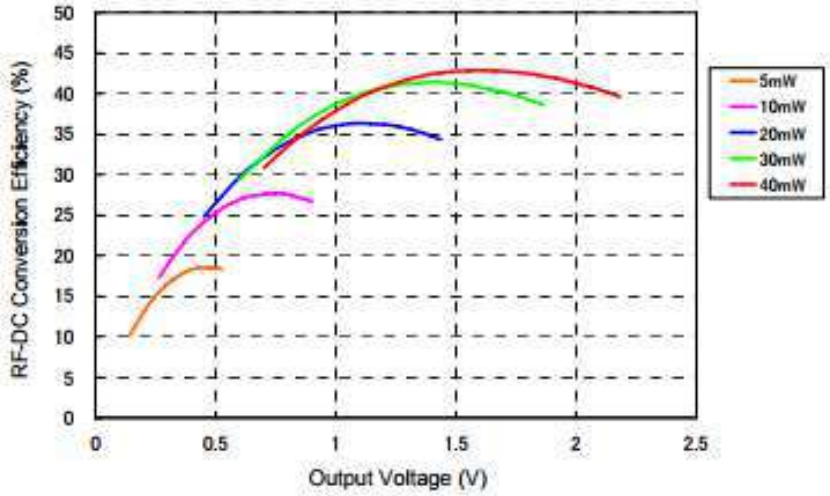


Fig.5: RF-DC conversion efficiency of ordinary power 24GHz rectenna

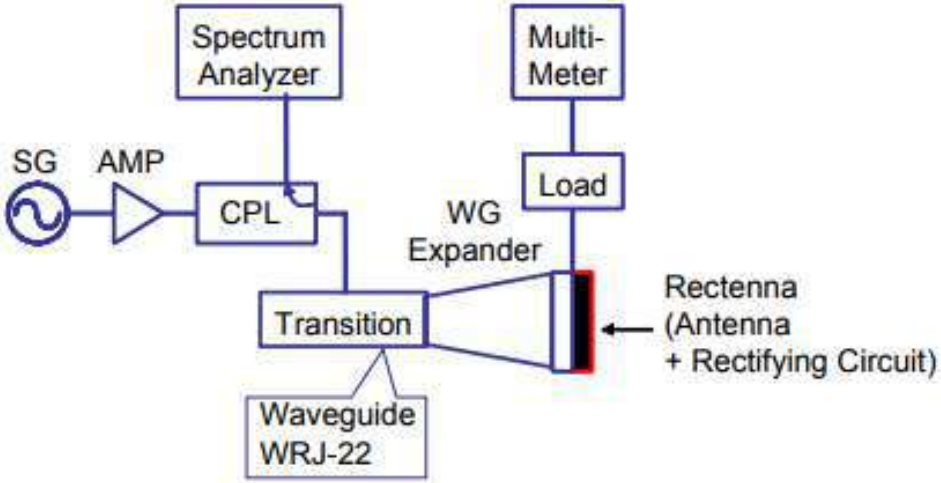
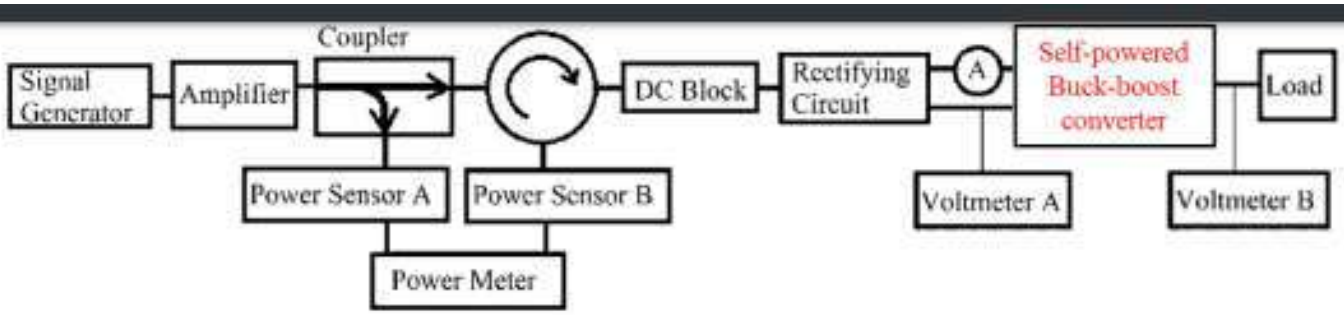
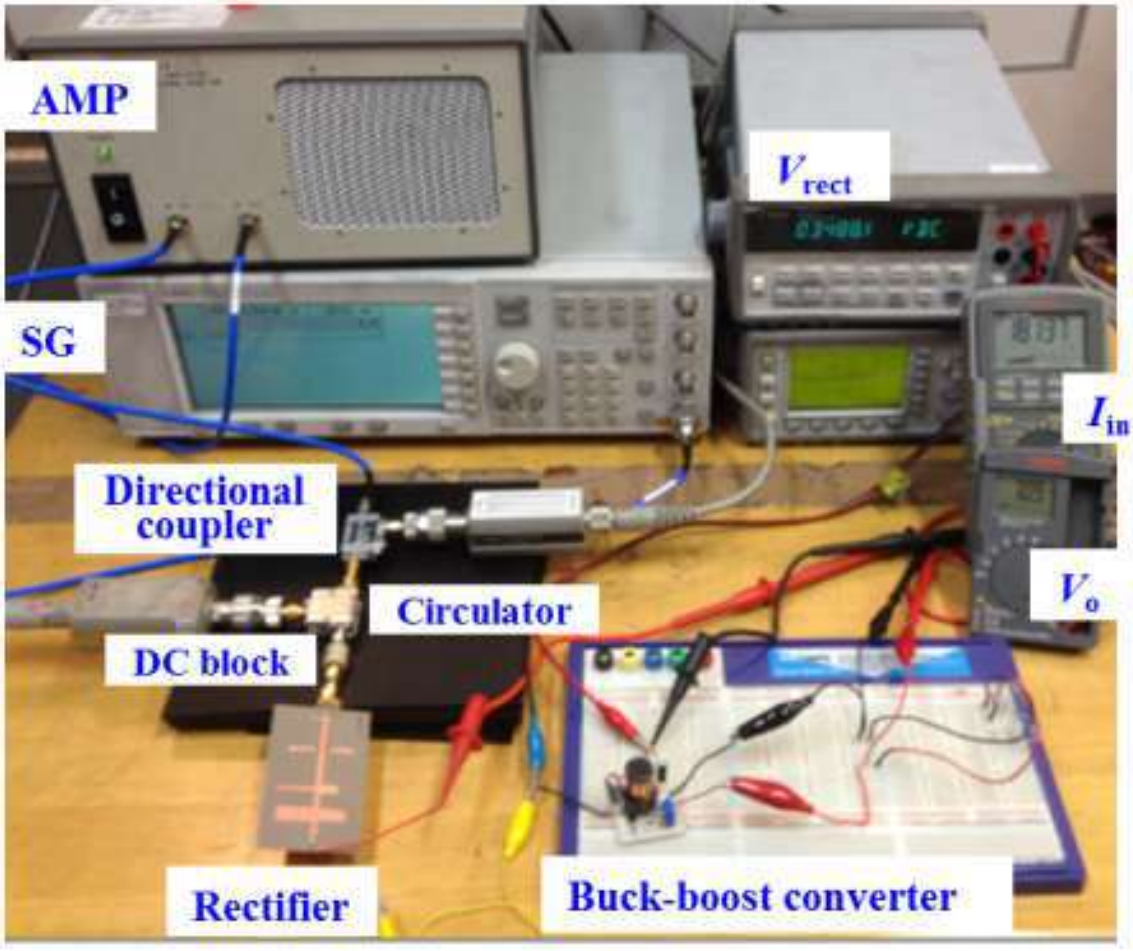


Fig.6 Measurement Setup



(a)

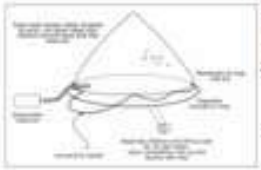


(b)

Figure 4.12: Experiment setup for measuring the efficiency of the self-powered RF-DC-DC circuit. (a) Experiment setup. (b) Experiment photograph.



Aquamate Solar Still



Manufactured to ISO 9002
NATO Stock no. 4610-66-144-2646
Aquamate product manufactured by Echomax

- Tear open pack for emergencies
- Easily inflated by mouth
- Lanyard fixing
- Pure water stored in separate pouch
- High visibility orange plastic
- Proven reliability
- Made to ISO 9002 with NATO stock number

Aquamate Inflatable Solar Stills are light, compact, and very easy to use. They utilize solar radiation to distill and collect pure drinking water from sea or impure water.

The still will produce 500 to 2000 ccs (1 to 4 pints) of water per day and has been used by military and civilian services throughout the world for the past 40 years.

Packs neatly away to 26 x 23 x 7cm. weighs just 1075 grams. At a fraction of the cost of a mechanical or electrical unit this is an ideal addition to the safety grab bag for any ocean going yachtsman.

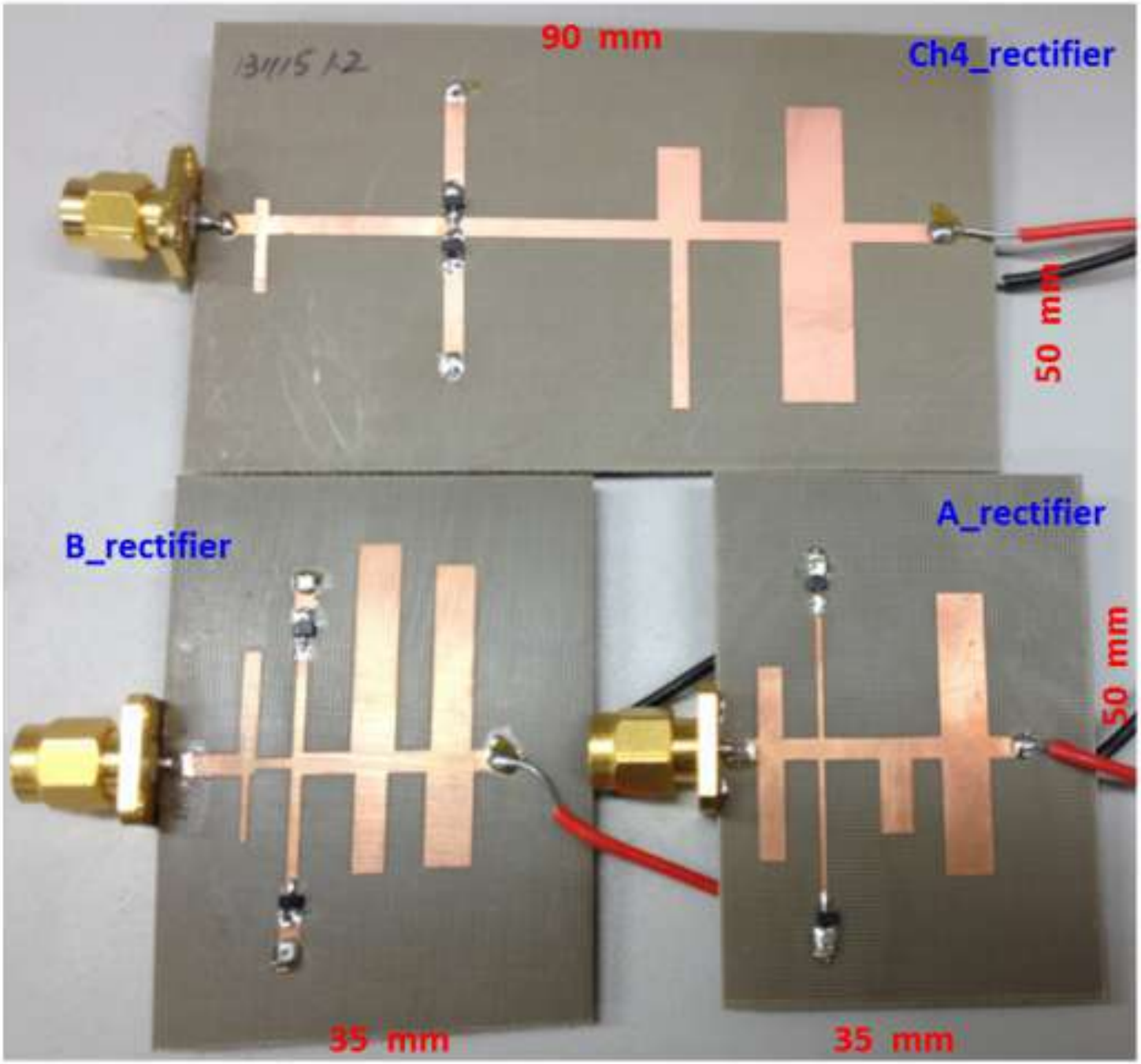
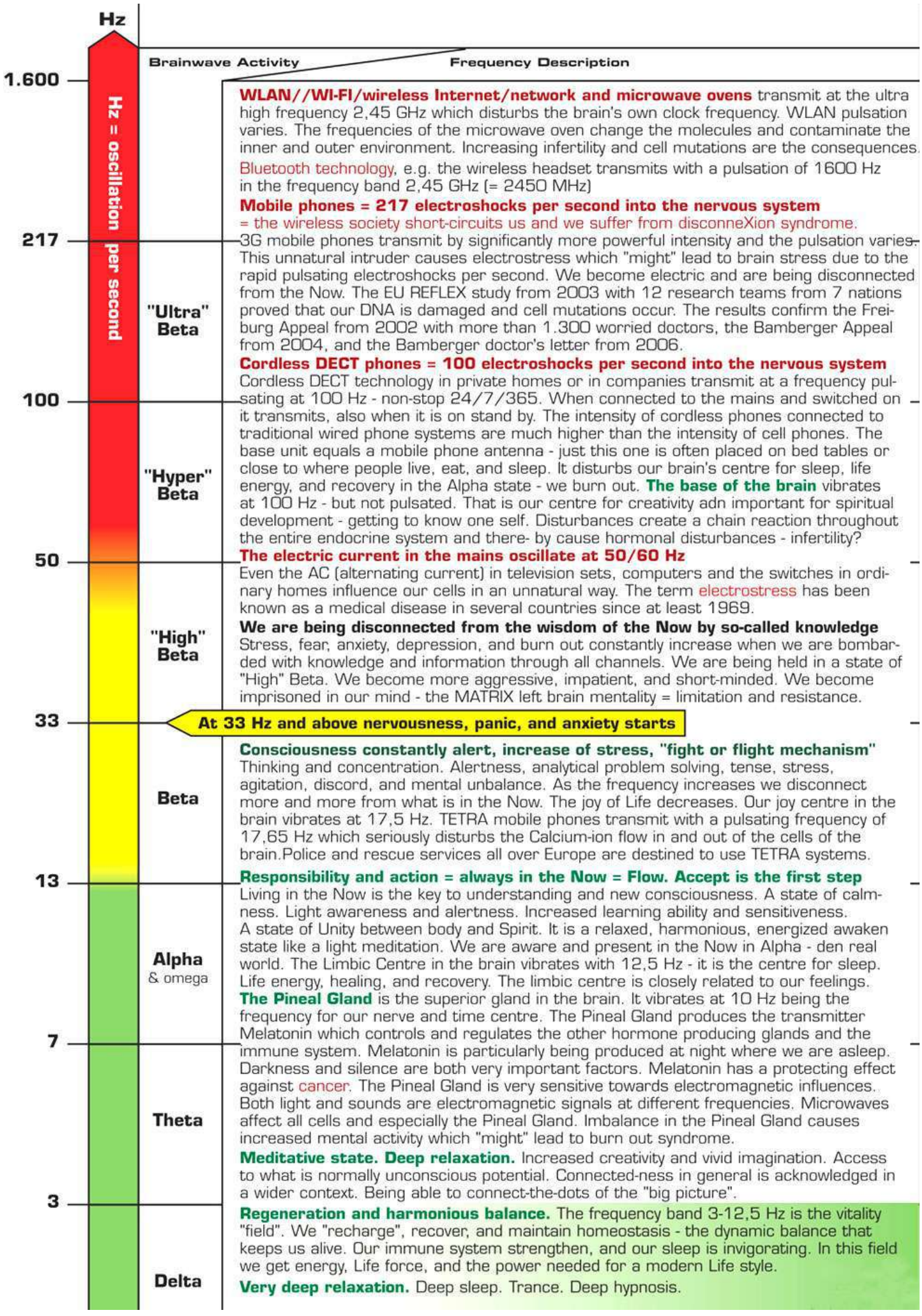


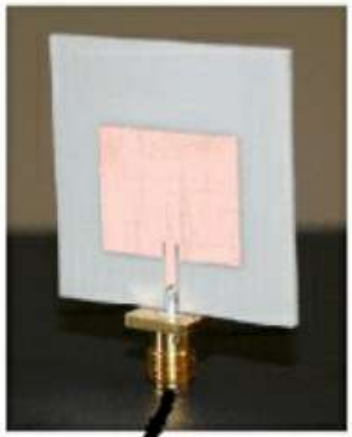
Figure 5.7: Photograph of designed rectifiers: A, B and Ch4_rectifier.


Hz
Brainwave Activity
Frequency Description
1.600
Hz = oscillation per second
217
"Ultra" Beta
100
"Hyper" Beta
50
"High" Beta
33
Beta
13
Alpha & omega
7
Theta
3
Delta
WLAN//WI-FI/wireless Internet/network and microwave ovens transmit at the ultra high frequency 2,45 GHz which disturbs the brain's own clock frequency. WLAN pulsation varies. The frequencies of the microwave oven change the molecules and contaminate the inner and outer environment. Increasing infertility and cell mutations are the consequences.
Bluetooth technology, e.g. the wireless headset transmits with a pulsation of 1600 Hz in the frequency band 2,45 GHz (= 2450 MHz)
Mobile phones = 217 electroshocks per second into the nervous system
= the wireless society short-circuits us and we suffer from disconneXion syndrome.
3G mobile phones transmit by significantly more powerful intensity and the pulsation varies. This unnatural intruder causes electrostress which "might" lead to brain stress due to the rapid pulsating electroshocks per second. We become electric and are being disconnected from the Now. The EU REFLEX study from 2003 with 12 research teams from 7 nations proved that our DNA is damaged and cell mutations occur. The results confirm the Freiburg Appeal from 2002 with more than 1.300 worried doctors, the Bamberger Appeal from 2004, and the Bamberger doctor's letter from 2006.
Cordless DECT phones = 100 electroshocks per second into the nervous system
Cordless DECT technology in private homes or in companies transmit at a frequency pulsating at 100 Hz - non-stop 24/7/365. When connected to the mains and switched on it transmits, also when it is on stand by. The intensity of cordless phones connected to traditional wired phone systems are much higher than the intensity of cell phones. The base unit equals a mobile phone antenna - just this one is often placed on bed tables or close to where people live, eat, and sleep. It disturbs our brain's centre for sleep, life energy, and recovery in the Alpha state - we burn out. The base of the brain vibrates at 100 Hz - but not pulsated. That is our centre for creativity adn important for spiritual development - getting to know one self. Disturbances create a chain reaction throughout the entire endocrine system and there- by cause hormonal disturbances - infertility?
The electric current in the mains oscillate at 50/60 Hz
Even the AC (alternating current) in television sets, computers and the switches in ordinary homes influence our cells in an unnatural way. The term electrostress has been known as a medical disease in several countries since at least 1969.
We are being disconnected from the wisdom of the Now by so-called knowledge
Stress, fear, anxiety, depression, and burn out constantly increase when we are bombarded with knowledge and information through all channels. We are being held in a state of "High" Beta. We become more aggressive, impatient, and short-minded. We become imprisoned in our mind - the MATRIX left brain mentality = limitation and resistance.
At 33 Hz and above nervousness, panic, and anxiety starts
Consciousness constantly alert, increase of stress, "fight or flight mechanism"
Thinking and concentration. Alertness, analytical problem solving, tense, stress, agitation, discord, and mental unbalance. As the frequency increases we disconnect more and more from what is in the Now. The joy of Life decreases. Our joy centre in the brain vibrates at 17,5 Hz. TETRA mobile phones transmit with a pulsating frequency of 17,65 Hz which seriously disturbs the Calcium-ion flow in and out of the cells of the brain.Police and rescue services all over Europe are destined to use TETRA systems.
Responsibility and action = always in the Now = Flow. Accept is the first step
Living in the Now is the key to understanding and new consciousness. A state of calmness. Light awareness and alertness. Increased learning ability and sensitiveness.
A state of Unity between body and Spirit. It is a relaxed, harmonious, energized awaken state like a light meditation. We are aware and present in the Now in Alpha - den real world. The Limbic Centre in the brain vibrates with 12,5 Hz - it is the centre for sleep. Life energy, healing, and recovery. The limbic centre is closely related to our feelings.
The Pineal Gland is the superior gland in the brain. It vibrates at 10 Hz being the frequency for our nerve and time centre. The Pineal Gland produces the transmitter Melatonin which controls and regulates the other hormone producing glands and the immune system. Melatonin is particularly being produced at night where we are asleep. Darkness and silence are both very important factors. Melatonin has a protecting effect against cancer. The Pineal Gland is very sensitive towards electromagnetic influences. Both light and sounds are electromagnetic signals at different frequencies. Microwaves affect all cells and especially the Pineal Gland. Imbalance in the Pineal Gland causes increased mental activity which "might" lead to burn out syndrome.
Meditative state. Deep relaxation. Increased creativity and vivid imagination. Access to what is normally unconscious potential. Connected-ness in general is acknowledged in a wider context. Being able to connect-the-dots of the "big picture".
Regeneration and harmonious balance. The frequency band 3-12,5 Hz is the vitality "field". We "recharge", recover, and maintain homeostasis - the dynamic balance that keeps us alive. Our immune system strengthen, and our sleep is invigorating. In this field we get energy, Life force, and the power needed for a modern Life style.
Very deep relaxation. Deep sleep. Trance. Deep hypnosis.

Broadband antenna:
TDK Horn (1-18GHz)



Antenna under test





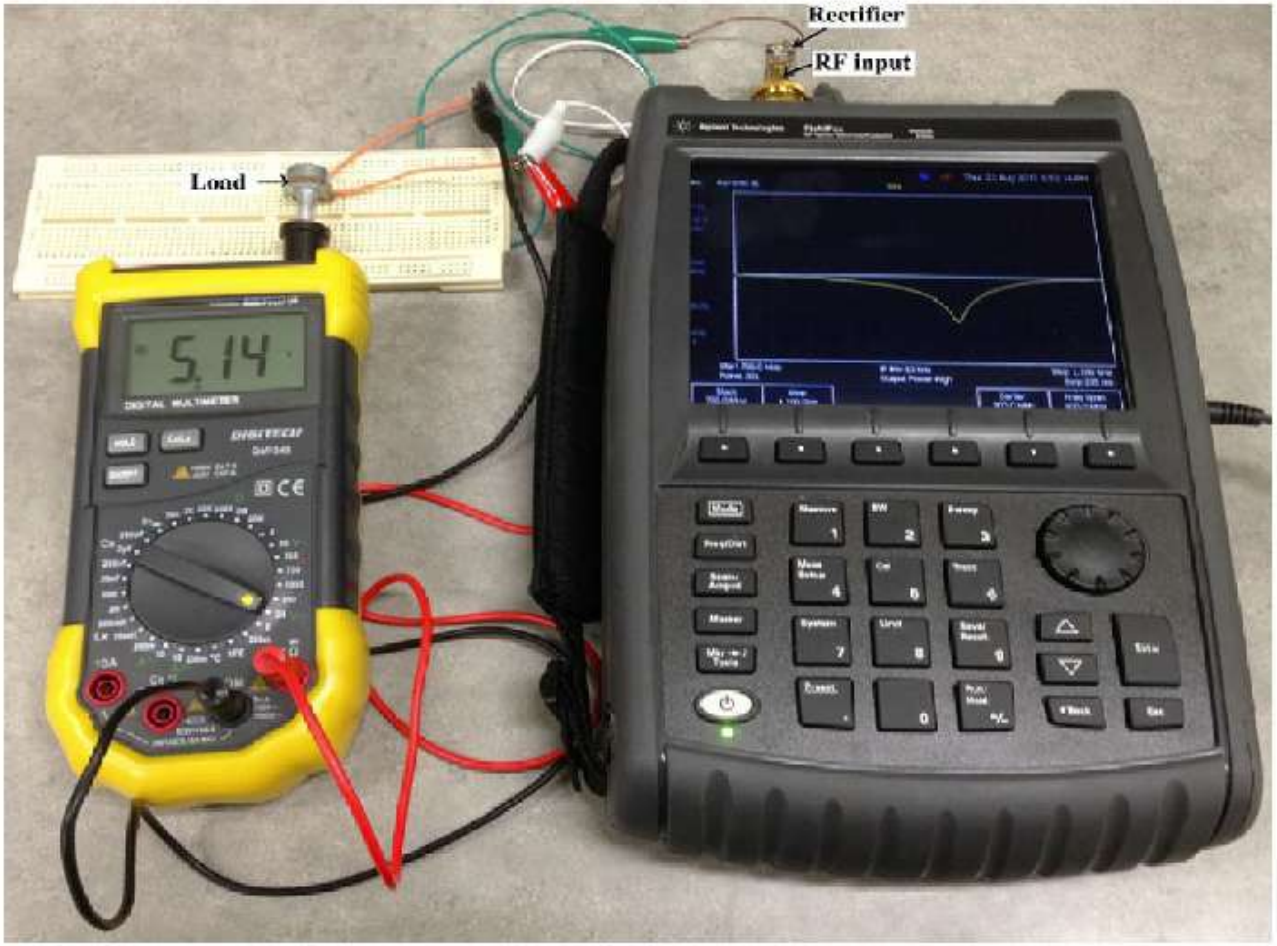
Spectrum analyzer
Agilent N1996A HP (100kHz-6GHz)



Signal generator SYSTRON DONNER 1710B-S1087
(10MHz - 8GHz)

Fig. 6 Experimental setup to measure the performance of the rectifier in free space

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Published in

RF rectifiers for EM power harvesting in a Deep Brain Stimulating device

Article · Jan 2015 · Australasian physical & ...

Md. Kamal Hosain · Hosain @bullet · Abbas Z. Kouzani · [...] · Michael Berk

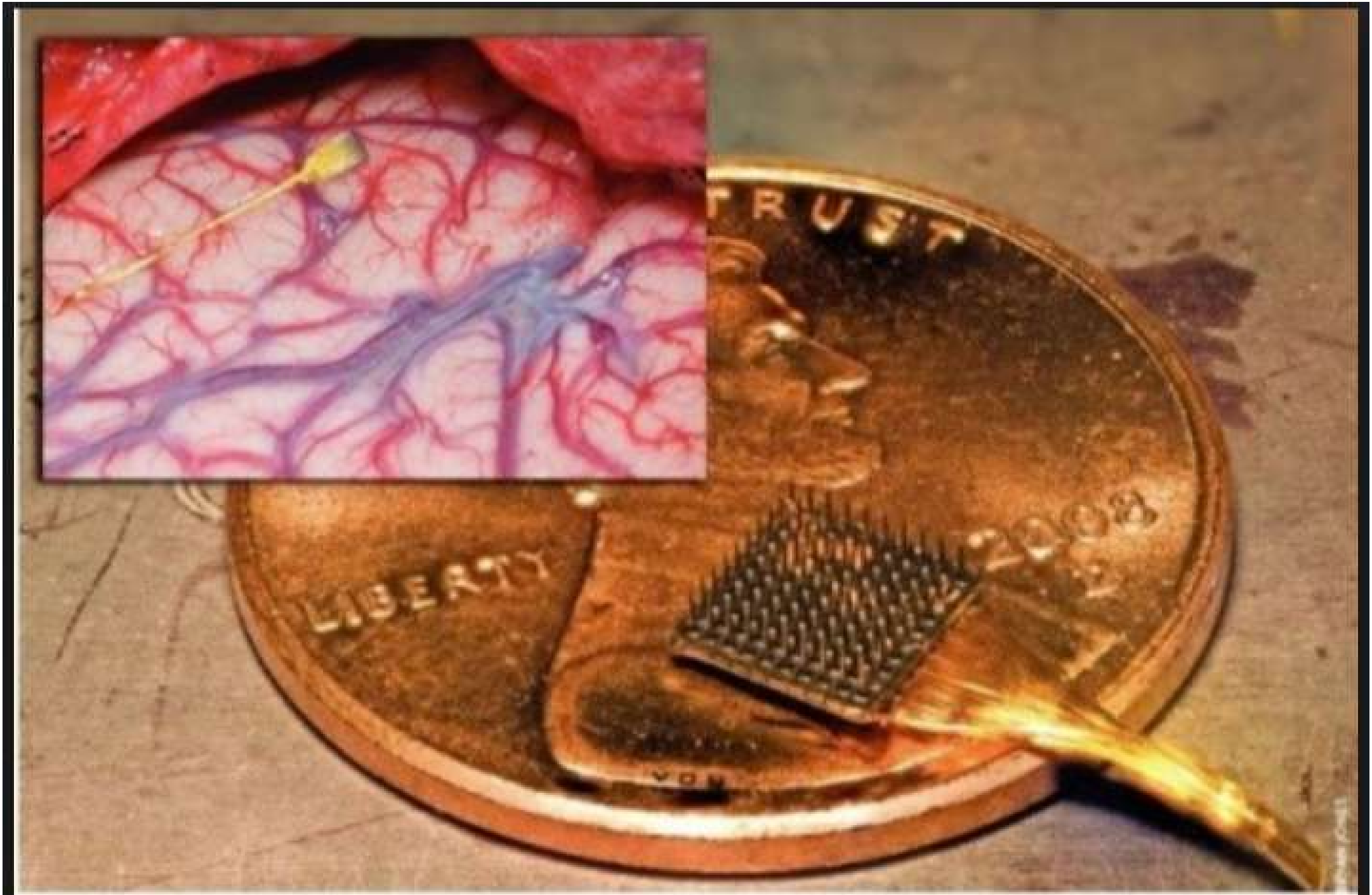
View

Citations

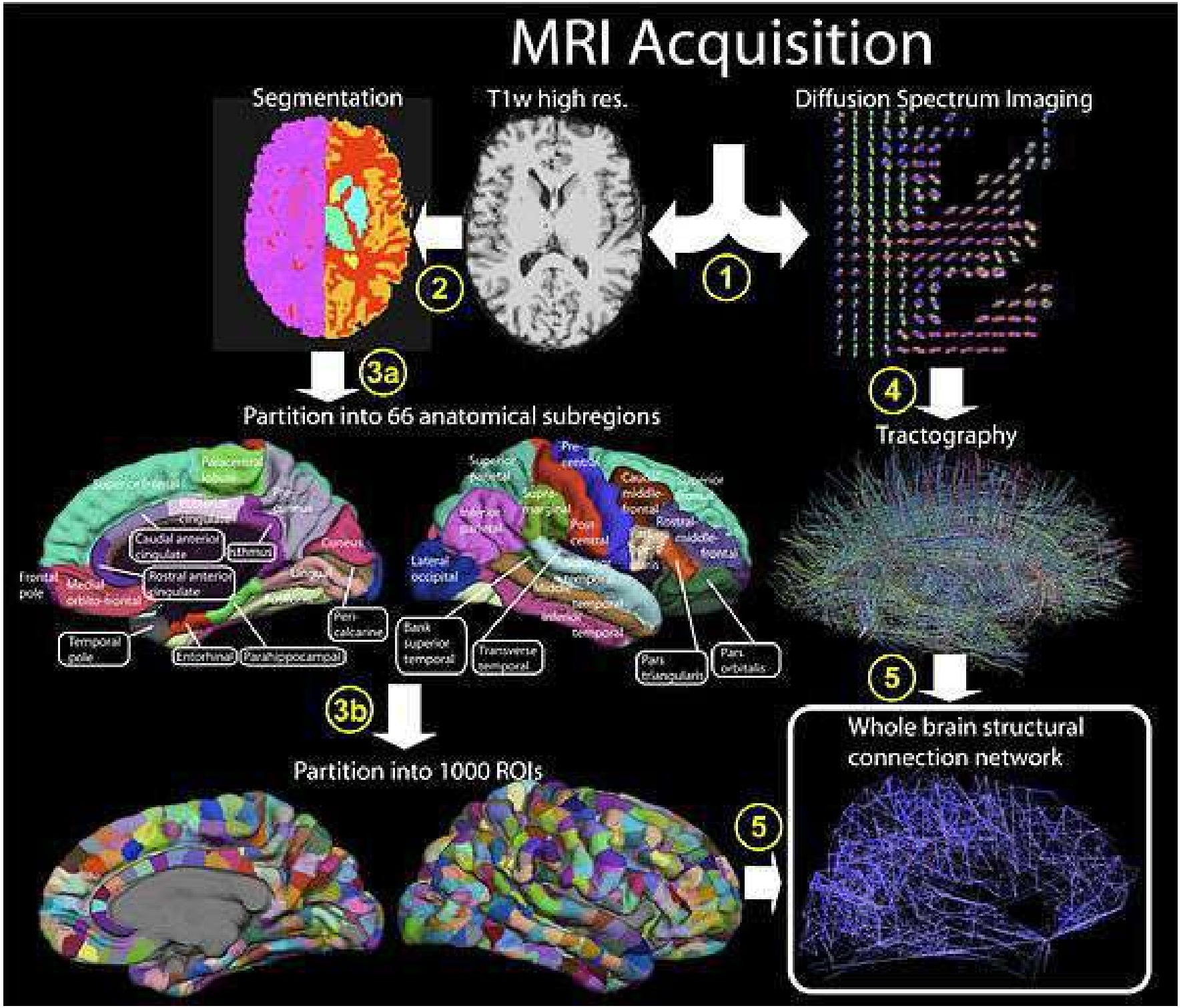
... The use of resistance compression networks (RCN) have been proposed to address this scenario [63]. In a related sense, improved RF-DC conversion efficiency of rectifier circuits is witnessed when appropriate time varying signals with high peak-toaverage power ratio (PAPR) are employed [64]. Further research on the use of RCNs and PAPR signals to optimize the performance of multiband RF energy harvesting systems is needed, and is potentially promising to significantly improve the performance of RF rectennas in real world applications. ...

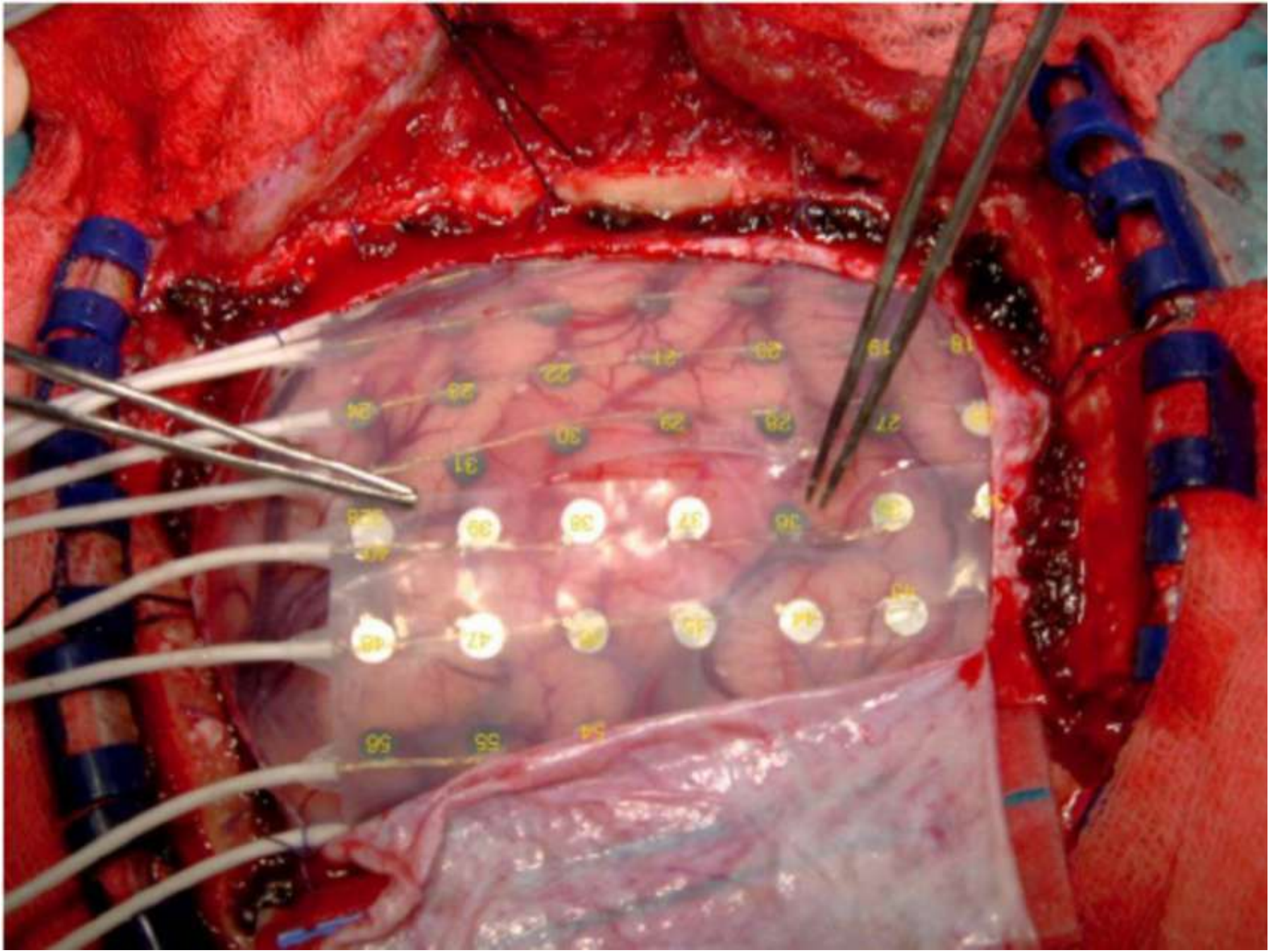
Radio Frequency Energy Harvesting

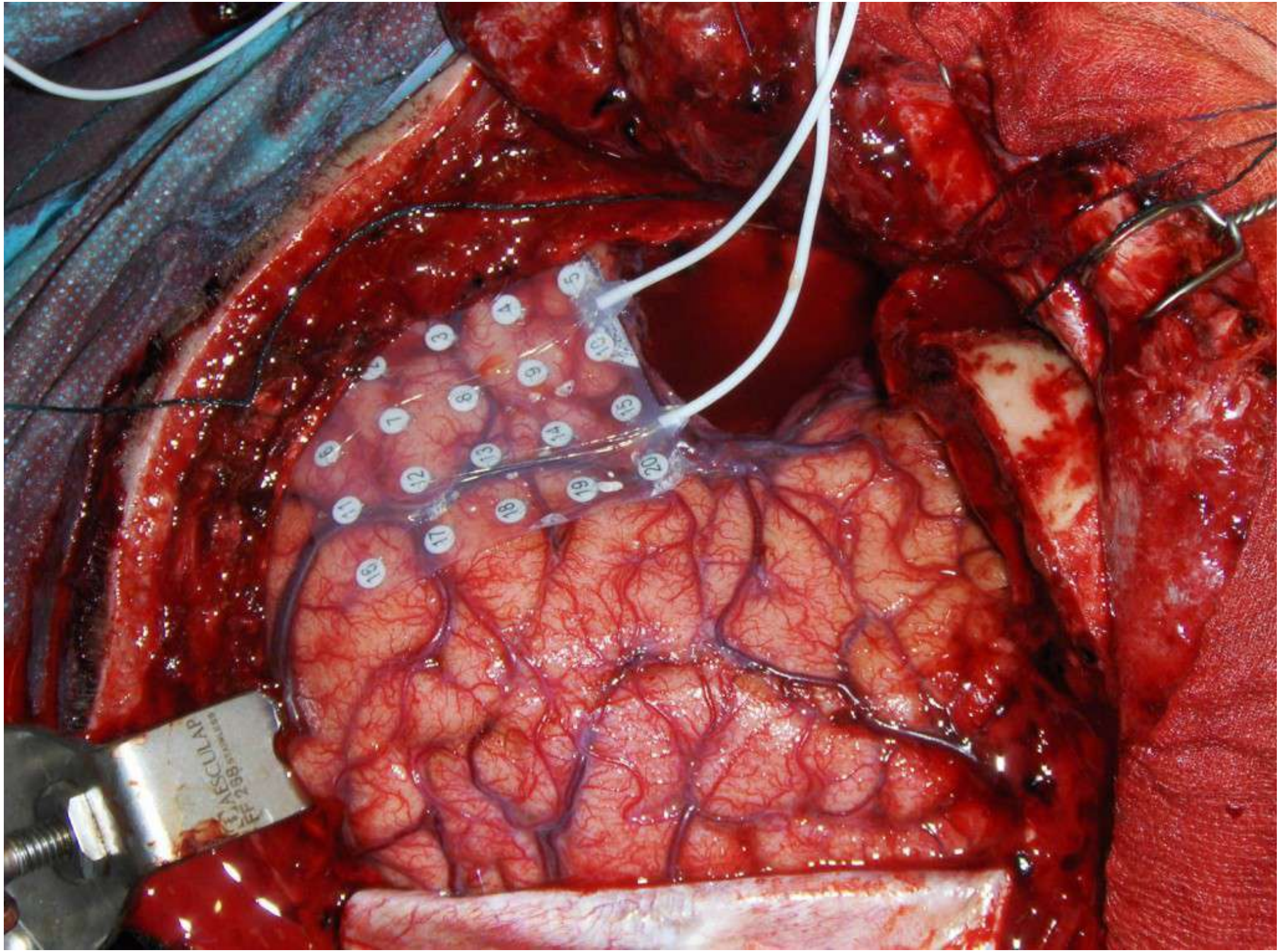

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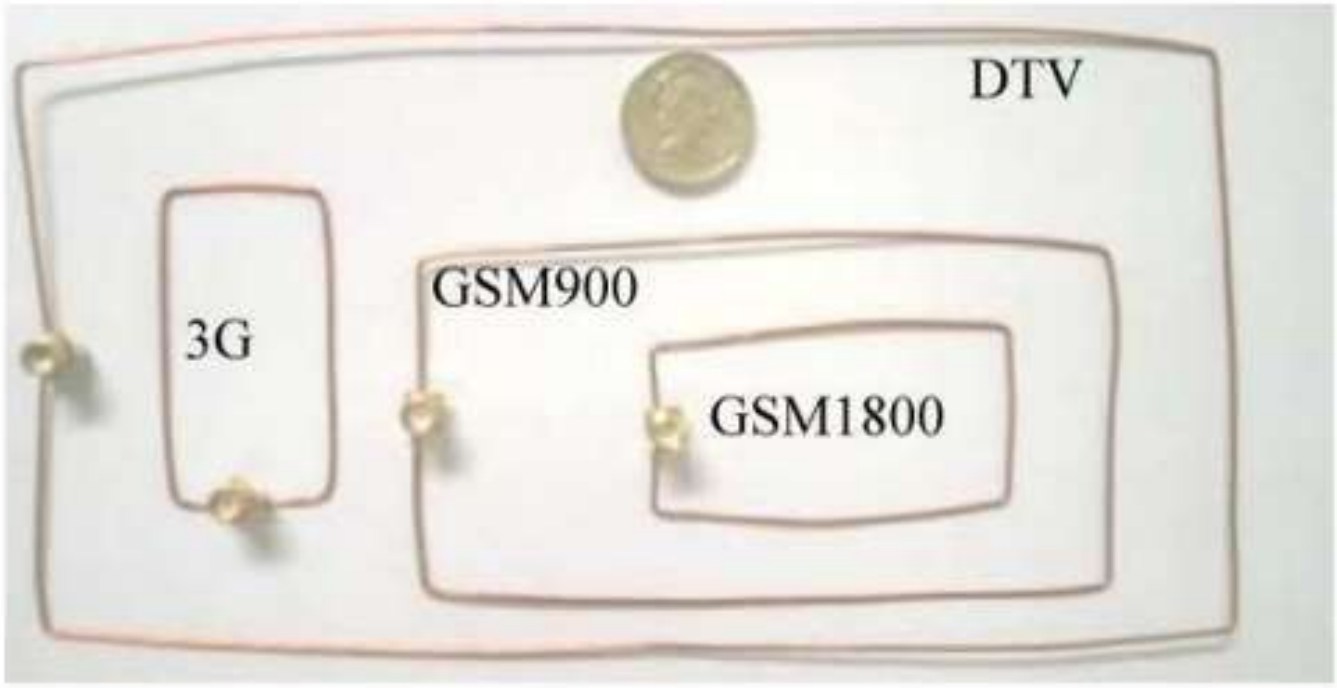


Thought control: The Utah Electrode Array can be implanted on a human brain. For a podcast and more photos, go to CityWeekly.net.

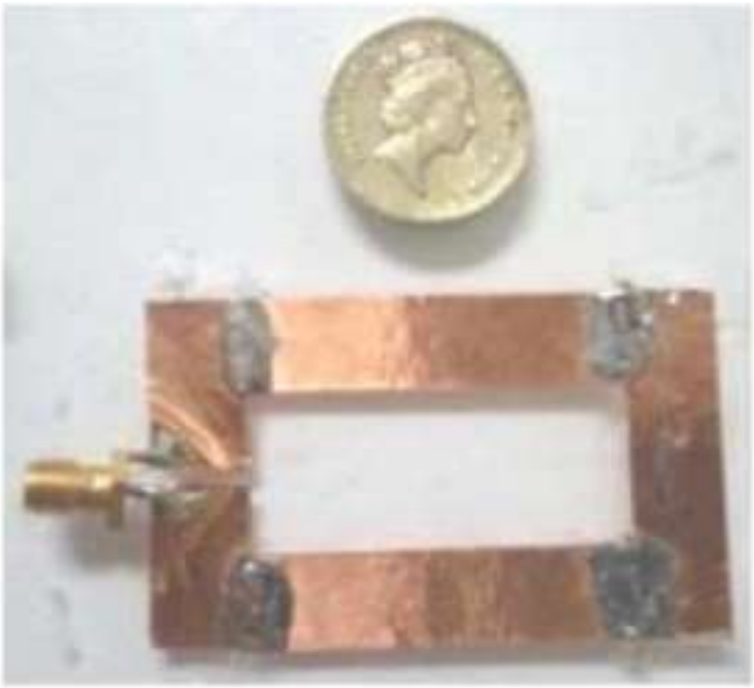

MRI Acquisition
Segmentation
T1w high res.
Diffusion Spectrum Imaging
2
1
3a
Partition into 66 anatomical subregions
4
Tractography
Caudal anterior cingulate
Thalamus
Caudate
Rostral anterior cingulate
Frontal pole
Medial orbito-frontal
Temporal pole
Entorhinal
Parahippocampal
Peri-calcarine
Superior frontal
Pre-central
Caudal middle frontal
Superior parietal
Inferior parietal
Rostral middle frontal
Post central
Lateral occipital
Bank superior temporal
Transverse temporal
Pars triangularis
Pars orbitalis
5
3b
Partition into 1000 ROIs
5
Whole brain structural connection network




AESCULAP

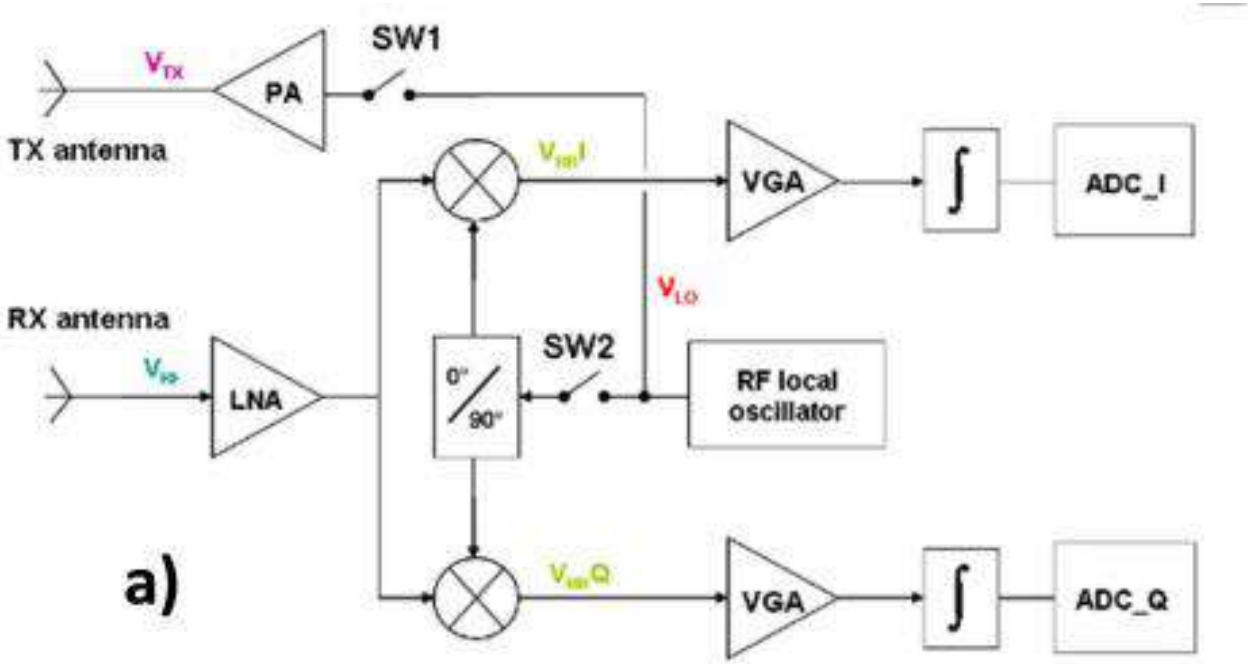


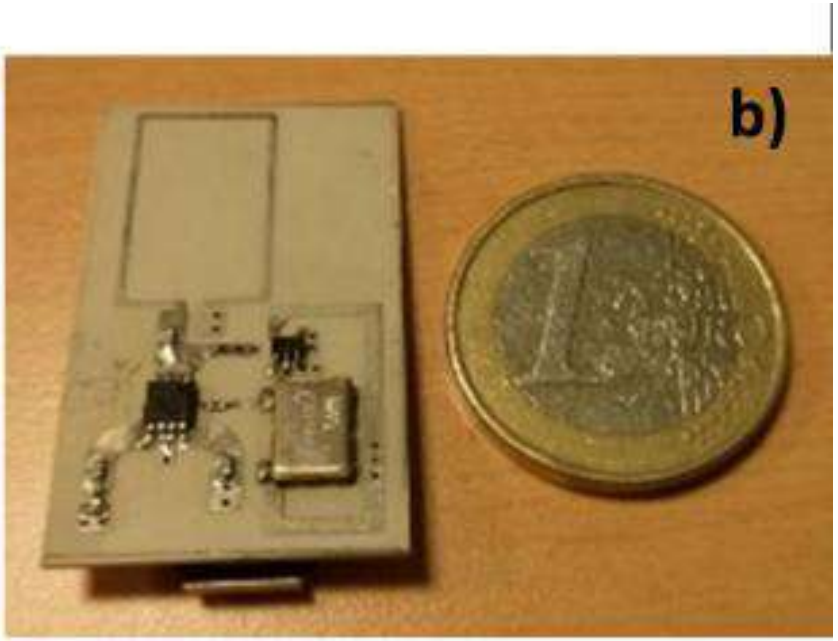
(a)



(b)

Fig. 3. 50-Ω folded-dipole antennas shown next to a British £1 coin. (a) DTV, GSM900 (BTx), GSM 1800 (BTx) and 3G (BTx) copper wire antennas. (b) 3G


SW1
V_{TX}
PA
TX antenna
$V_{out}I$
VGA
∫
ADC_I
V_{LO}
RX antenna
V_{RX}
LNA
0°
90°
SW2
RF local oscillator
$V_{out}Q$
VGA
∫
ADC_Q
a)


b)

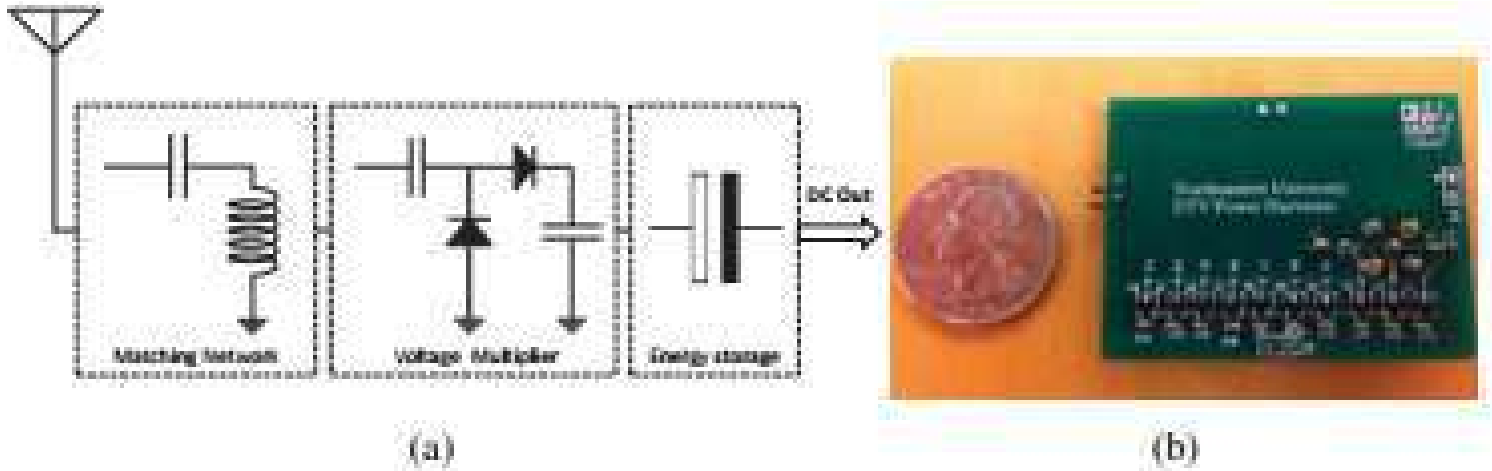


Fig. 1. Ambient RF energy harvesting (a) and RF energy harvesting module (DTV band) (b)

Design – Physical System

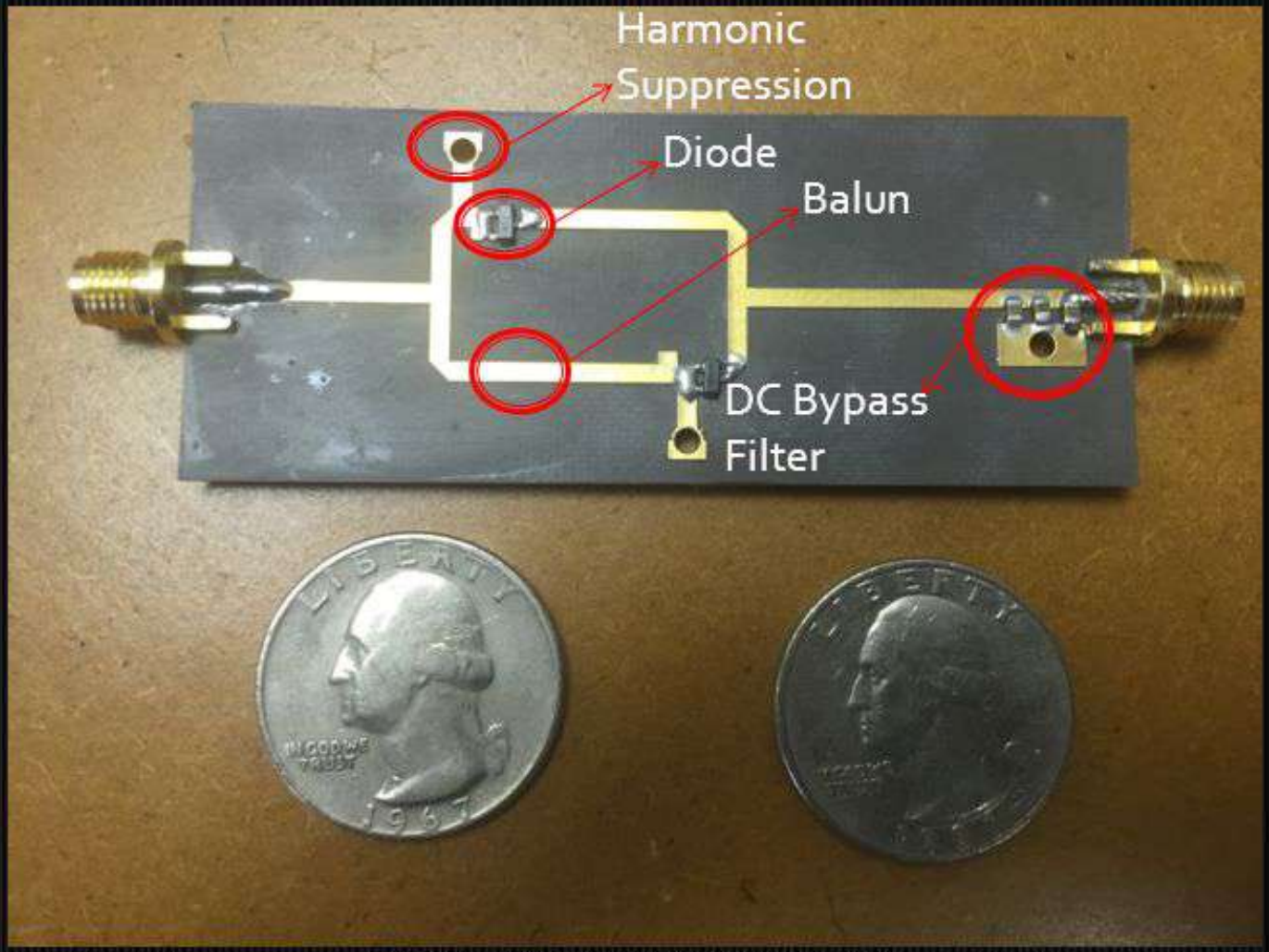


Fig 5. RF to DC converter

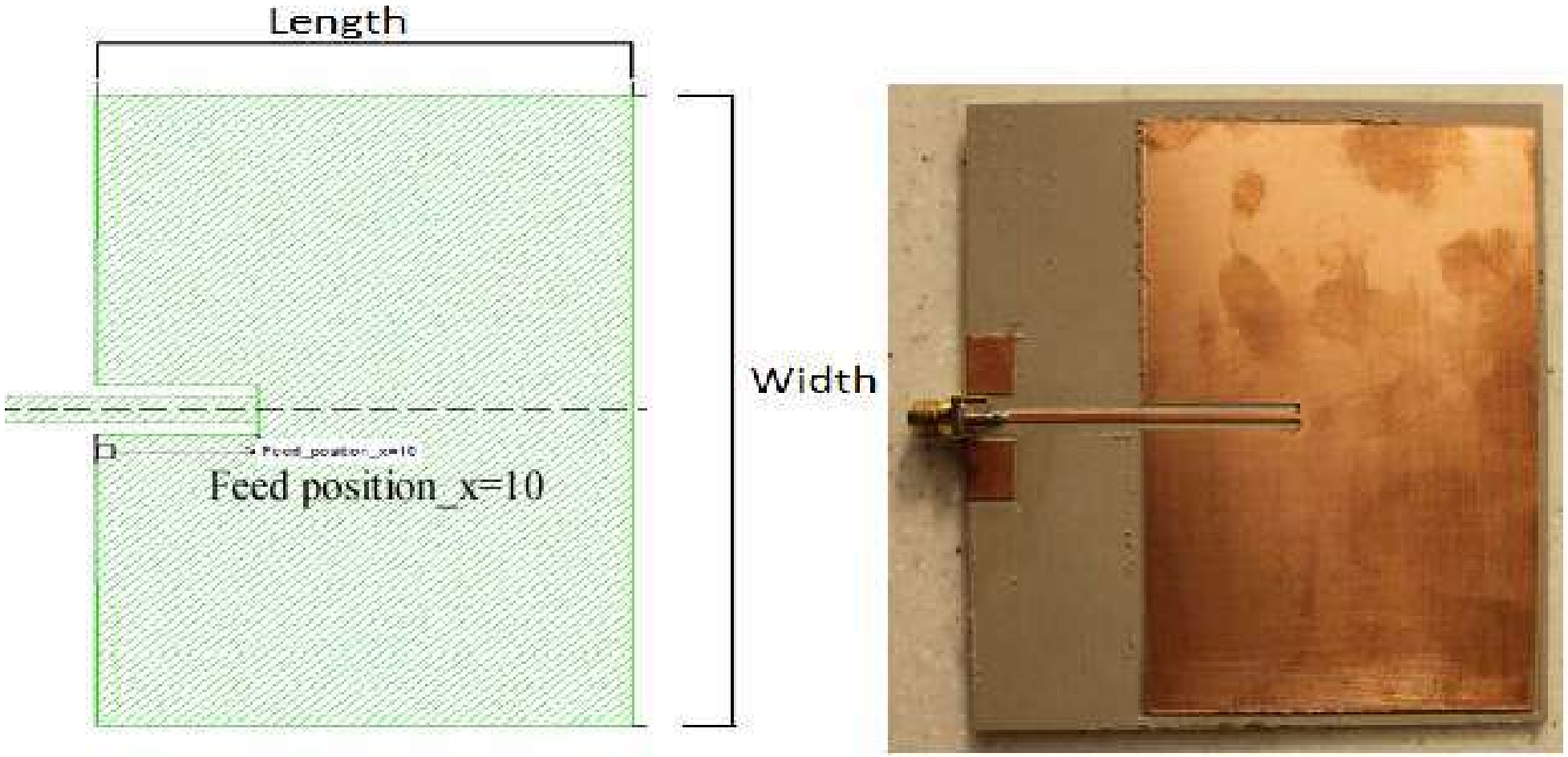
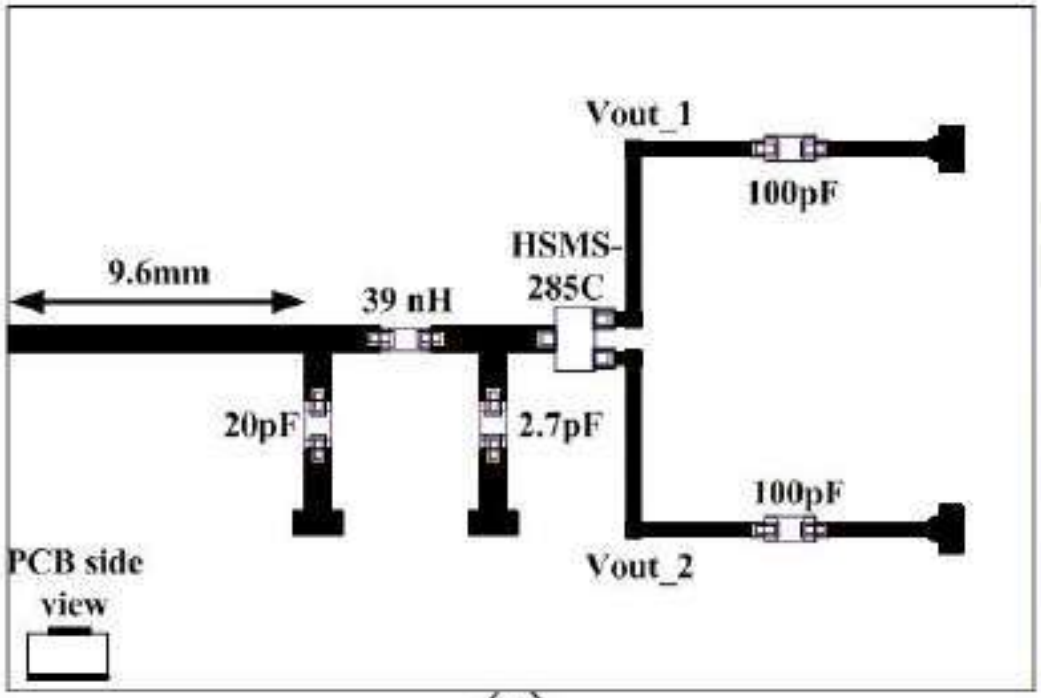


Fig. 3. RF Energy receiving antenna layout and manufactured prototype

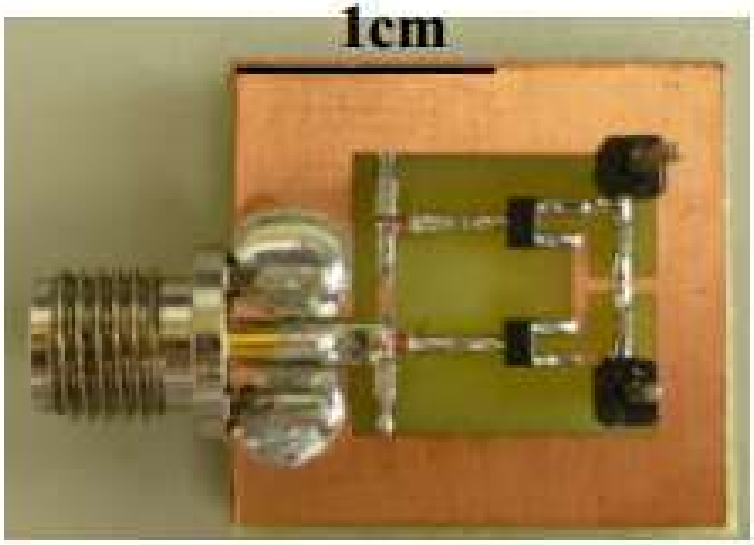
Fig. 3. RF Energy receiving antenna layout and manufactured prototype

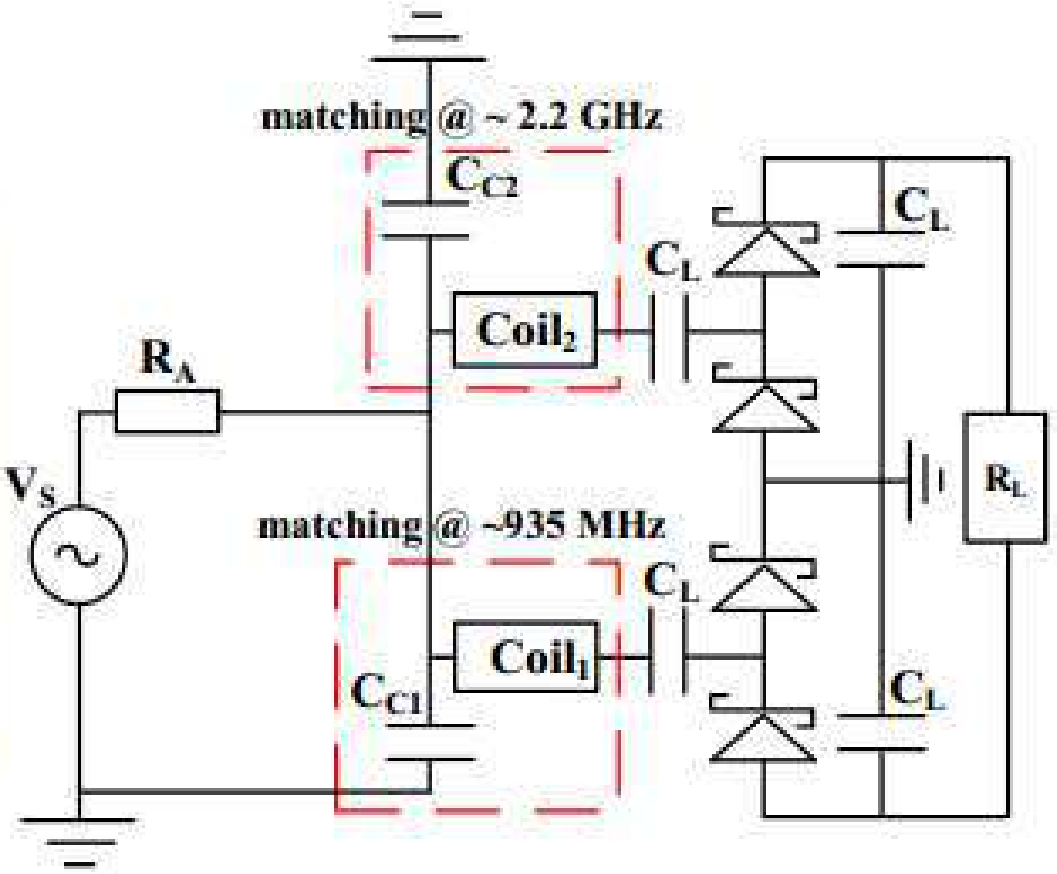

Vout_1
100pF
HSMS-
285C
9.6mm
39 nH
20pF
2.7pF
100pF
PCB side
view
Vout_2

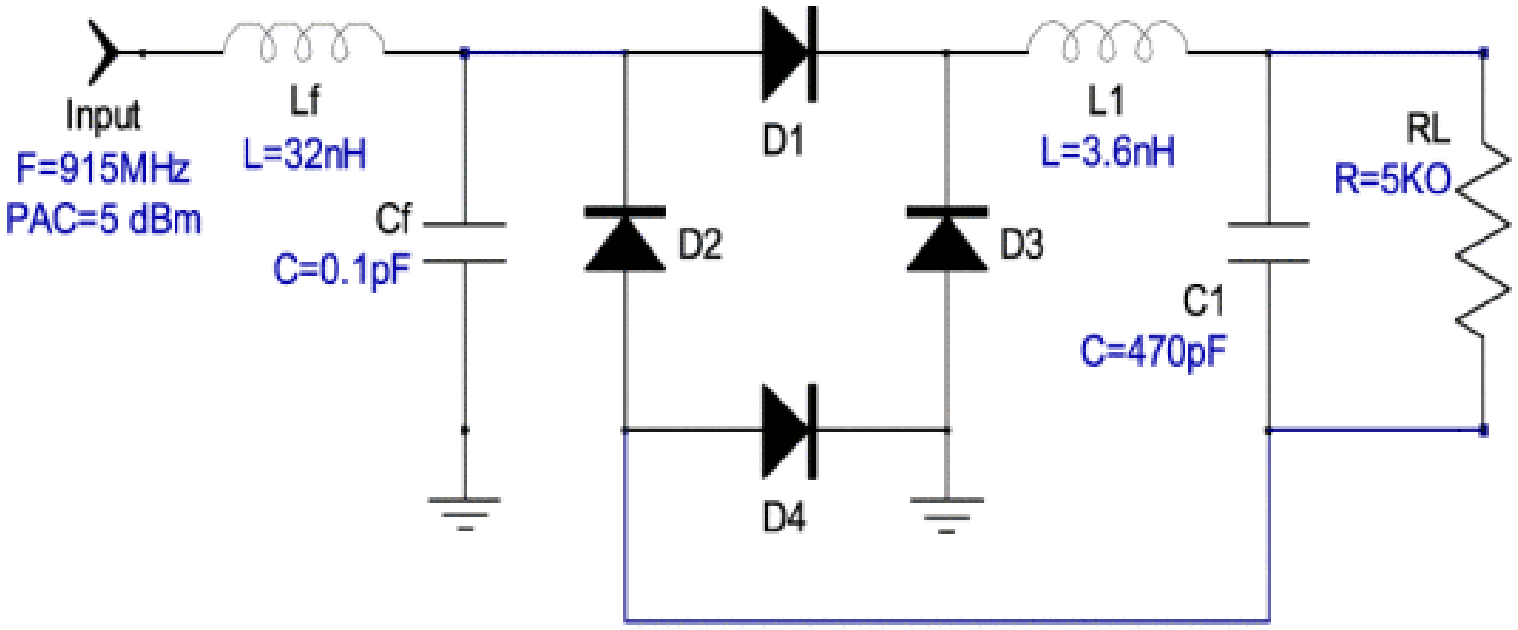
(a)



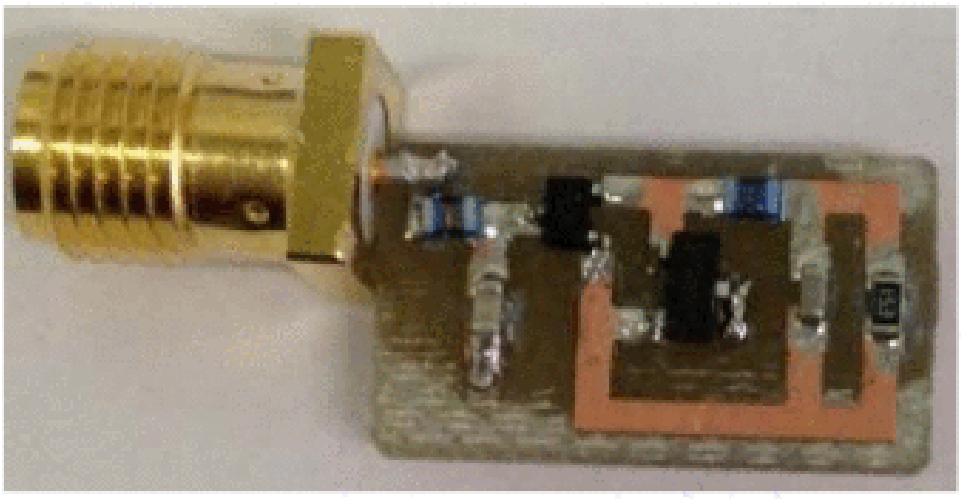
(b)


1cm


matching @ ~ 2.2 GHz
C_{C2}
C_L
C_L
$Coil_2$
R_A
V_S
matching @ ~935 MHz
C_L
$Coil_1$
C_{C1}
C_L
R_L


Input
F=915MHz
PAC=5 dBm
Lf
L=32nH
Cf
C=0.1pF
D1
D2
D3
D4
L1
L=3.6nH
C1
C=470pF
RL
R=5KO

(a)



(b)

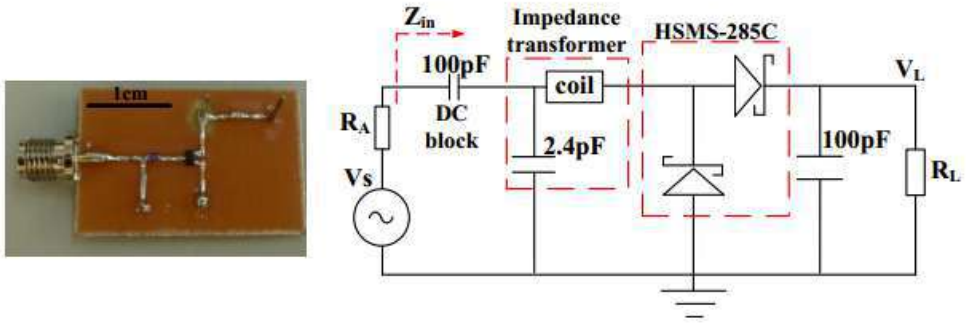


Figure 4. PCB of the realized RF harvester at 930MHz using a HSMS-285C diode voltage doubler. The HSMS-285C has the following spice parameters I_S = 3μA, C_j = 0.18pF and R_S= 25. *Coil* = 38.5nH at 900MHz with a Q_u of 69. The chip capacitors have Q_u of about 1000 at 900MHz.

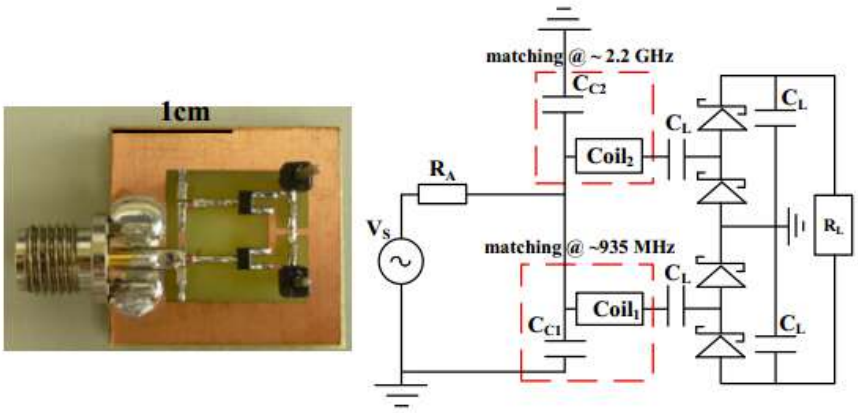
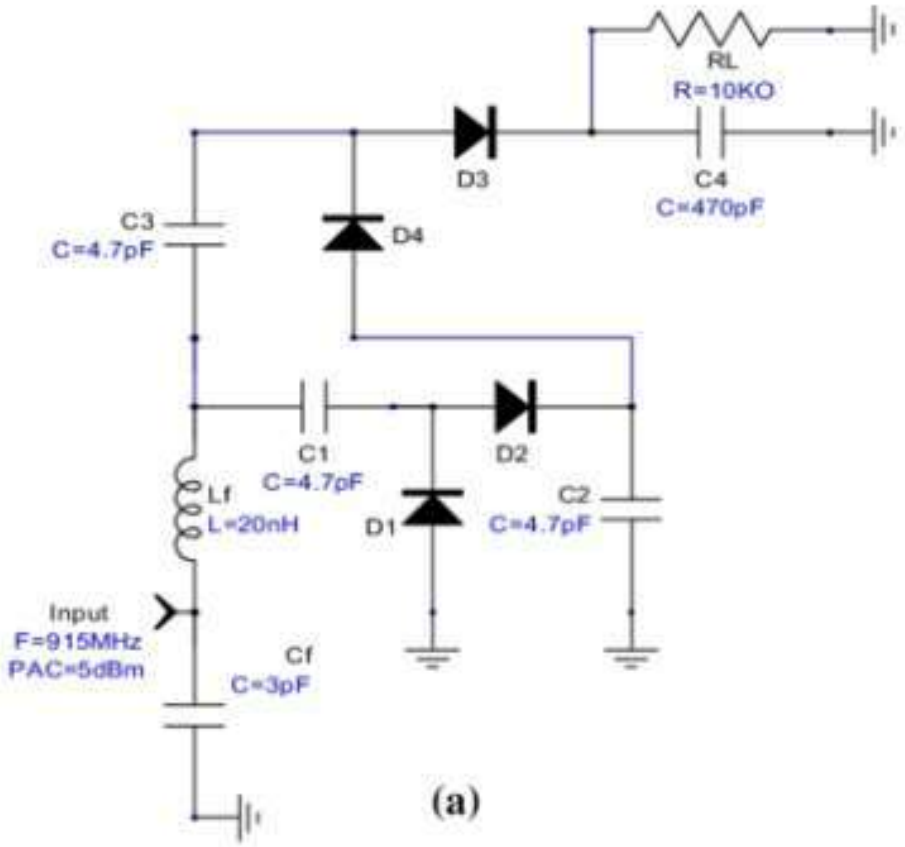
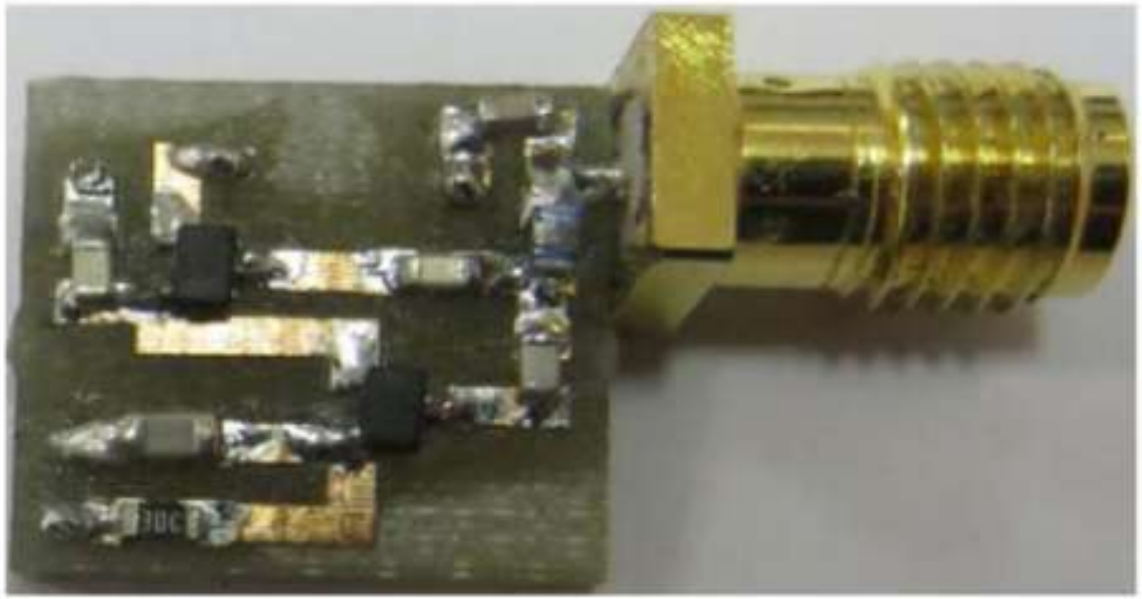


Figure 6. Picture and circuit layout of the dual-band RF harvester. The harvester is matched at 935MHz and 2.2GHz. Schottky diodes are HSMS-285x series. C_{C1}=2.7pF, $Coil_1$ =39nH; $Coil_1$ Q_U @ 900MHz =88, C_{C2}=0.8pF, $Coil_2$ =2.14nH; $Coil_2$ Q_U @ 1.7GHz =35, C_L=100pF.

Fig. 14 a Two-stages charge pump rectifier with a L-matching network. b Fabricated L-matched two-stages charge pump rectifier

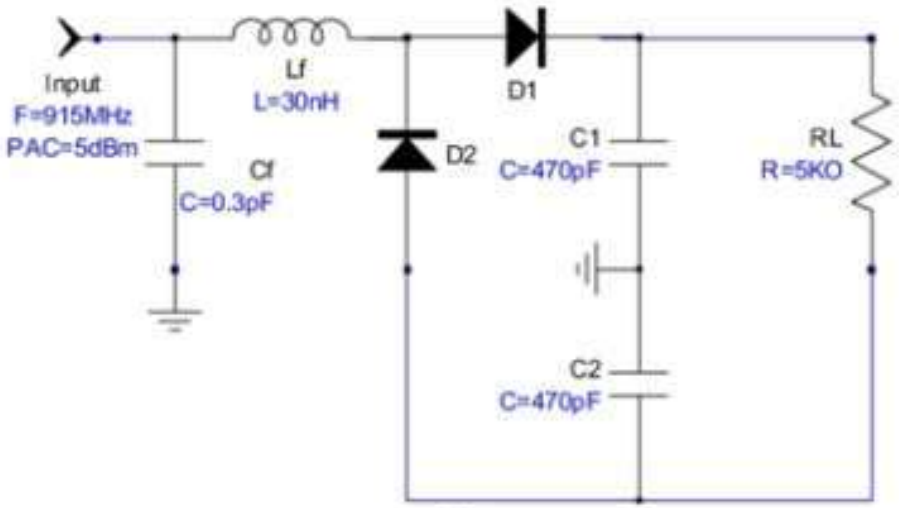


(a)

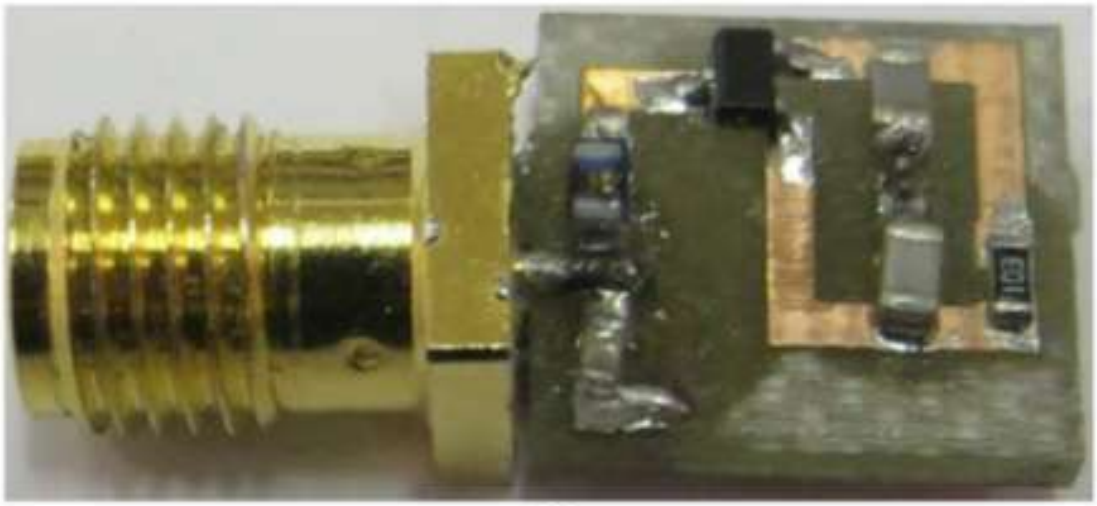


(b)

Fig. 4 a Delon voltage doubler rectifier with an L-section matching network. b Fabricated PCB of the L-section matched Delon voltage doubler rectifier



(a)



(b)

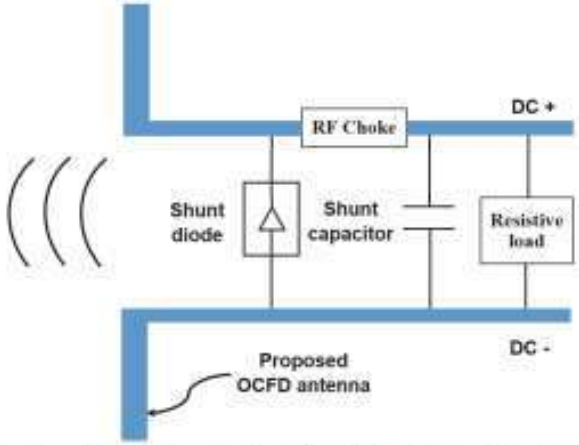


Fig. 9. Configuration of a single shunt diode (Class F) rectifier with a dipole antenna.

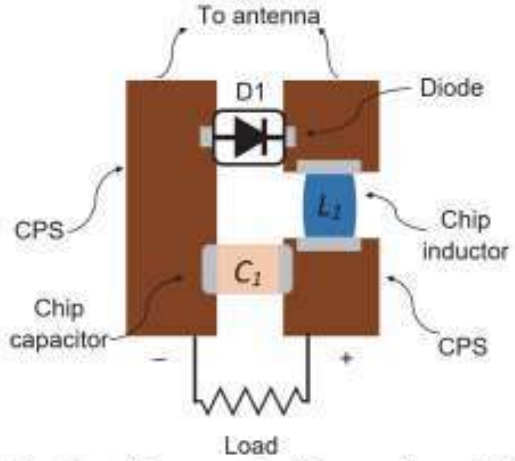


Fig. 10. Configuration of the proposed rectifier on coplanar striplines (CPS).

TABLE III
CIRCUIT COMPONENTS USED IN THE DESIGN

Component name	Nominal Value	Part number and supplier
D1	Schottky diode	SMS7630-079LF, Skyworks
L1	47 nH chip inductor	0603HP47N, Coilcraft
C1	100 nF chip capacitor	GRM188R71H104JA93D, Murata

antenna have a radius of 50 mm and a circumference angle of

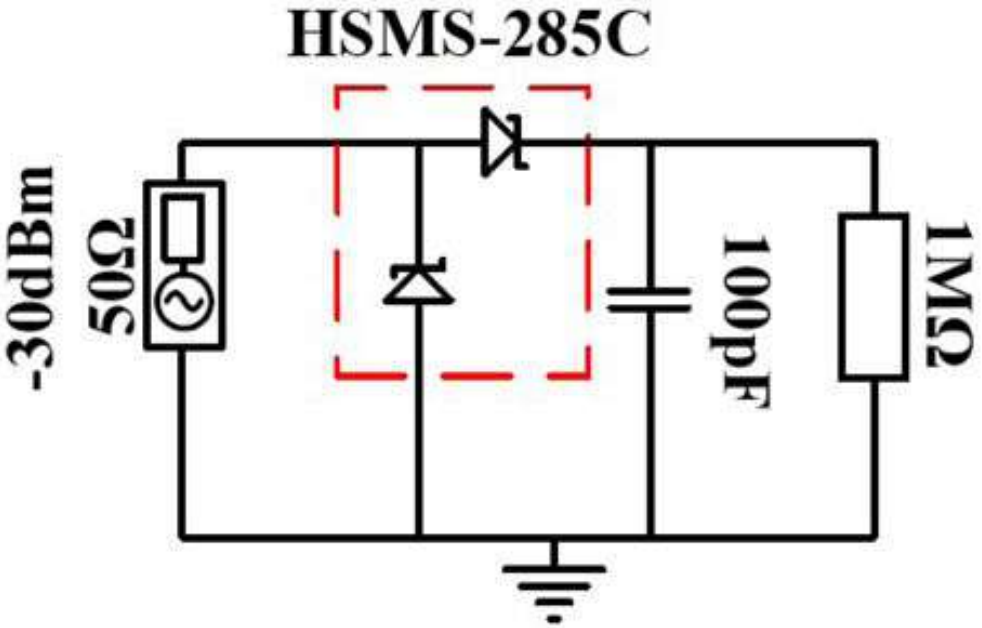
respectively. While the imaginary part of the proposed OCFD is around 0 Ω at resonant frequencies 0.6 GHz, 1.2 GHz and 2.4 GHz, which are f_0, $2f_0$, and $4f_0$ respectively. These results have demonstrated that the simulated results agree with the OCFD theory as discussed in Section III–A. Furthermore, the imaginary part of the impedance of the antenna over the resonant frequency band from 1.4 to 2 GHz turns from negative values (for the reference antenna) to positive values (for the proposed antenna). As shown in Fig. 7(b), the value of the imaginary part of the proposed antenna impedance varies between 0 and 300 Ω over the desired frequency band. This feature could help the proposed antenna to produce a better conjugate matching with the rectifier, since the imaginary part of the impedance of the rectifier normally varies between -700 and 0 Ω as we discussed earlier. The simulated 3D radiation patterns of the proposed antenna at the frequencies of interest are depicted in Fig. 8. The 2D polar plots of antenna patterns in *E-plane* and *H-plane* are shown as well. Here we have only showed the directivity (maximum gain) of the antenna (without taking the mismatch loss into account). From Fig. 8, it can be seen that the antenna has symmetrical patterns about YOZ plane with a maximum directivity of 1.8 dBi at 0.9 GHz, 3.5 dBi at 1.8 GHz and 3.3 dBi at 2.4 GHz. The antenna is more directive towards the long arm direction at 1.8 GHz and 2.4 GHz with the half-power beam-widths (HPBW) of around 174° and 185° respectively. The HPBW is about 96° at 0.9 GHz.

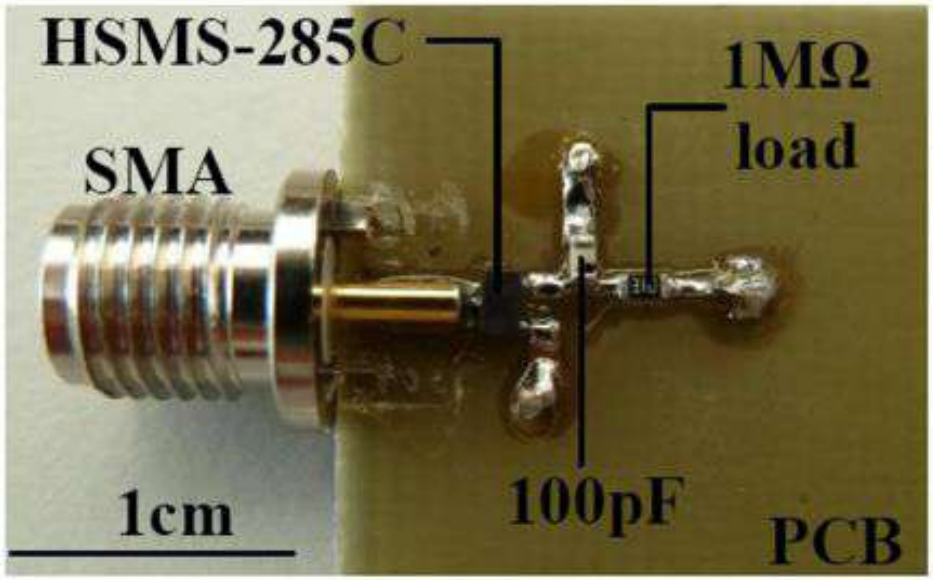
Therefore, the proposed broadband OCFD antenna has obtained high impedance over a wide frequency range. The proposed design is just an example to illustrate the proposed new method. The details of the dipole could be modified according to the frequency of interest.

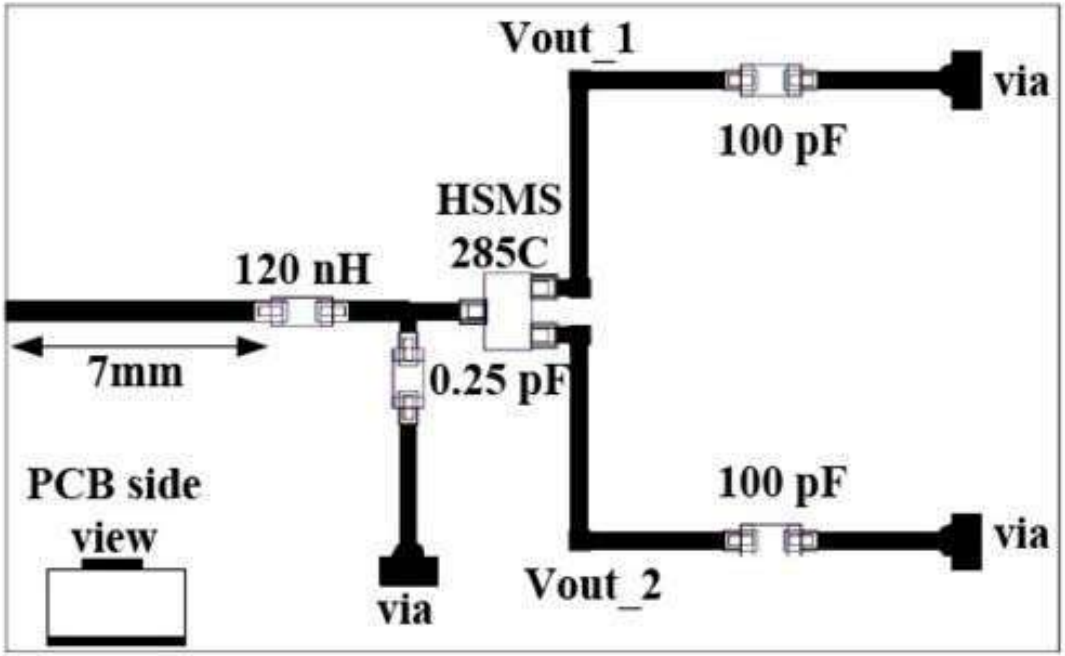
IV. RECTENNA INTEGRATION

A. Rectifier Configuration

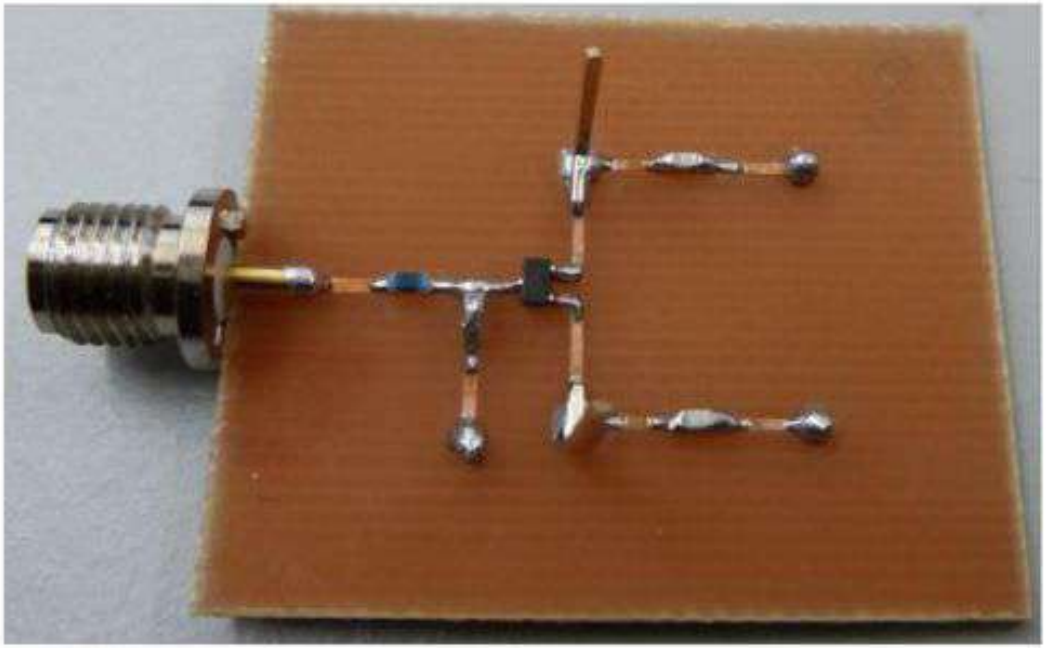
The proposed high impedance OCFD antenna may directly conjugate match with the input impedance of a rectifier over a wide frequency band. The rectifier should only consist of few circuit components for rectification, DC storage and output. A single shunt diode rectifier is selected due to its very simple structure and high conversion efficiency [33]. The configuration of the single shunt diode rectifier with a dipole


HSMS-285C
-30dBm
50Ω
100pF
1MΩ

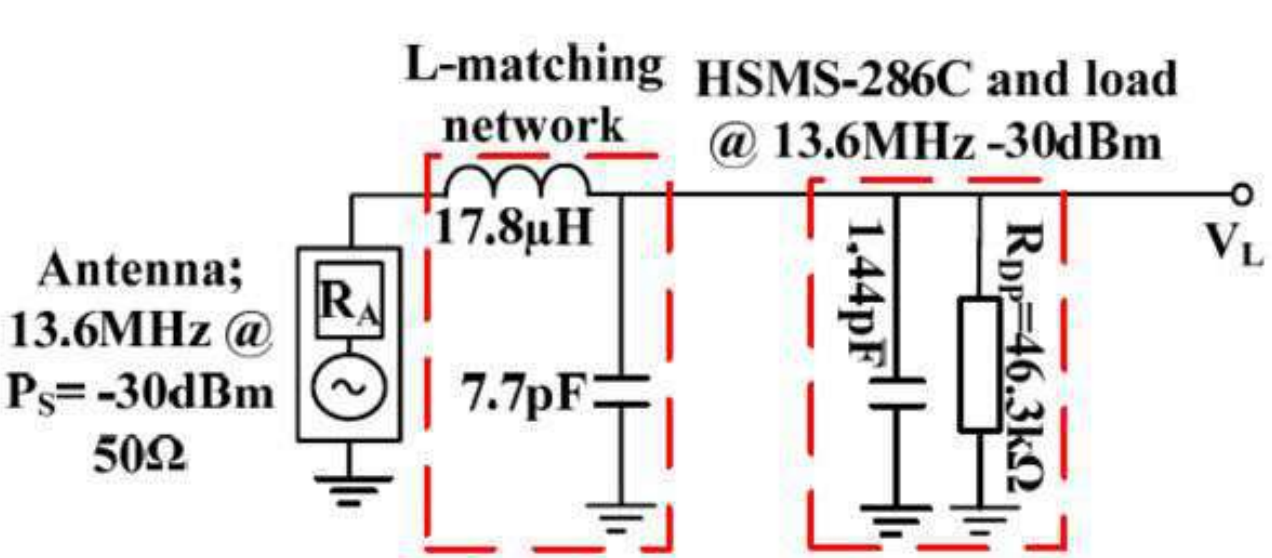

HSMS-285C
1MΩ
load
SMA
1cm
100pF
PCB


Vout_1
via
100 pF
HSMS
285C
120 nH
7mm
0.25 pF
PCB side
view
100 pF
via
Vout_2
via

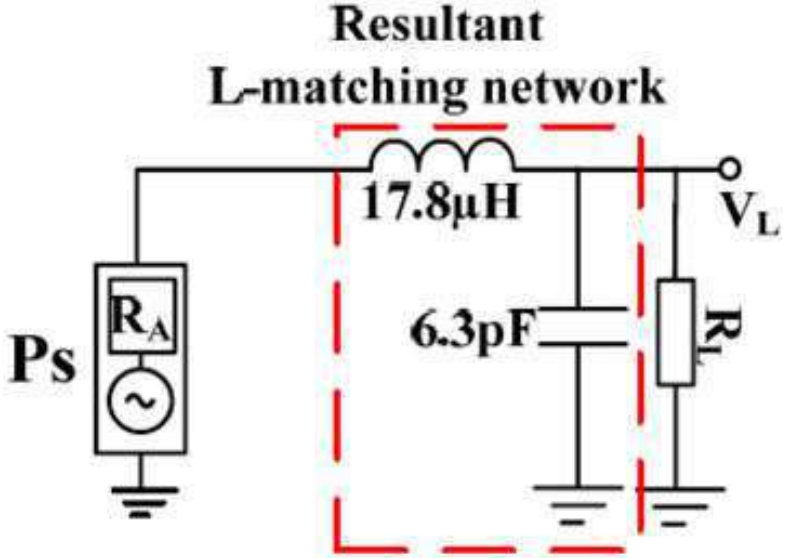
(c)



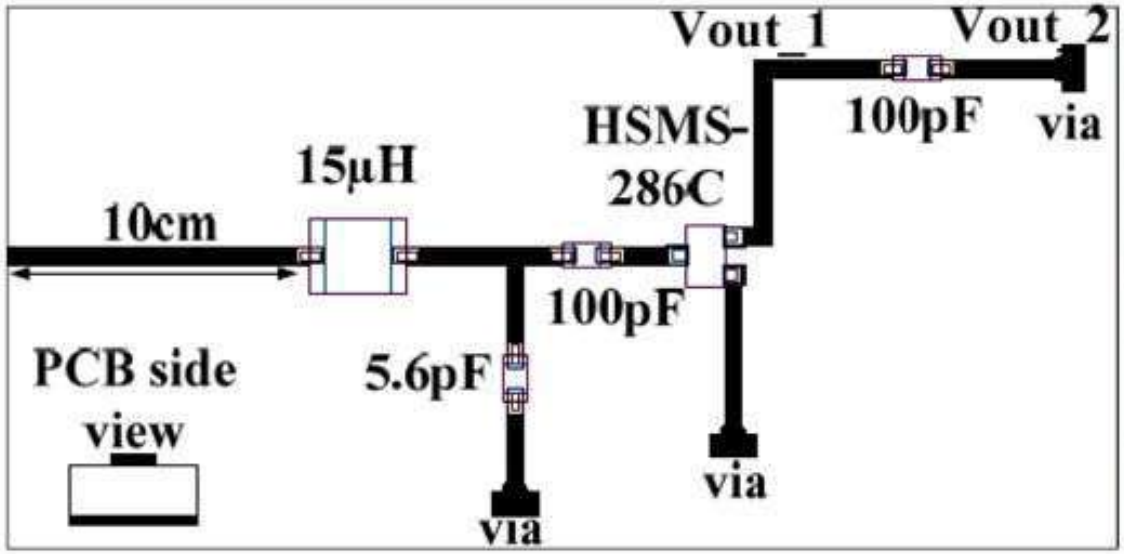
(d)


L-matching network
HSMS-286C and load @ 13.6MHz -30dBm
Antenna; 13.6MHz @ P_S= -30dBm 50Ω
R_A
17.8µH
7.7pF
1.44pF
R_{DP}=46.3kΩ
V_L

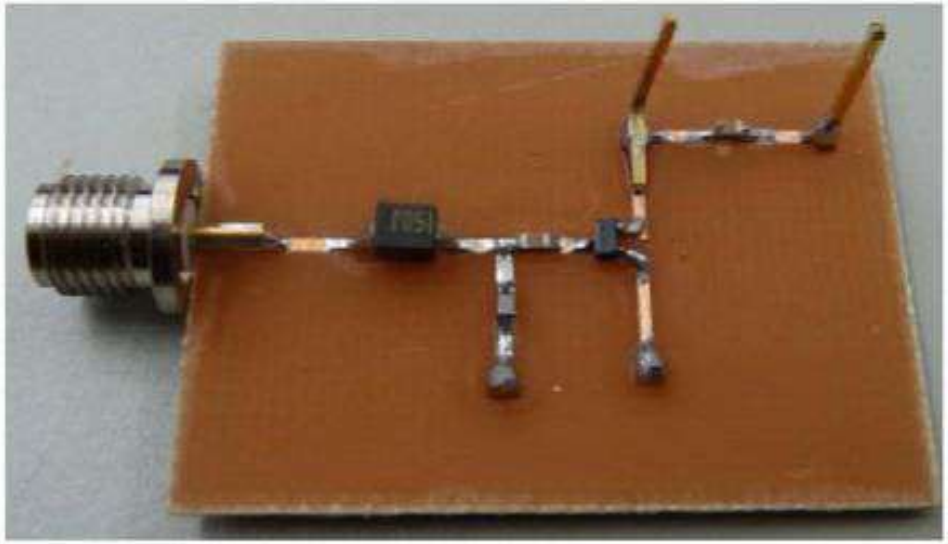
(a)


Resultant L-matching network
Ps
R_A
17.8µH
6.3pF
R_L
V_L

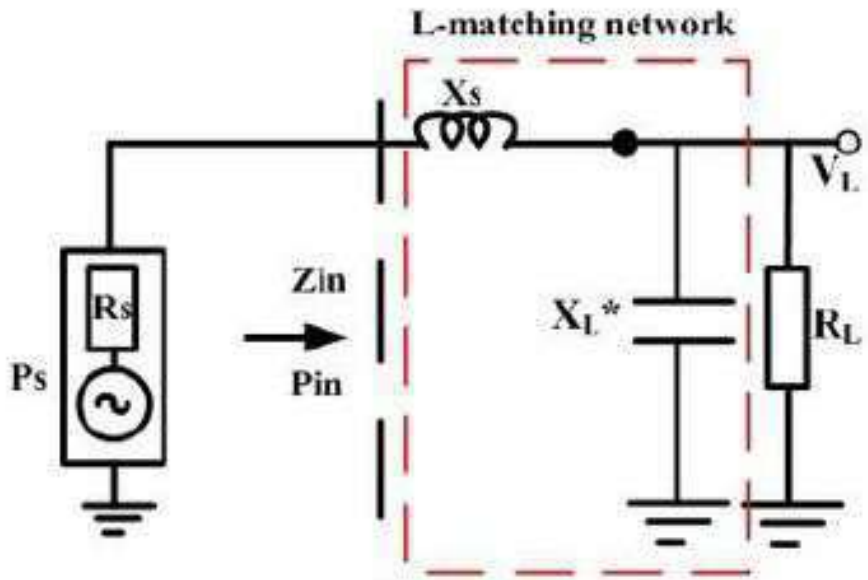
(b)


Vout_1
Vout_2
HSMS-286C
100pF
via
15µH
10cm
100pF
PCB side view
5.6pF
via
via

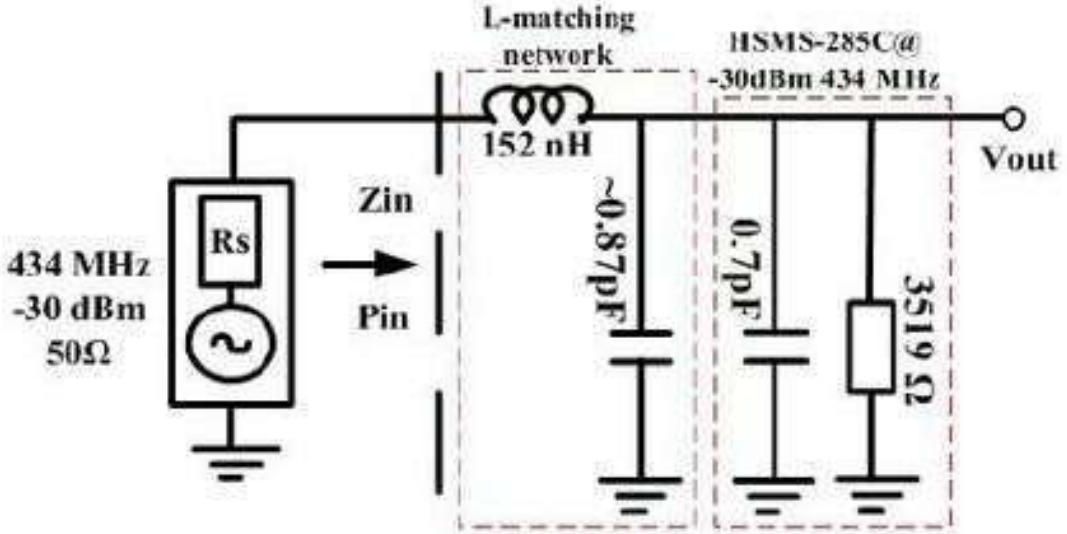
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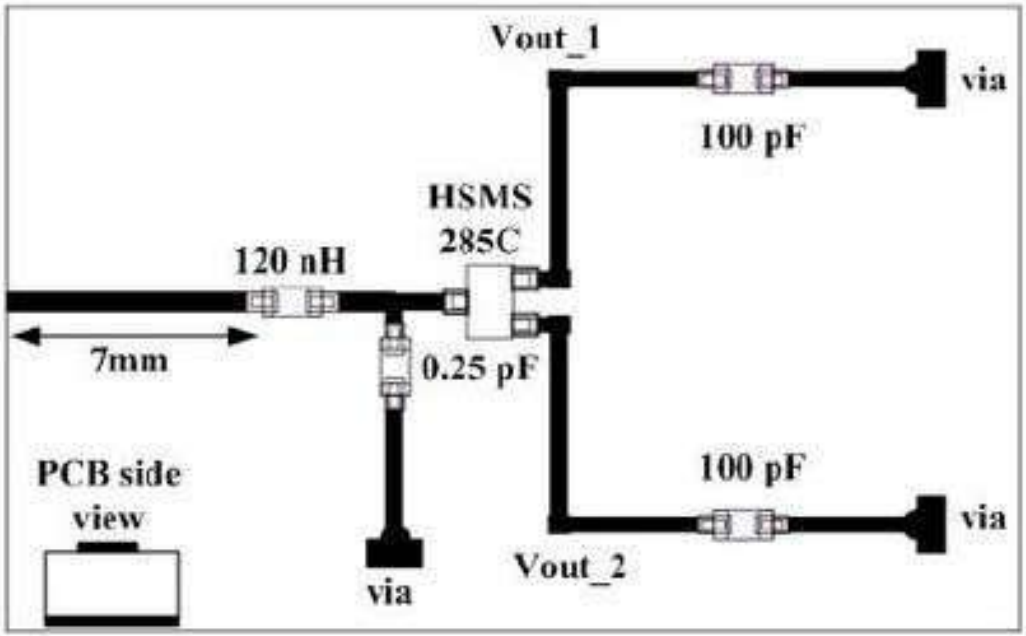
(d)


L-matching network
Xs
V_L
Zin
Rs
Ps
Pin
X_L*
R_L

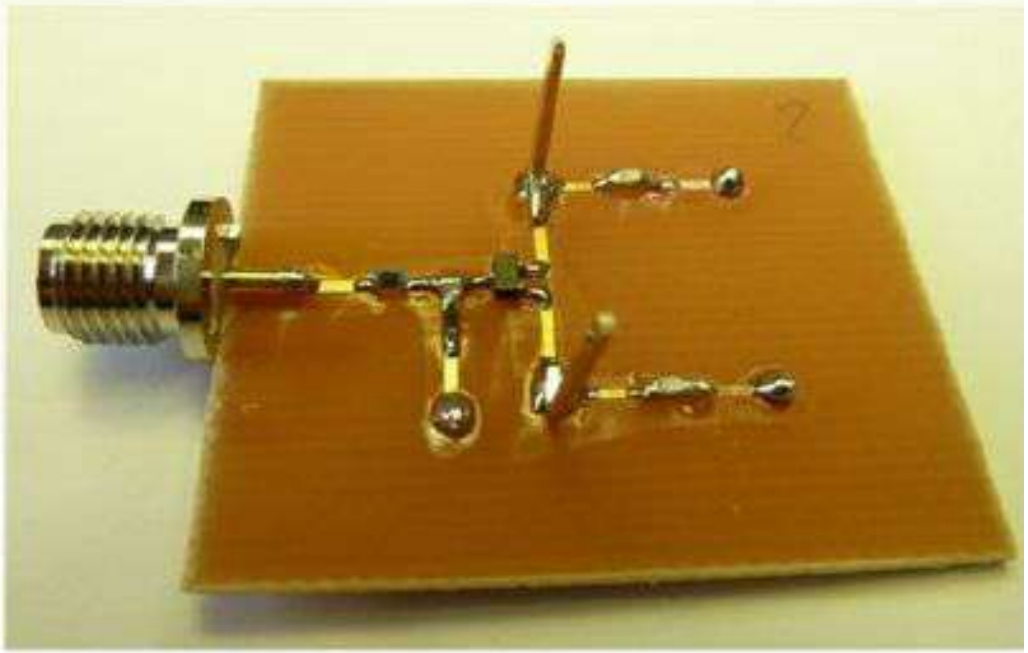
(a)


L-matching
network
HSMS-285C@
-30dBm 434 MHz
152 nH
Vout
Zin
Rs
434 MHz
-30 dBm
50Ω
Pin
~0.87pF
0.7pF
3519 Ω

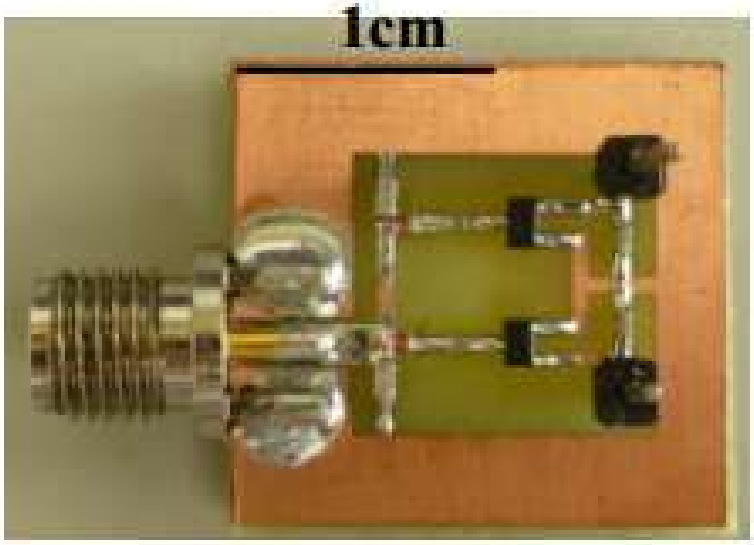
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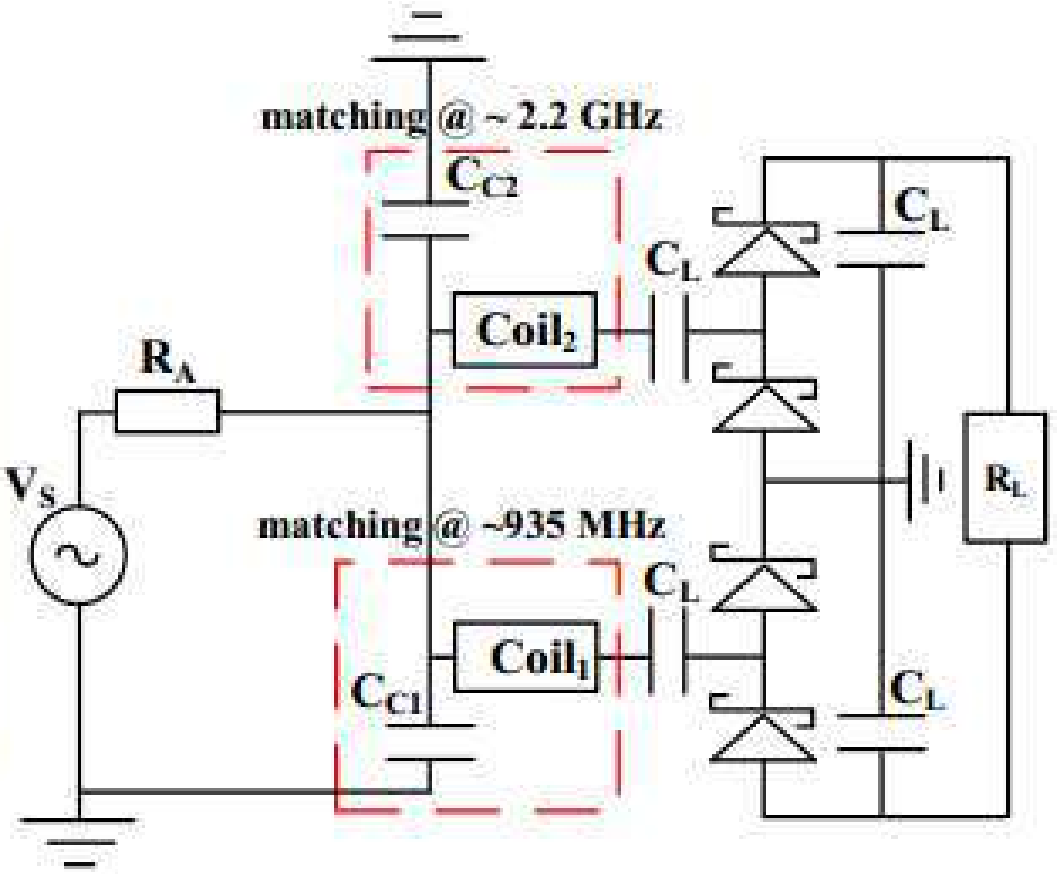

Vout_1
via
100 pF
HSMS
285C
120 nH
7mm
0.25 pF
PCB side
view
100 pF
via
via
Vout_2

(c)

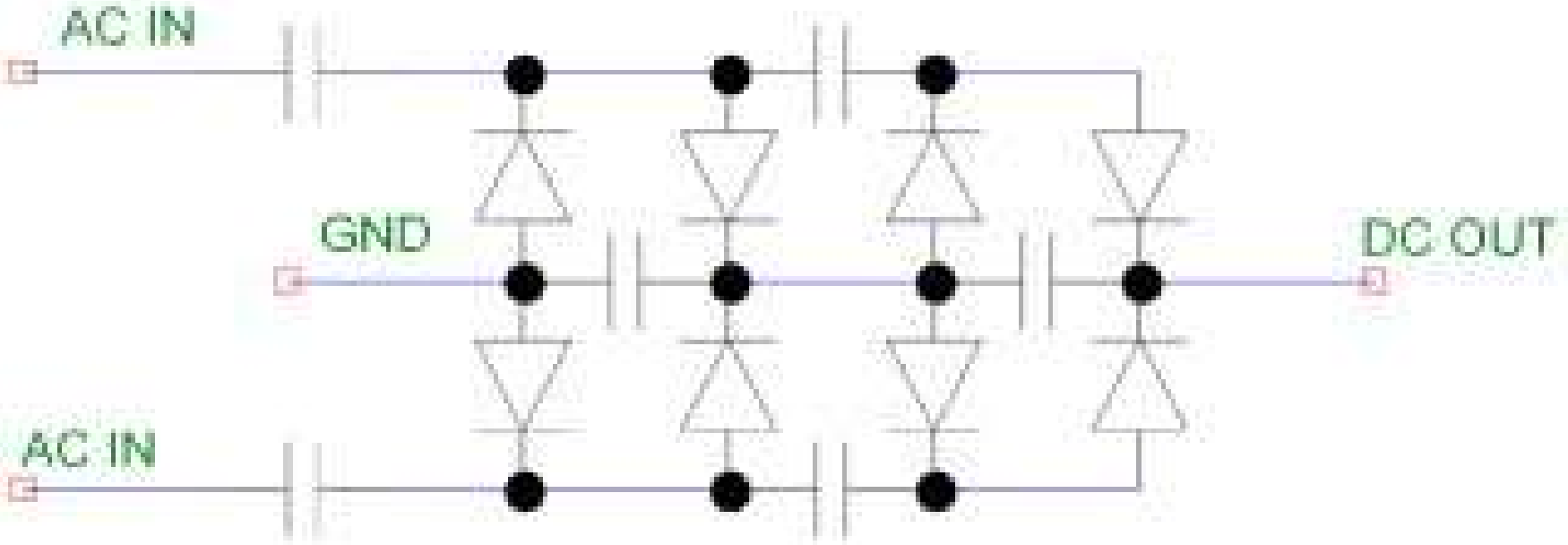


(d)

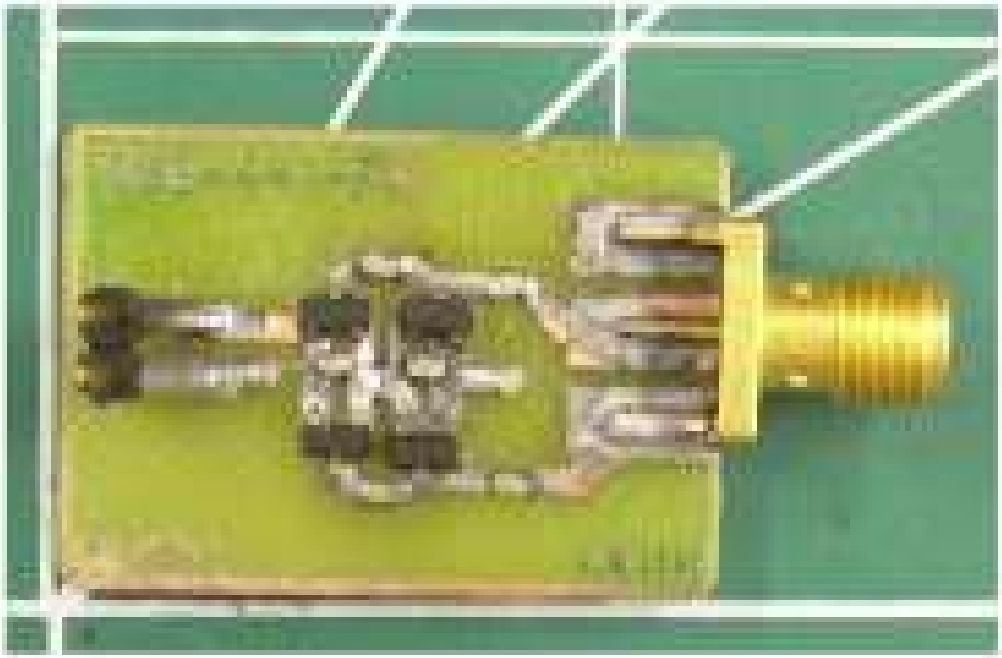

1cm

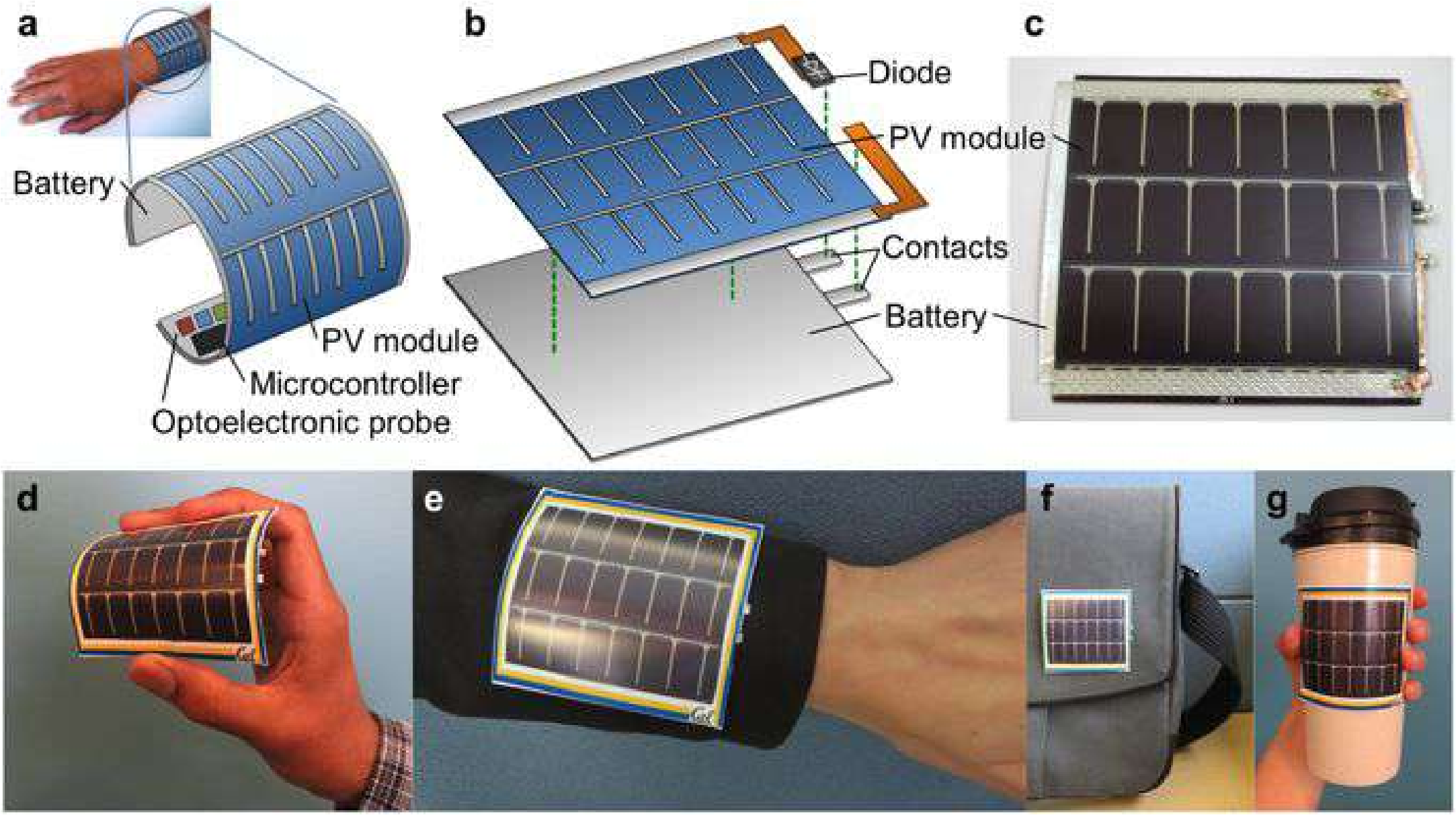

matching @ ~ 2.2 GHz
C_{C2}
C_L
C_L
$Coil_2$
R_A
V_S
matching @ ~935 MHz
C_L
$Coil_1$
C_{C1}
C_L
R_L

(a)



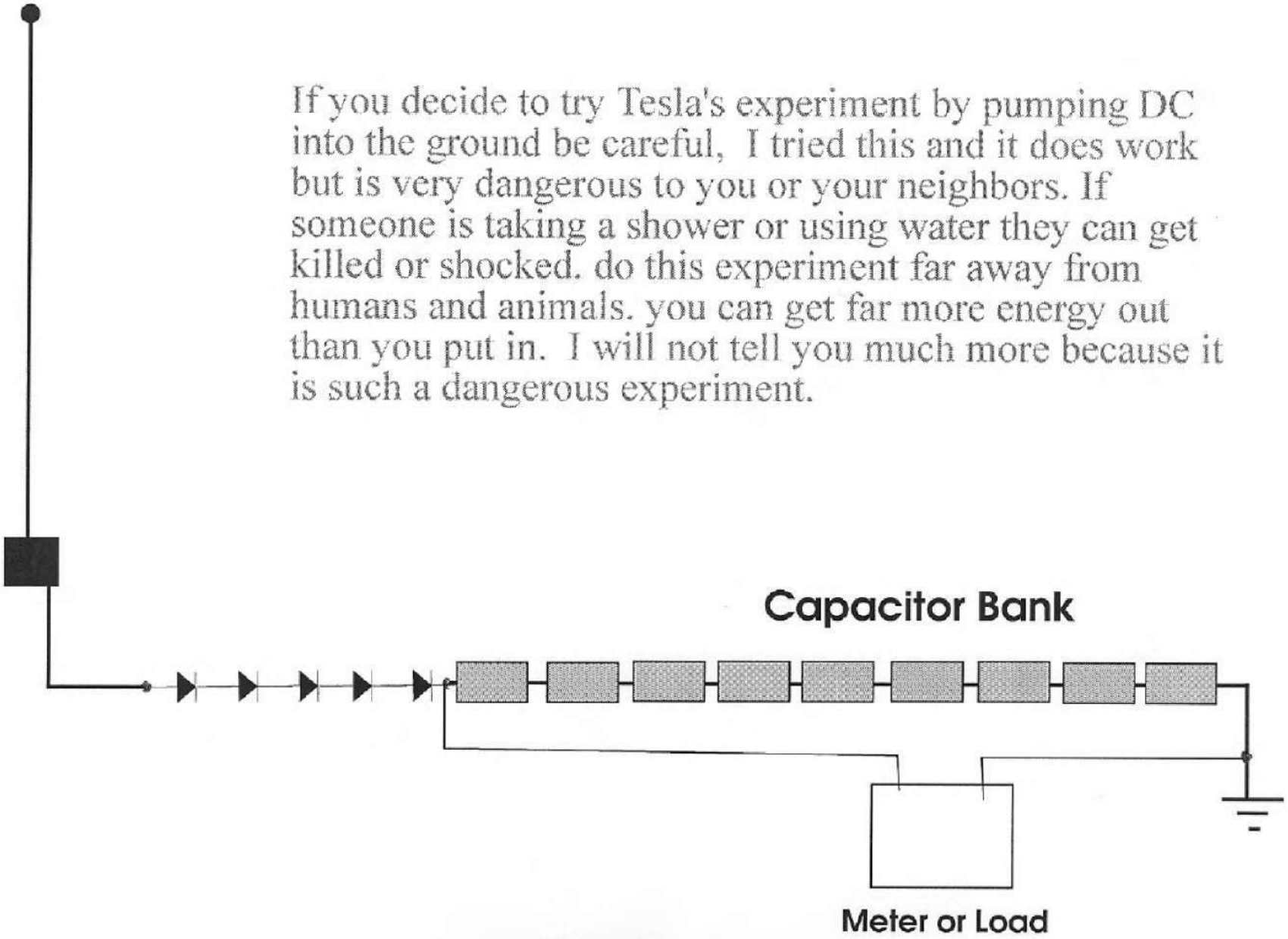
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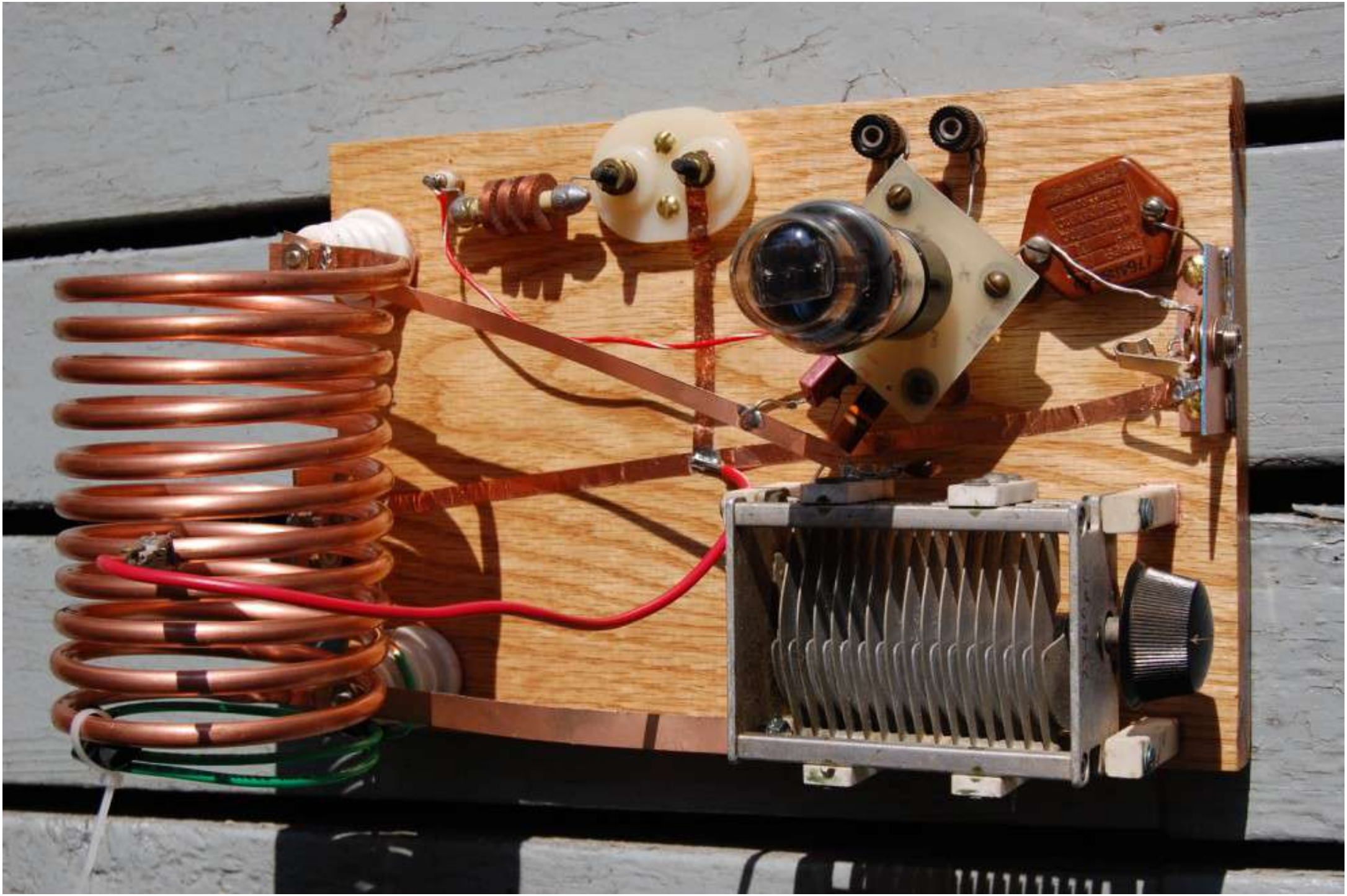


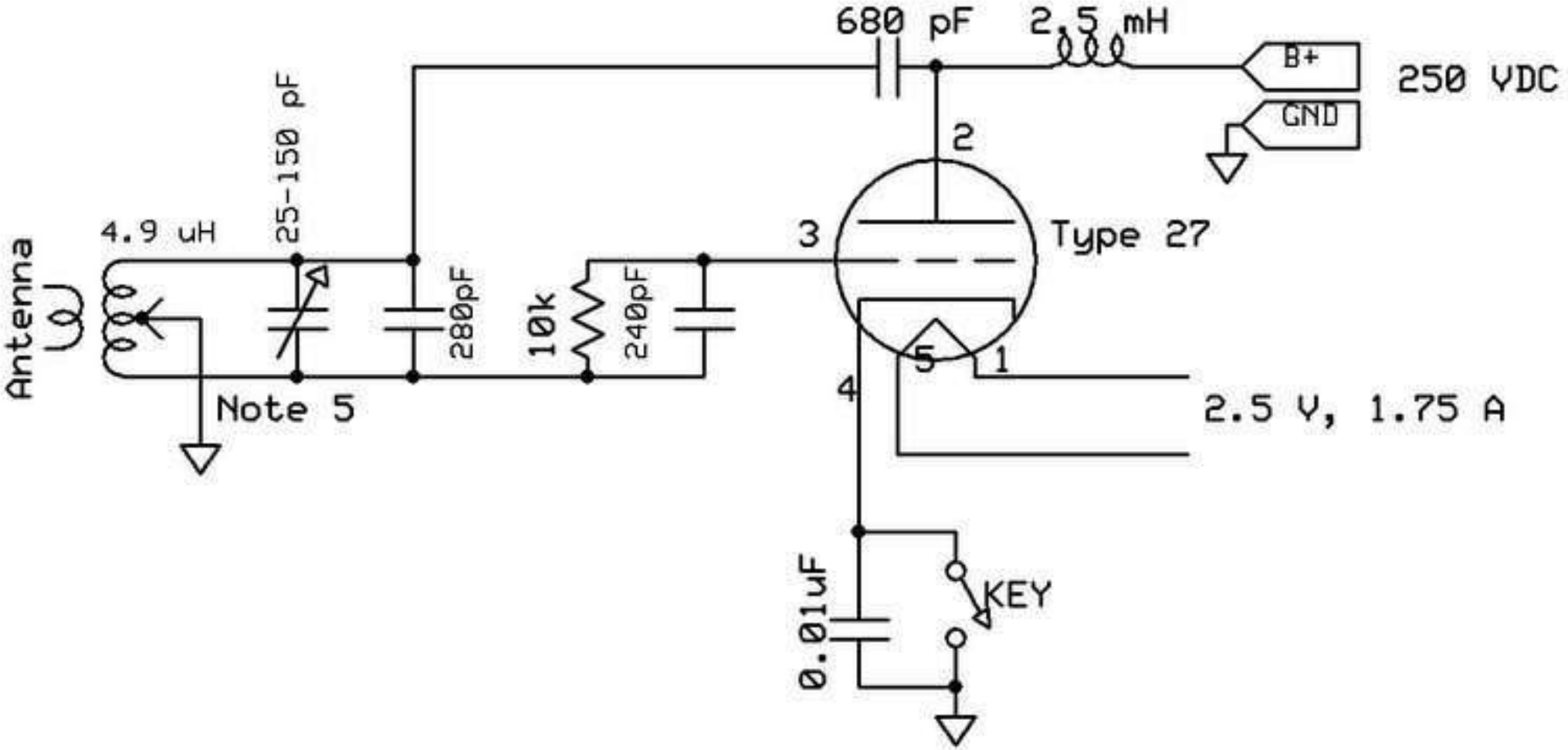

a
Battery
PV module
Microcontroller
Optoelectronic probe
b
Diode
PV module
Contacts
Battery
c
d
e
f
g

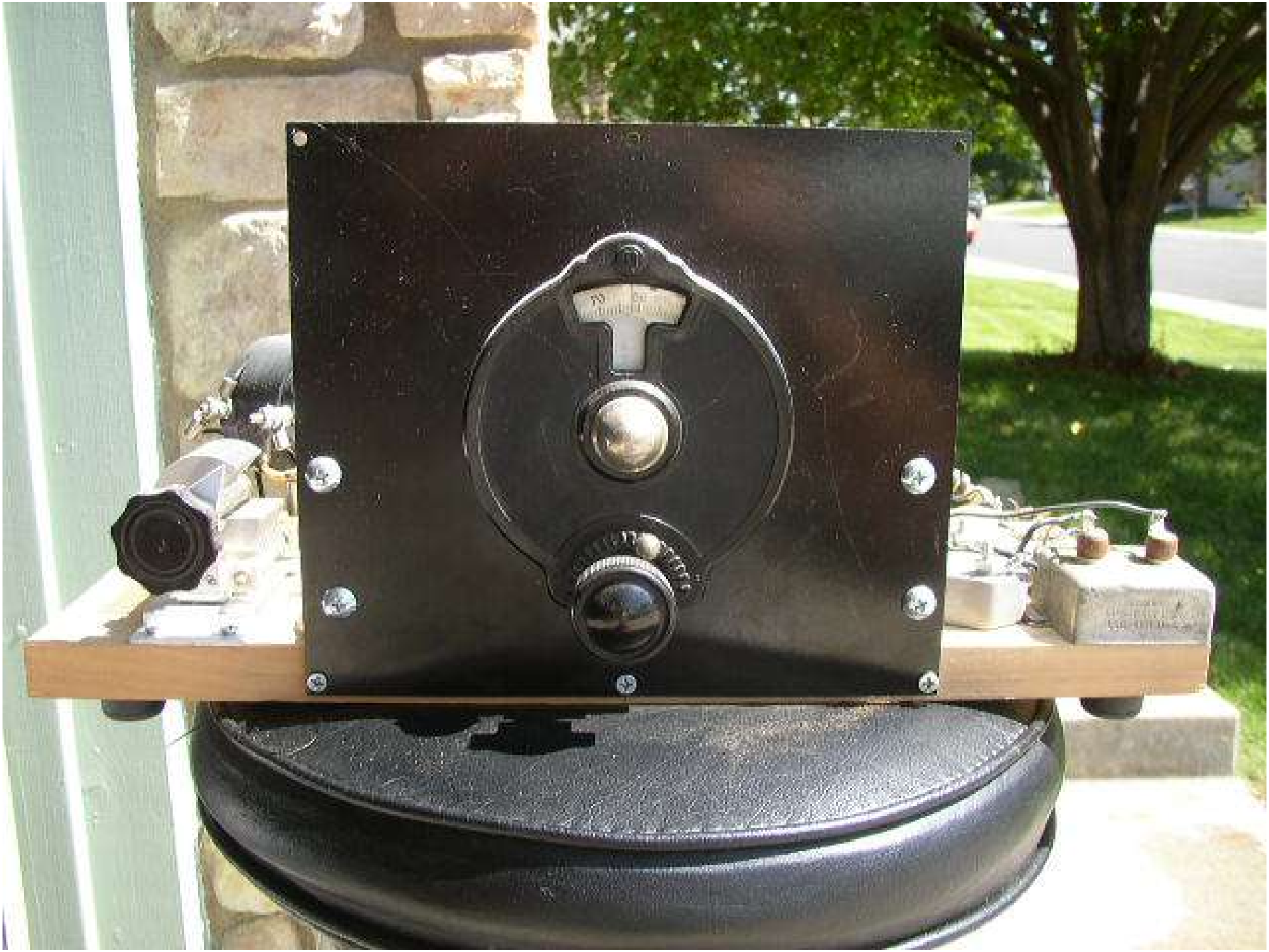
Capacitors we used are electrolytic rated at 400 volts x 47 uF put in series to equal 6,000 volts, the diodes we used were silicon 1000 volt 2 amp placed in series to equal 6,000 volts..... Ground was connected to laboratory wall out let ground.

If you decide to try Tesla's experiment by pumping DC into the ground be careful, I tried this and it does work but is very dangerous to you or your neighbors. If someone is taking a shower or using water they can get killed or shocked. do this experiment far away from humans and animals. you can get far more energy out than you put in. I will not tell you much more because it is such a dangerous experiment.





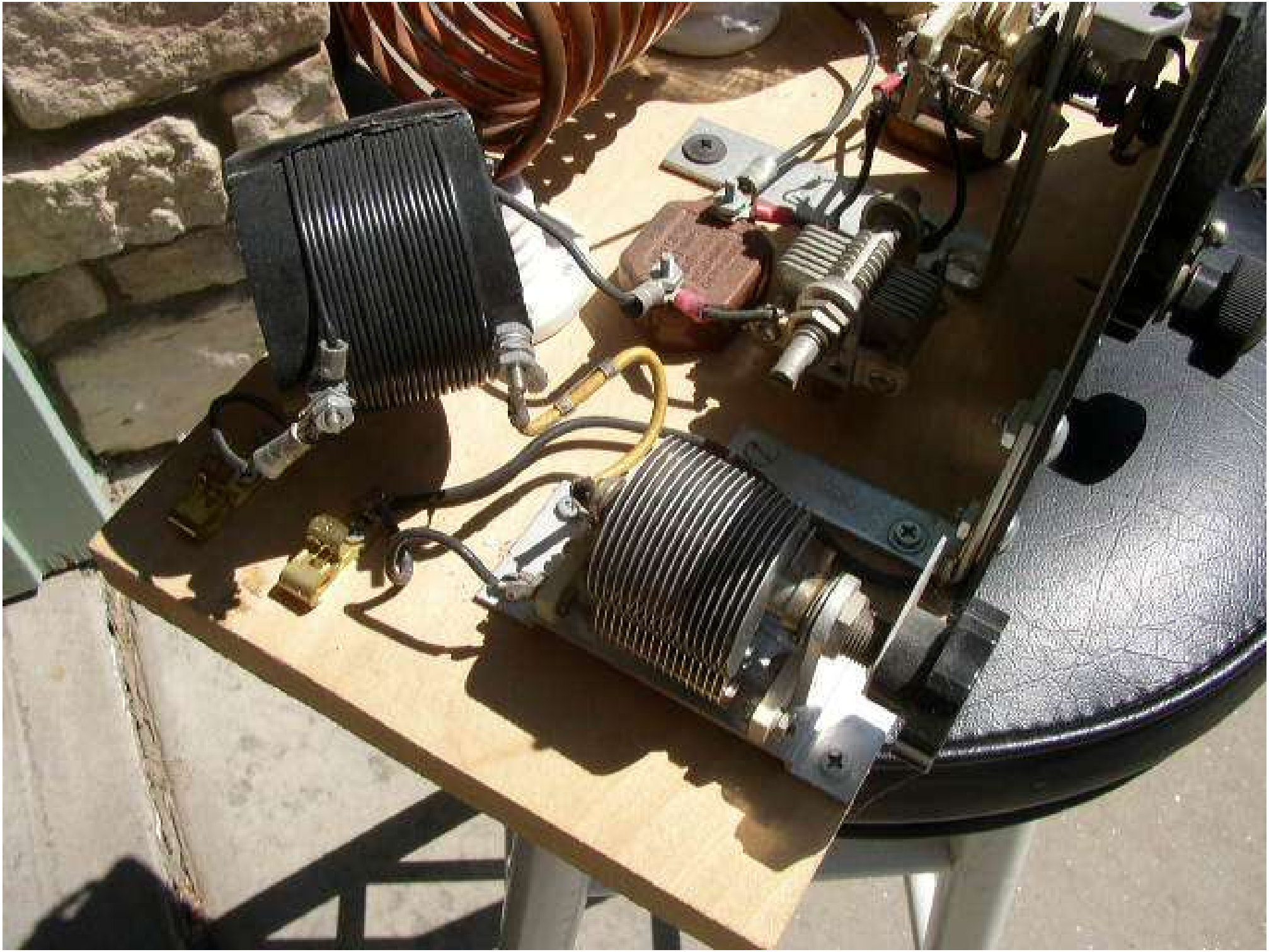

680 pF
2.5 mH
B+
250 VDC
GND
2
25-150 pF
4.9 uH
3
Type 27
Antenna
280pF
10k
240pF
5
1
4
Note 5
2.5 V, 1.75 A
0.01uF
KEY

























Side View



Front View



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CONSTRUCTION 1

If you examine the following circuits you will find that each one is different. In most cases the difference lies in the coil design and/or the method by which the crystal and aerial is tapped into it. Each of these circuits has its own particular advantage to suit different conditions and the ideal circuit in some localities is not necessarily the best in others. It is not just a matter of a given circuit giving louder results than another, if it were there would be no point in showing more than one.

The main problem is to obtain adequate selectivity without reducing the volume level.

A receiver is said to be selective when it tunes sharply, a set with poor selectivity allows the stations to spread over the dial and when used near a transmitter will receive the local stations mixed together, which of course is useless.

Consider Fig. 16a, this is a very simple receiver, with no special attempt to provide any great amount of selectivity. In areas where signal

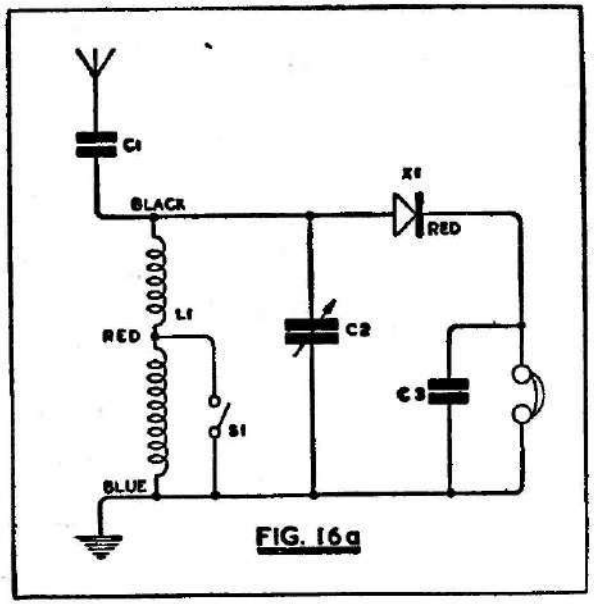
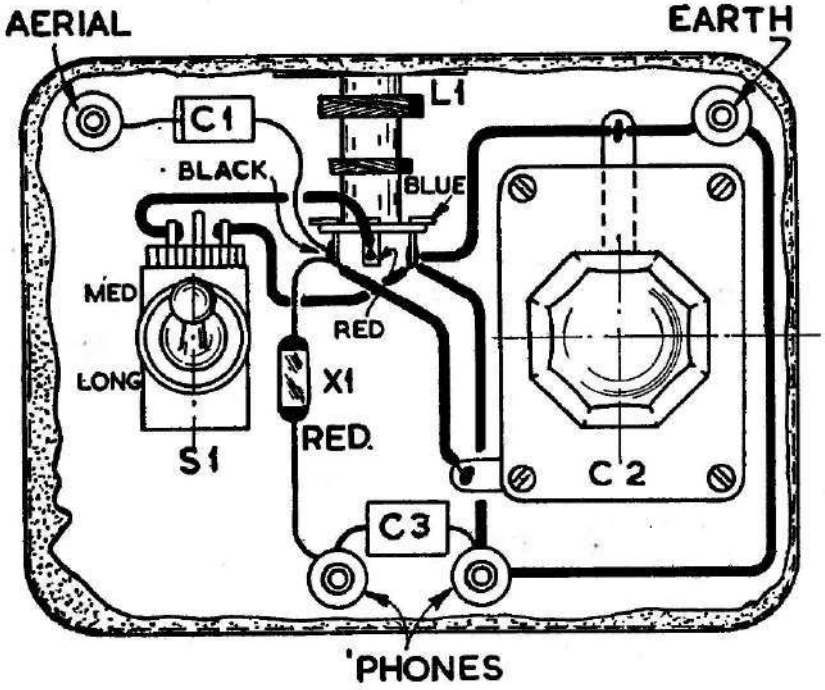


FIG. 16a



LID SHOWN BROKEN AWAY TO

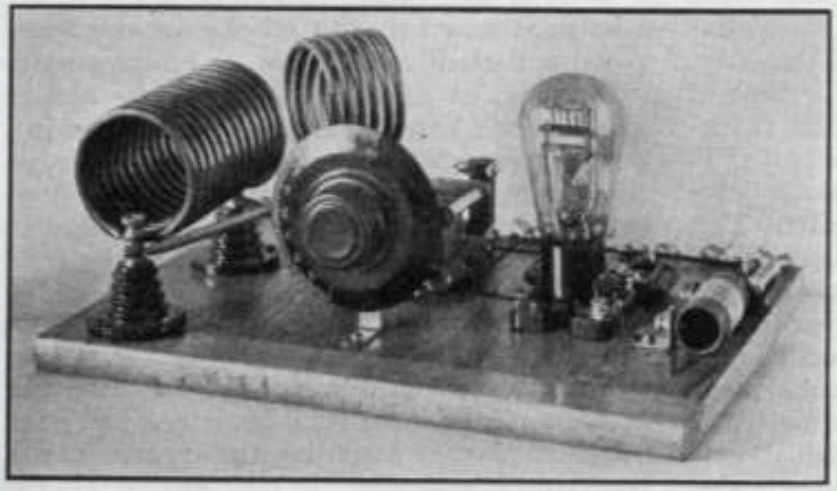


FIG. 703 — THE LOW-POWER SINGLE-TUBE TRANSMITTER

The plate tank circuit is at the left. The grid coil, leak and grid condenser are to the right of the Type 10 tube. The antenna coil is shown swung away from the plate coil to give loose antenna coupling.

Late last fall I saw an announcement regarding the upcoming '19
(AWA). Transmitters used during the event must only utilize 192
transmitters have to utilize self-excited oscillators! Listening-in o
imagine how different the bands must have sounded back in the l
heard sounded wonderful, considering the simplicity of the transı
came after watching and listening to WØVLZ's (Neil) superb You
watch these without wanting to roll-up their sleeves and start bui

After some research into the 1929 transmitter style, it became ap
Tuned (TNT) design. I can well imagine the countless late night l
simpler off-shoot of the TPTG design.

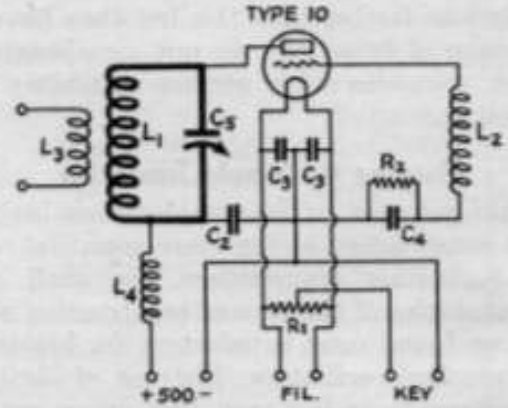


FIG. 704 — THE CIRCUIT OF THE TRANSMITTER

L_1, L_2 and L_3 — Plate, grid and antenna coils. The specifications are given under the illustration of the coils.

L_4 — A commercial "short-wave" receiving-type radio-frequency choke will do or one can be made by winding a two-inch length of half-inch tubing or wooden dowel with No. 38 d.s.c. or d.c.c. wire.

C_1 — 2000-μμfd. (.002 μfd.) mica fixed condenser, receiver type, if plate voltage does not exceed 500.

C_2 — 5000-μμfd. (.005 μfd.) mica fixed condenser, receiver type.

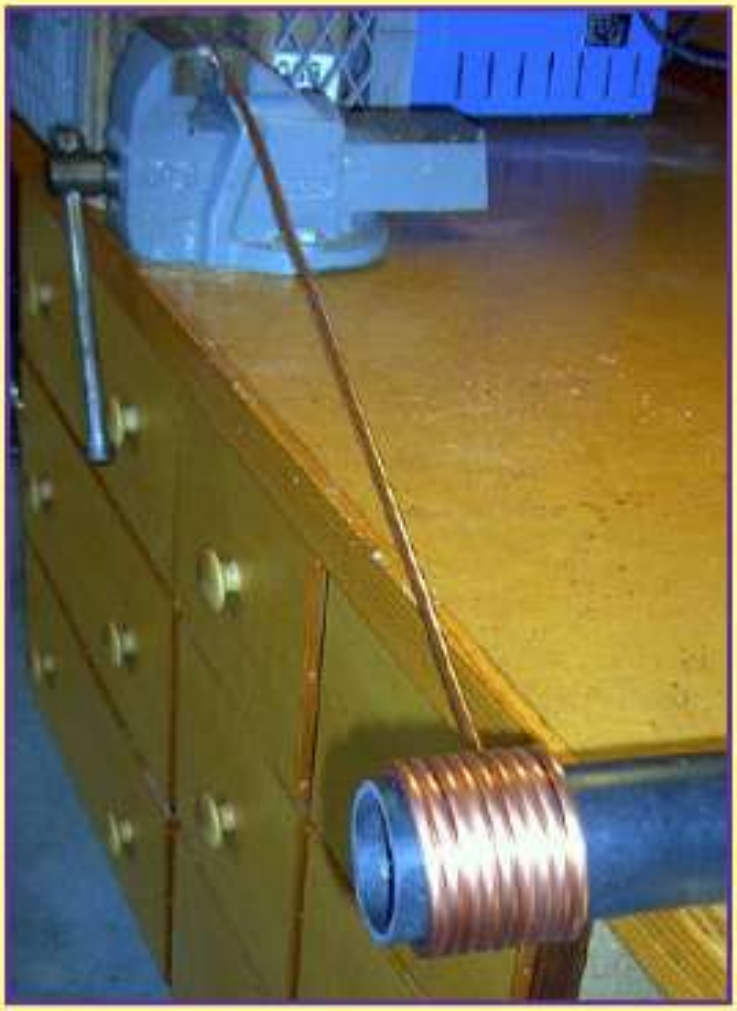
C_4 — 250-μμfd. (.00025 μfd.) mica fixed condenser, receiver type.

C_5 — 500-μμfd. (.0005 μfd.) variable condenser. Any good receiving condenser will be satisfactory.

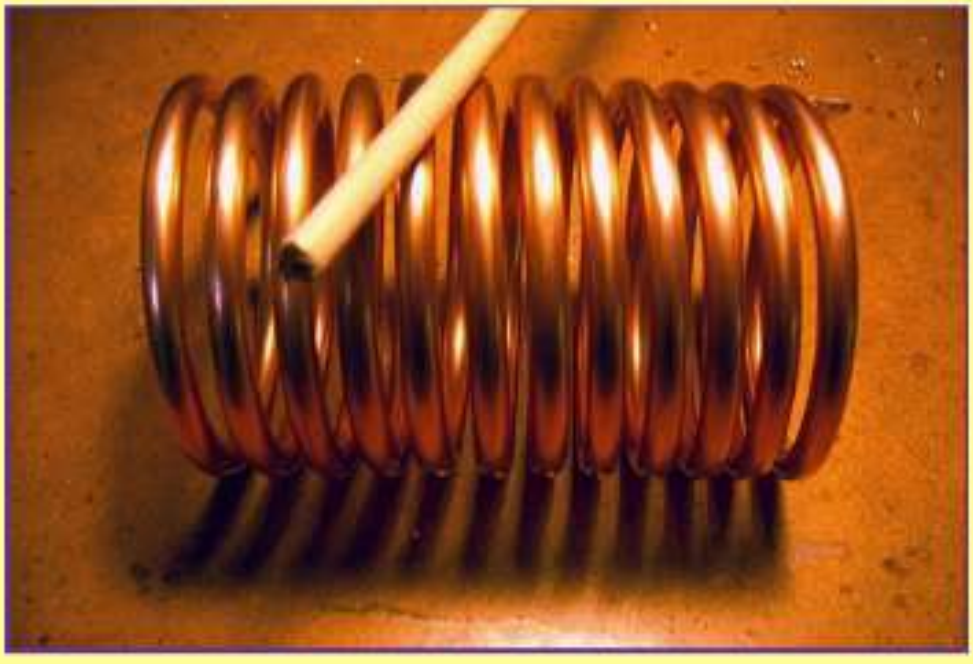
R_1 — Center-tapped resistor, 75 to 100 ohms total resistance.

R_2 — Grid-leak resistor, 10,000 ohms. Any small resistor rated at 5 watts or more will do.

Three General Radio or similar stand-off insulators will be necessary, as well as 8 Fahnestock clips, some miscellaneous small machine screws and nuts, and a few feet of bus wire.



r coils. Once the proper number of turns is reached it is just a matter of flattening and drilling the ot
, I wound a plate coil for 40m as well. I haven't been brave enough to try the TNT on 20m yet but I w

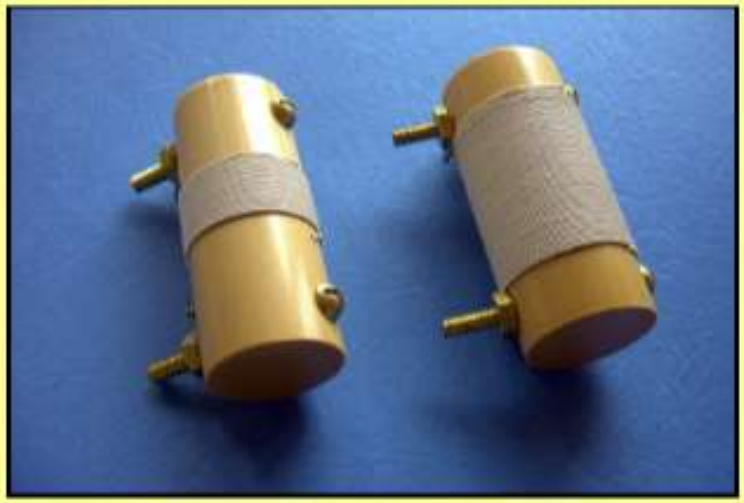






ither wound on bakelite tubing or on well-sealed wood dowel. Not having any bakelite made the choice any easy one. The 1" forms were made from some Yellow C







resistor was fabricated to resemble the original bakelite-enclosed 'Pilot' style, popular in the late 20's.The pictures indicate how this was done and the finished result. The small plexi-glass form was filled with black Fi
emoved and the entire package was baked in the kitchen toaster oven at its lowest temperature for several hours. This achieved the desired hardening effect and a suitable reproduction Pilot filament resistor.





reproduction also, of an early 'Lavite' model. The ends of a new wire-wound resistor were removed and found to be made from brass. These ends were then fitted to the body of an older style 10K resistor soldered, pa
y across the terminals of the grid cap. I found out later that the actual value of the grid leak is quite critical in the TNT. I tried various values and luckily the one I had manufactured turned out to be perfect. My earlier
UX-210) required a far larger grid leak to produce best keying and good output. If you are making your own grid leak I would recommend that the value be optimized first, before the grid leak is built in its final form.







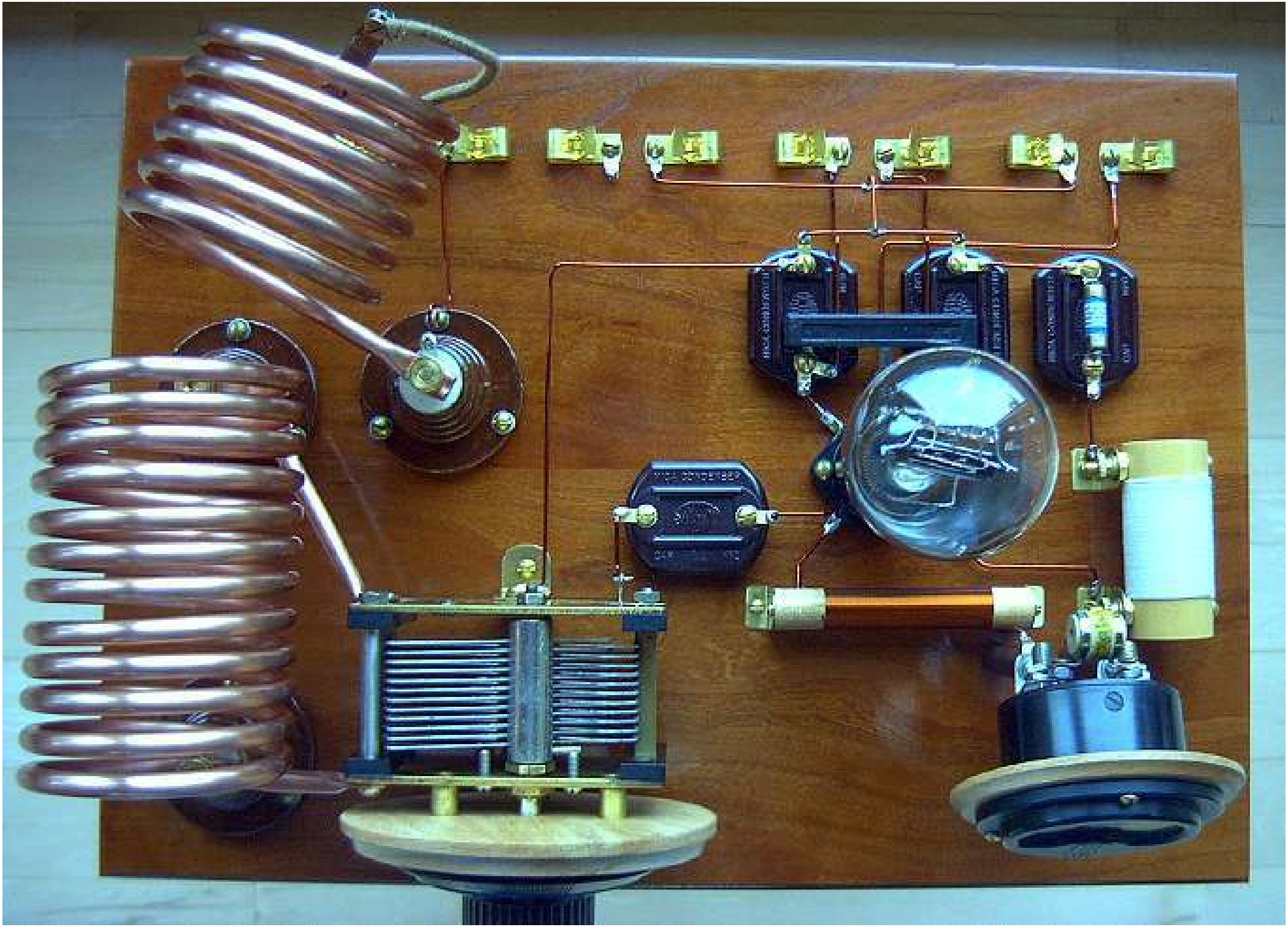




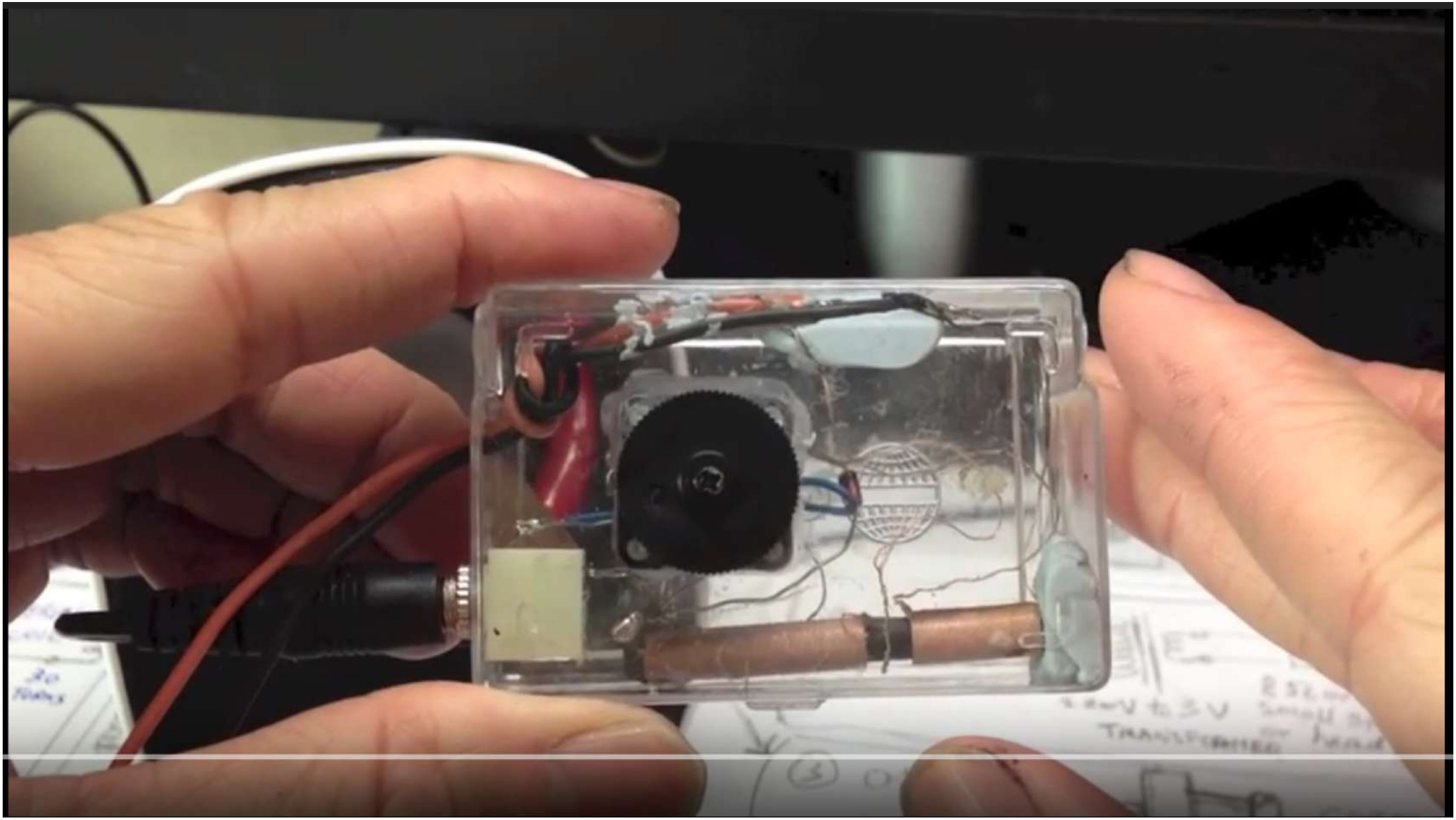
as breadboarded - first using the Type '45 and later with the Type '10. Various values were tried for both the grid leak and for the grid capacitor. Both affect keying and outp
ling of the plate voltage in order to remove high voltage from the large exposed tank coil. I did not want to run the chance of accidently grabbing hold of it late some evening
fference between shunt-feed and the standard series-feed method. It saddens me to think of all of the amateurs of the 20's or 30's that may have been unnecessarily hurt or ki

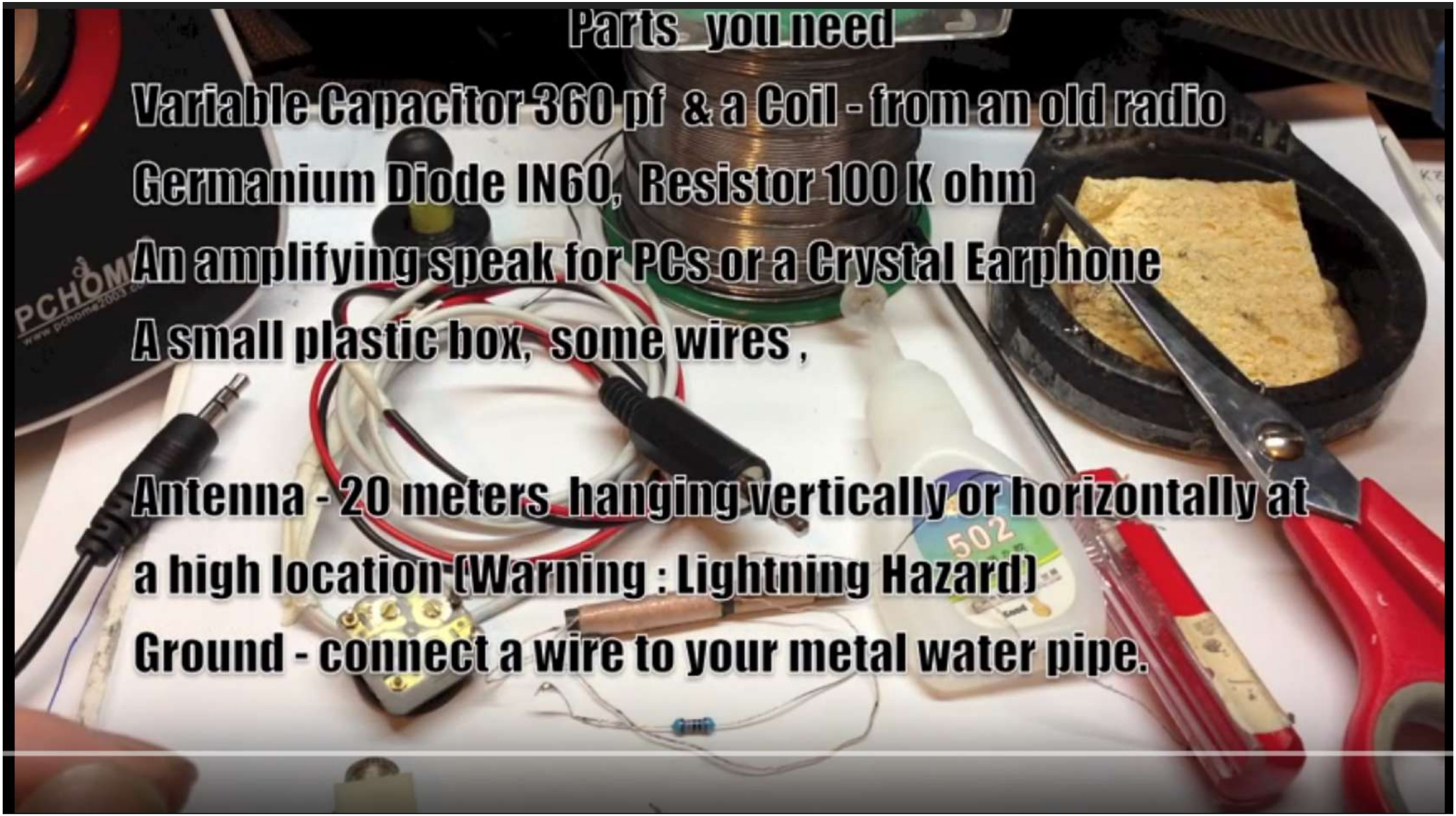


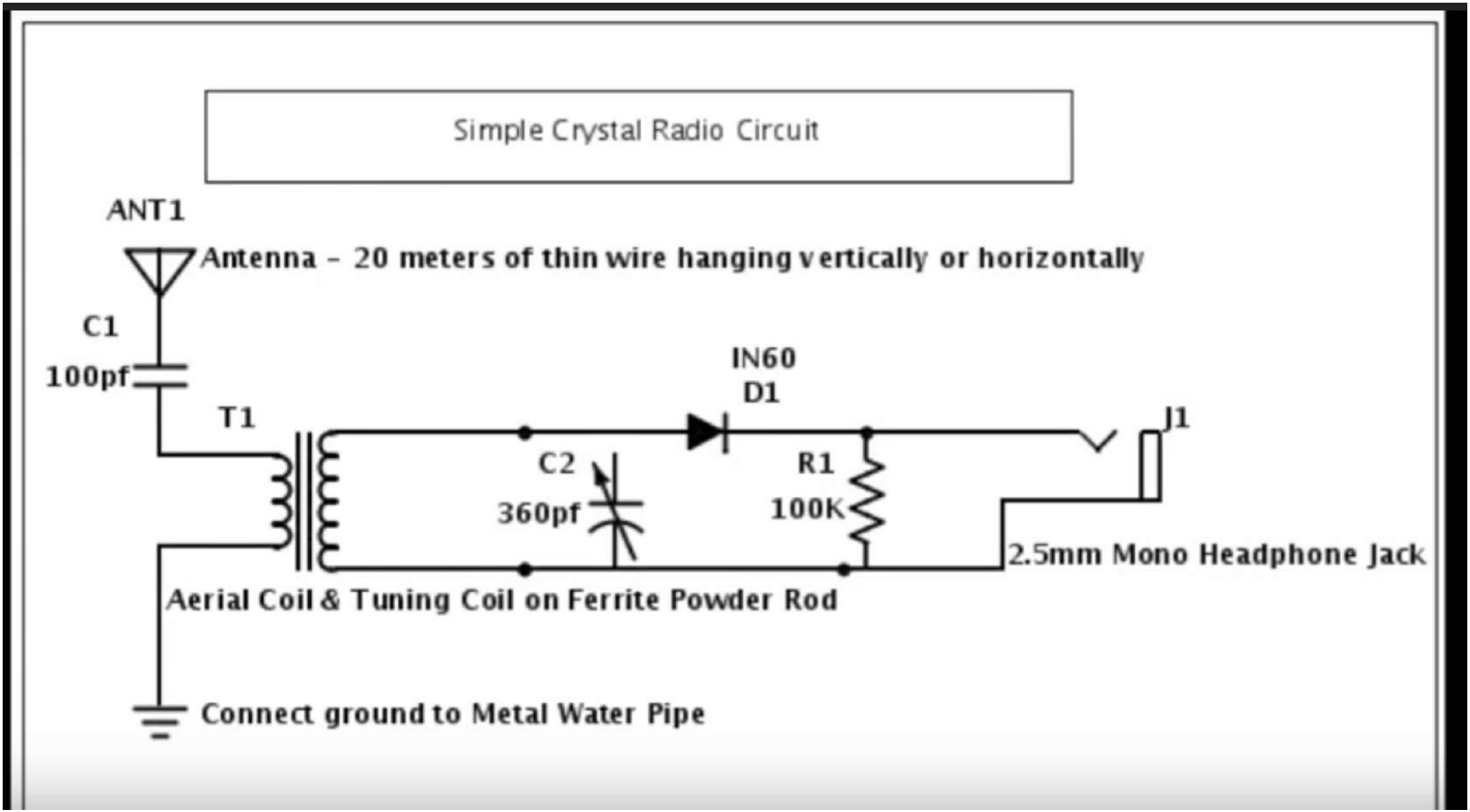

CANADIAN STATION
VE
7SL
MAINE ISLAND, BRITISH COLUMBIA, CANADA



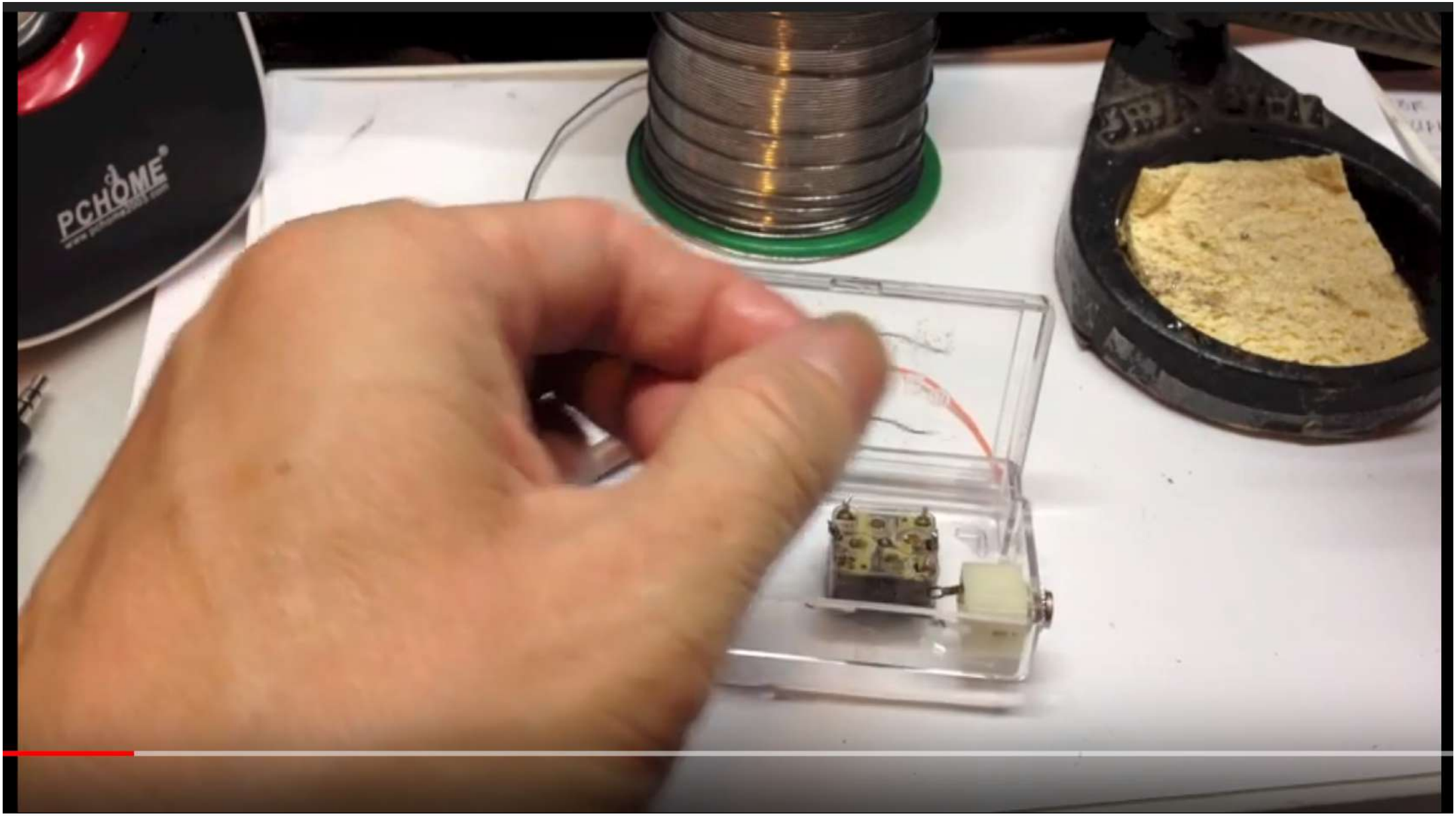





Parts you need
Variable Capacitor 360 pf & a Coil - from an old radio
Germanium Diode IN60, Resistor 100 K ohm
An amplifying speak for PCs or a Crystal Earphone
A small plastic box, some wires ,
Antenna - 20 meters hanging vertically or horizontally at
a high location (Warning : Lightning Hazard)
Ground - connect a wire to your metal water pipe.

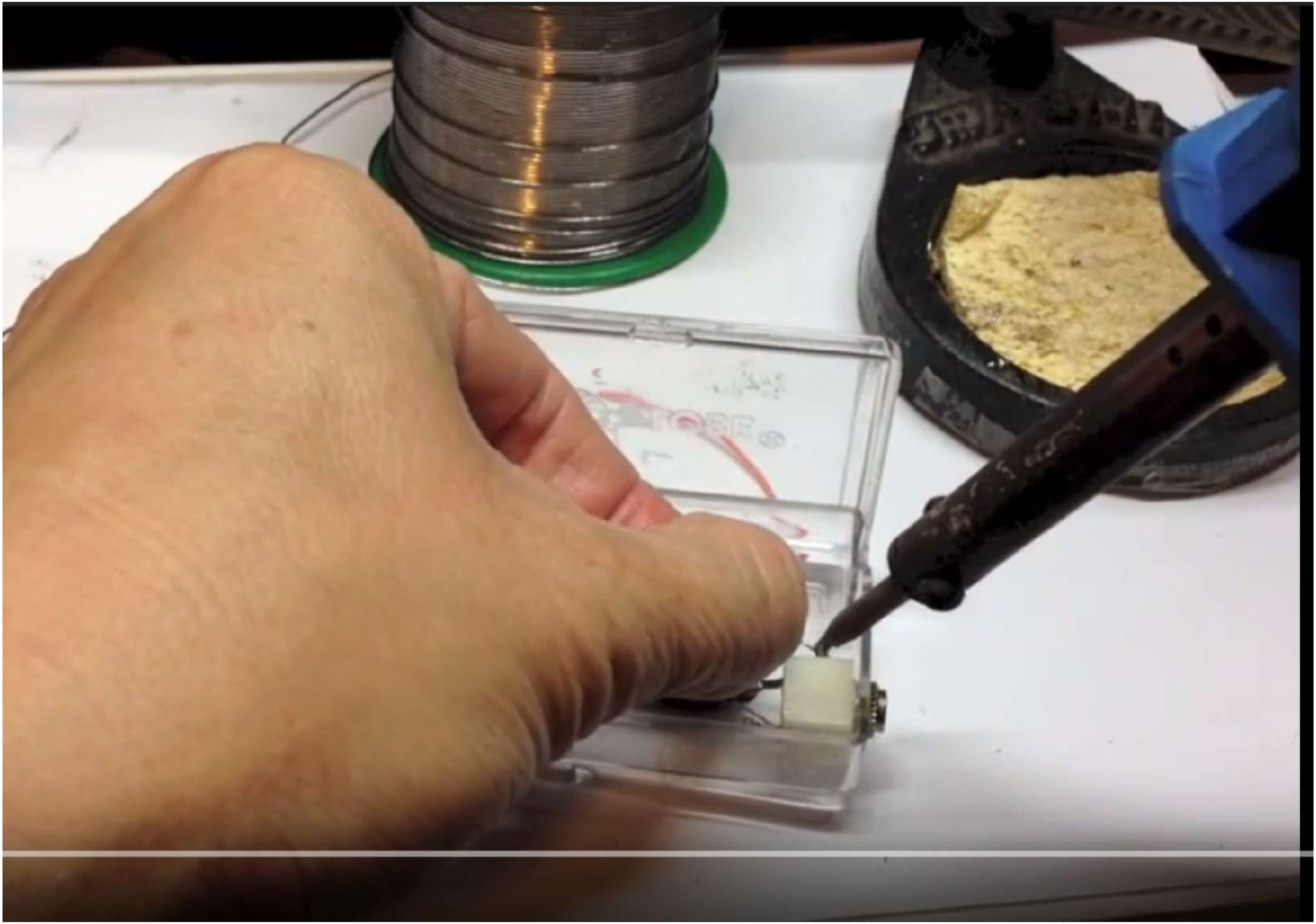

Simple Crystal Radio Circuit
ANT1
Antenna – 20 meters of thin wire hanging vertically or horizontally
C1
100pf
T1
IN60
D1
J1
C2
360pf
R1
100K
2.5mm Mono Headphone Jack
Aerial Coil & Tuning Coil on Ferrite Powder Rod
Connect ground to Metal Water Pipe

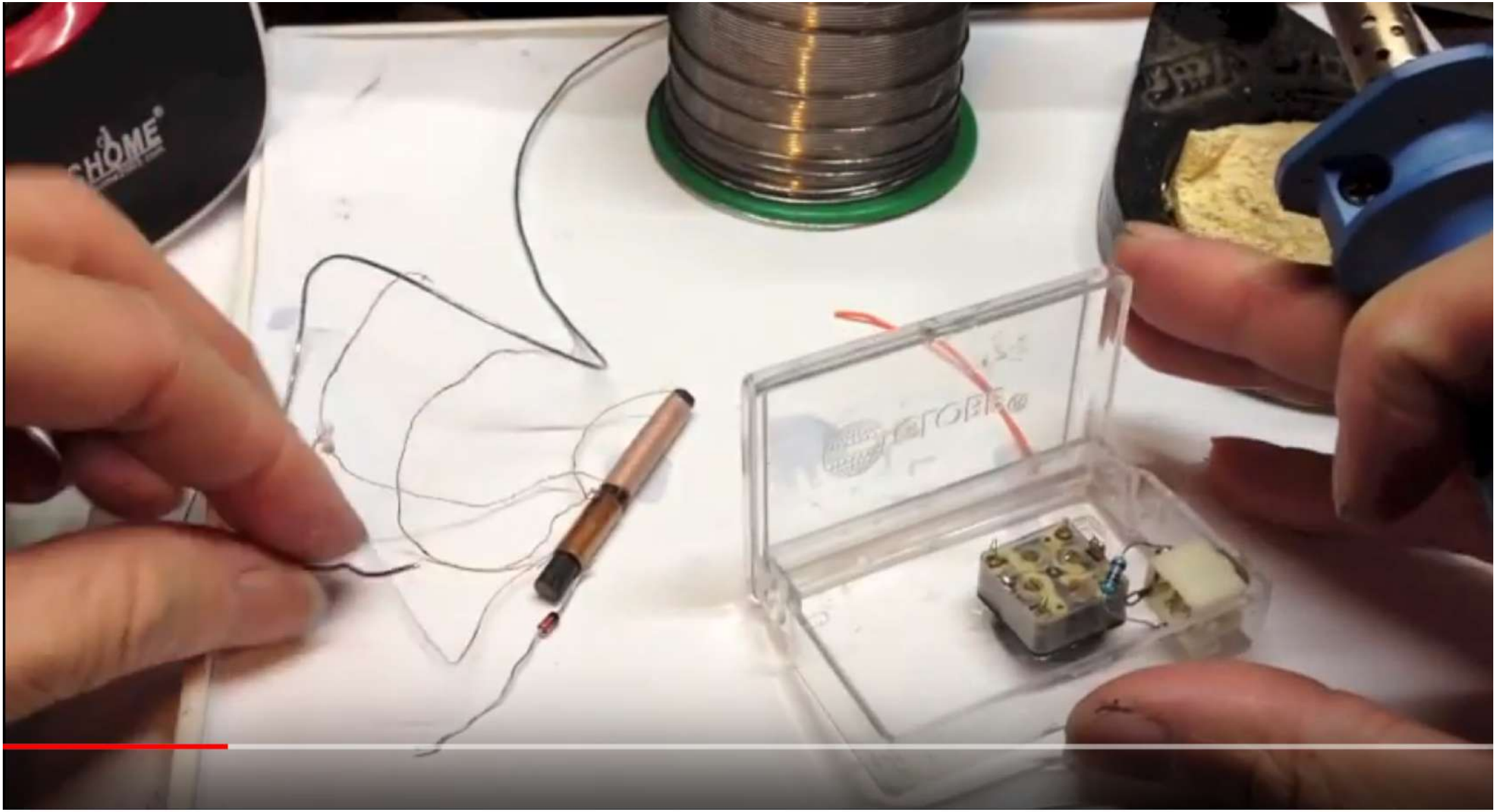



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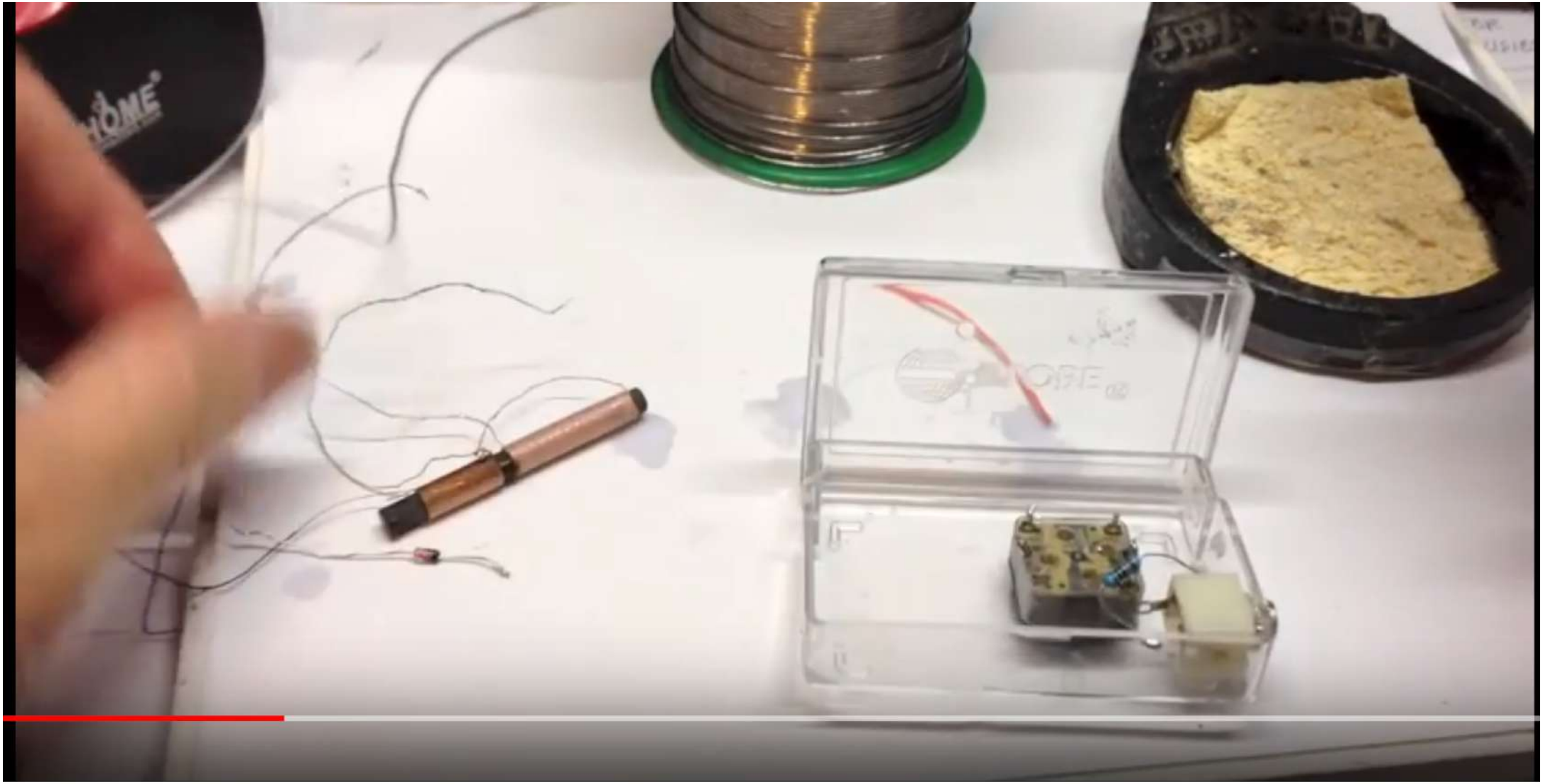

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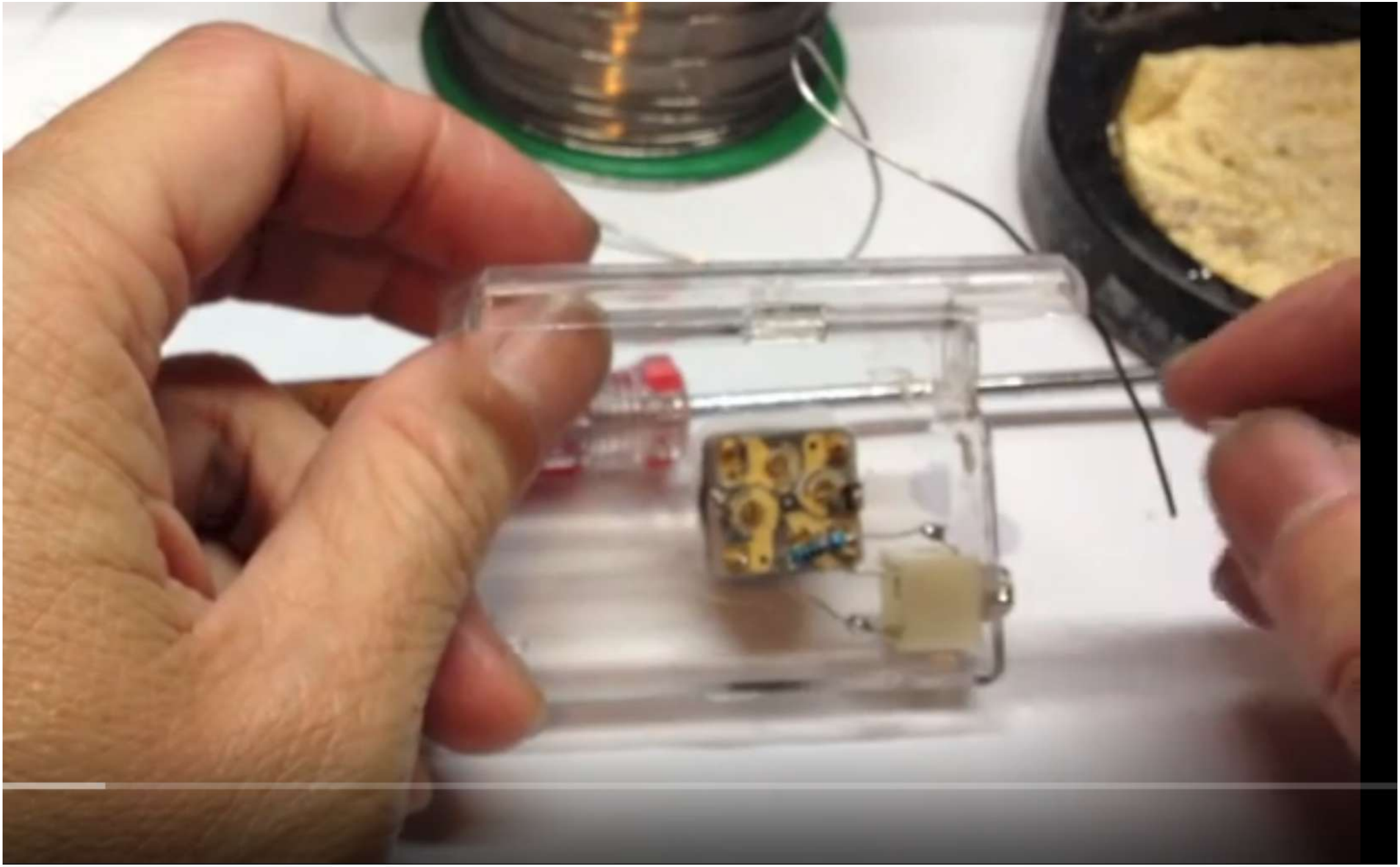


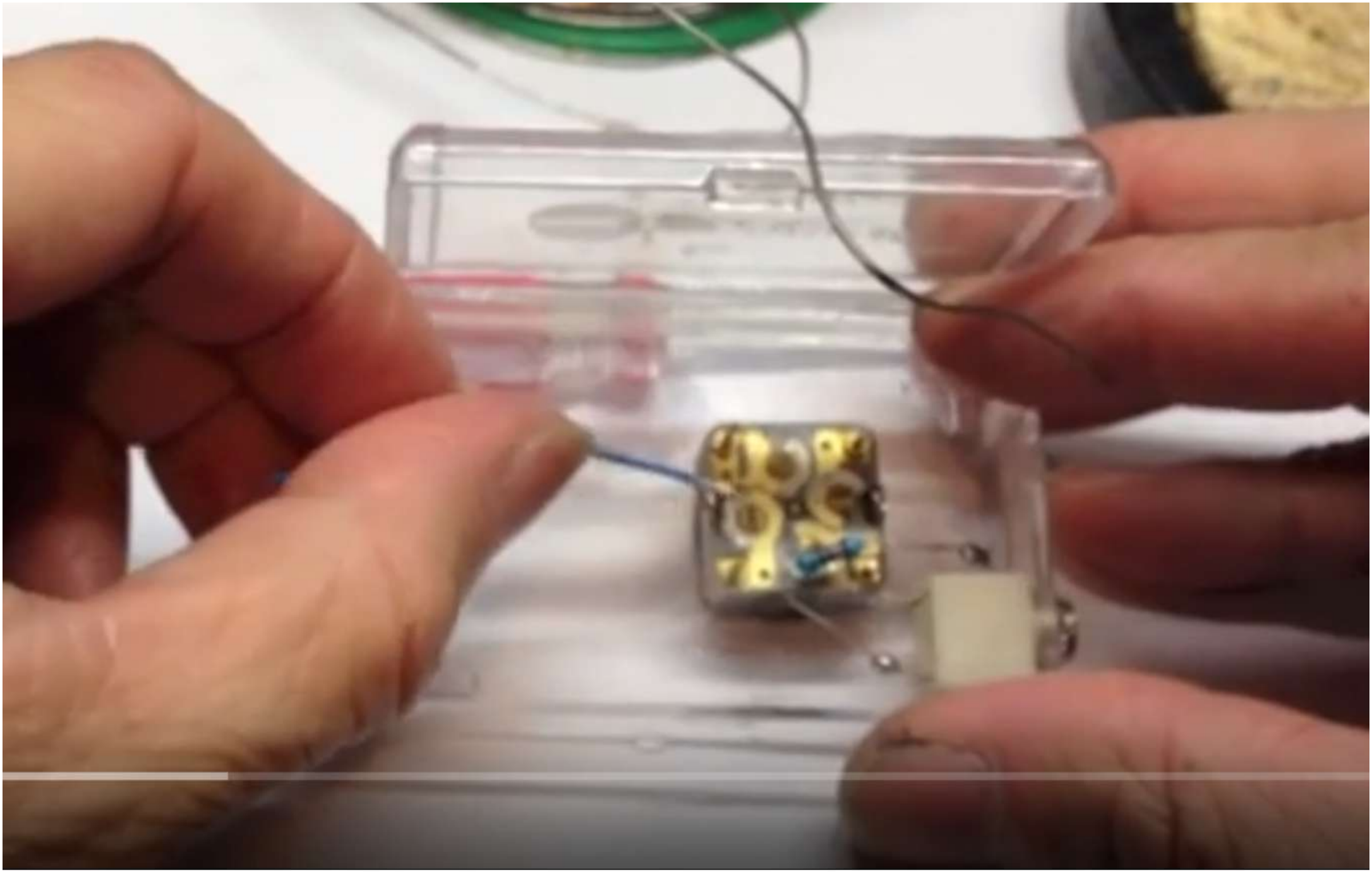



HOME



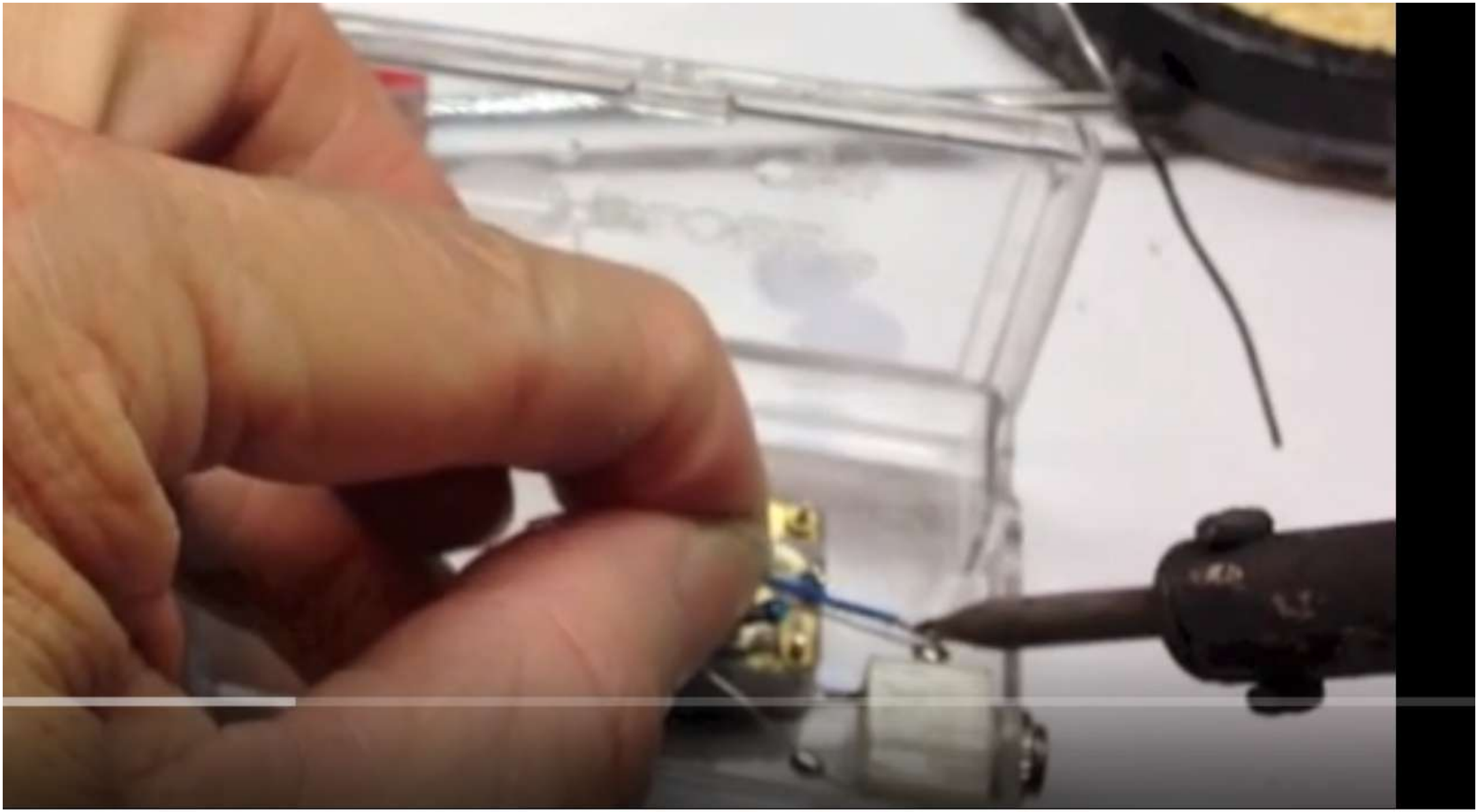




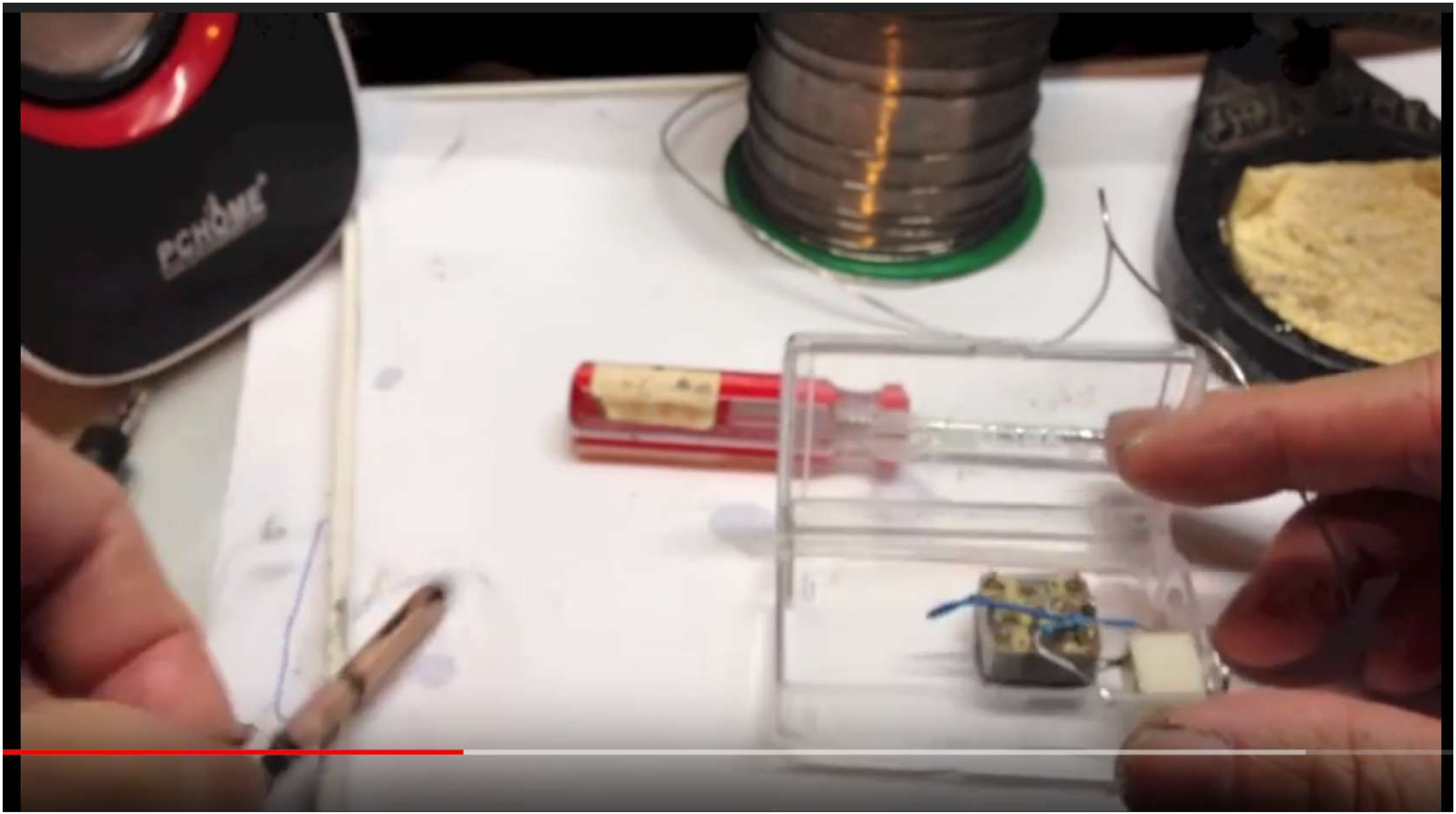


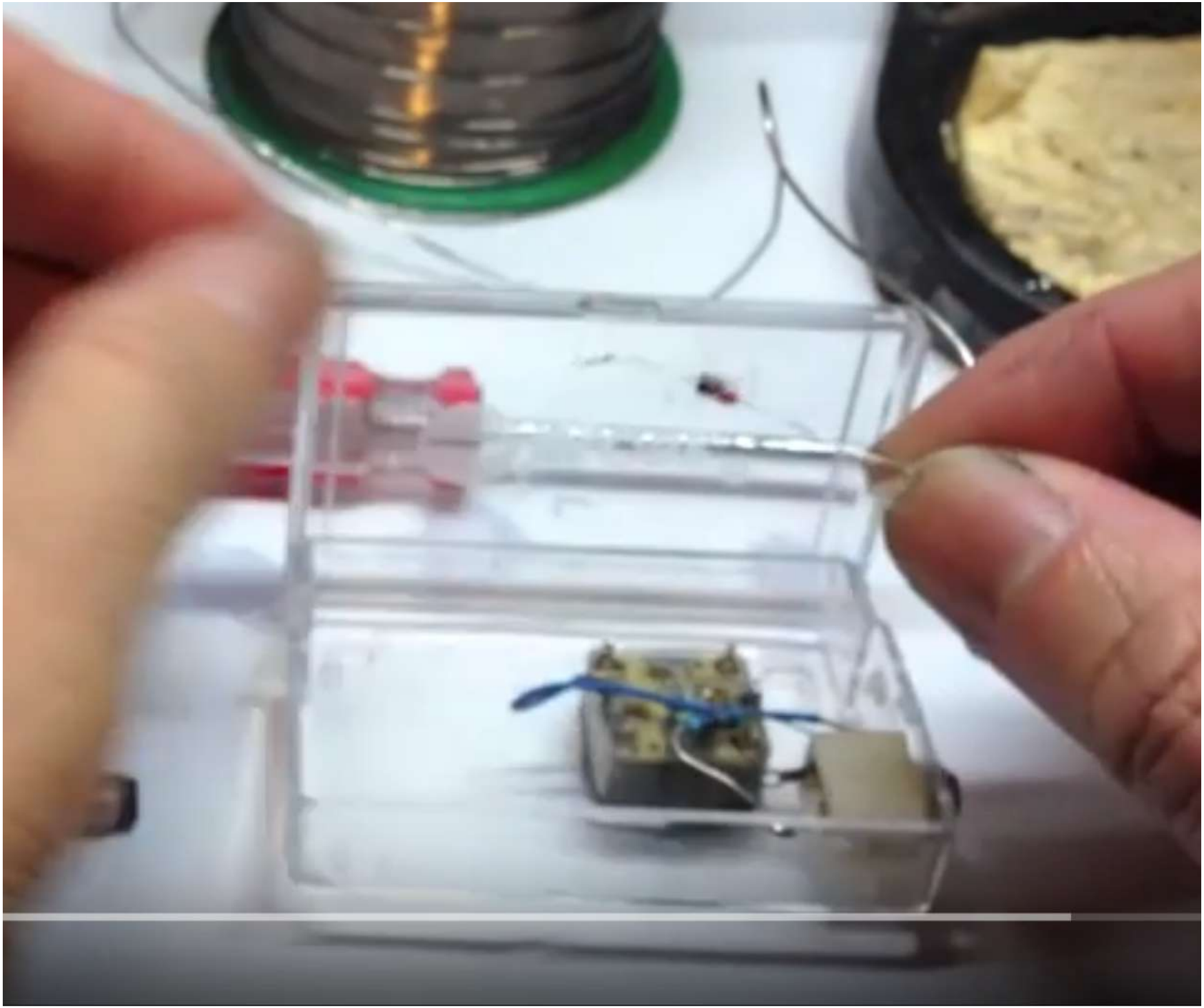


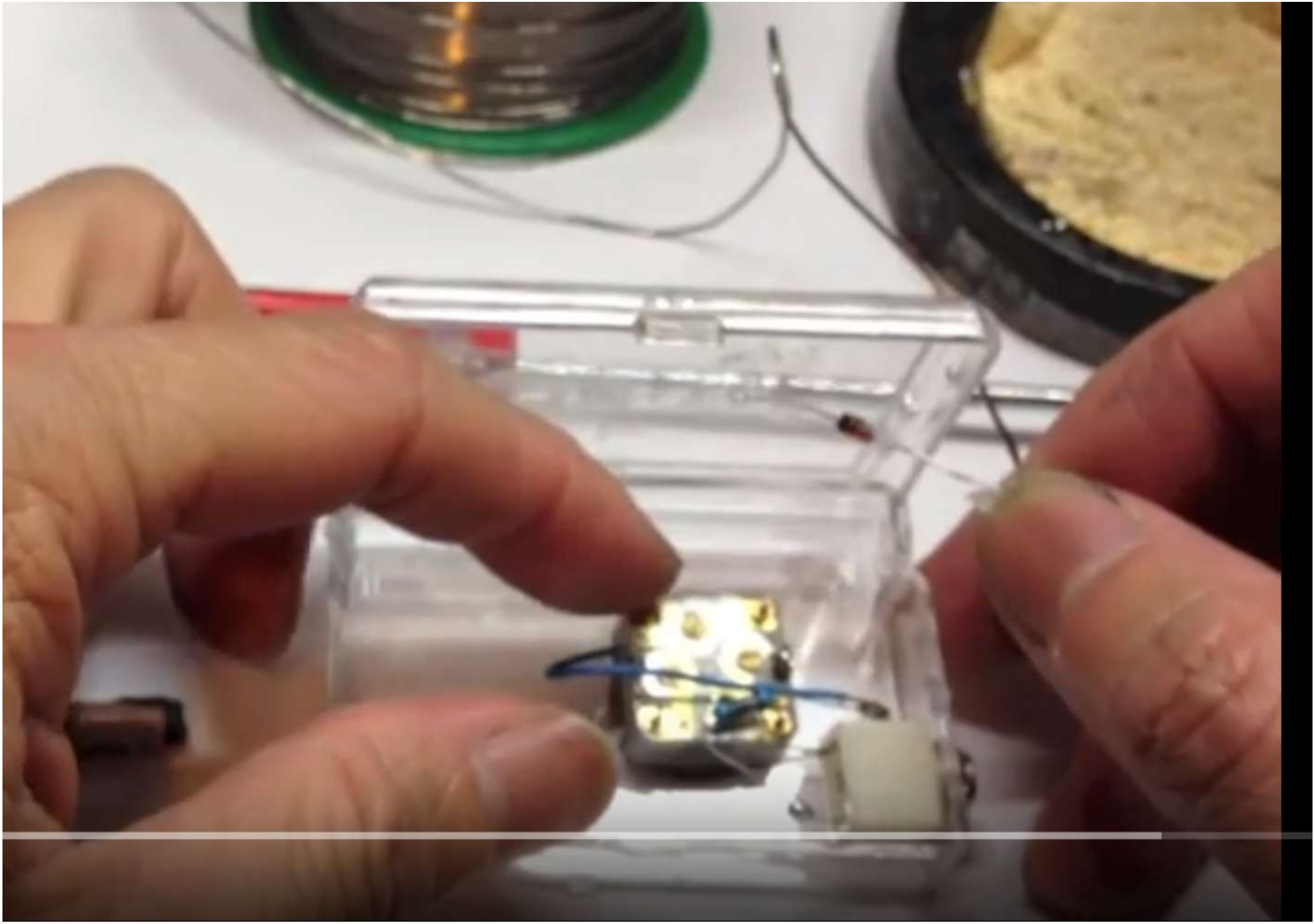






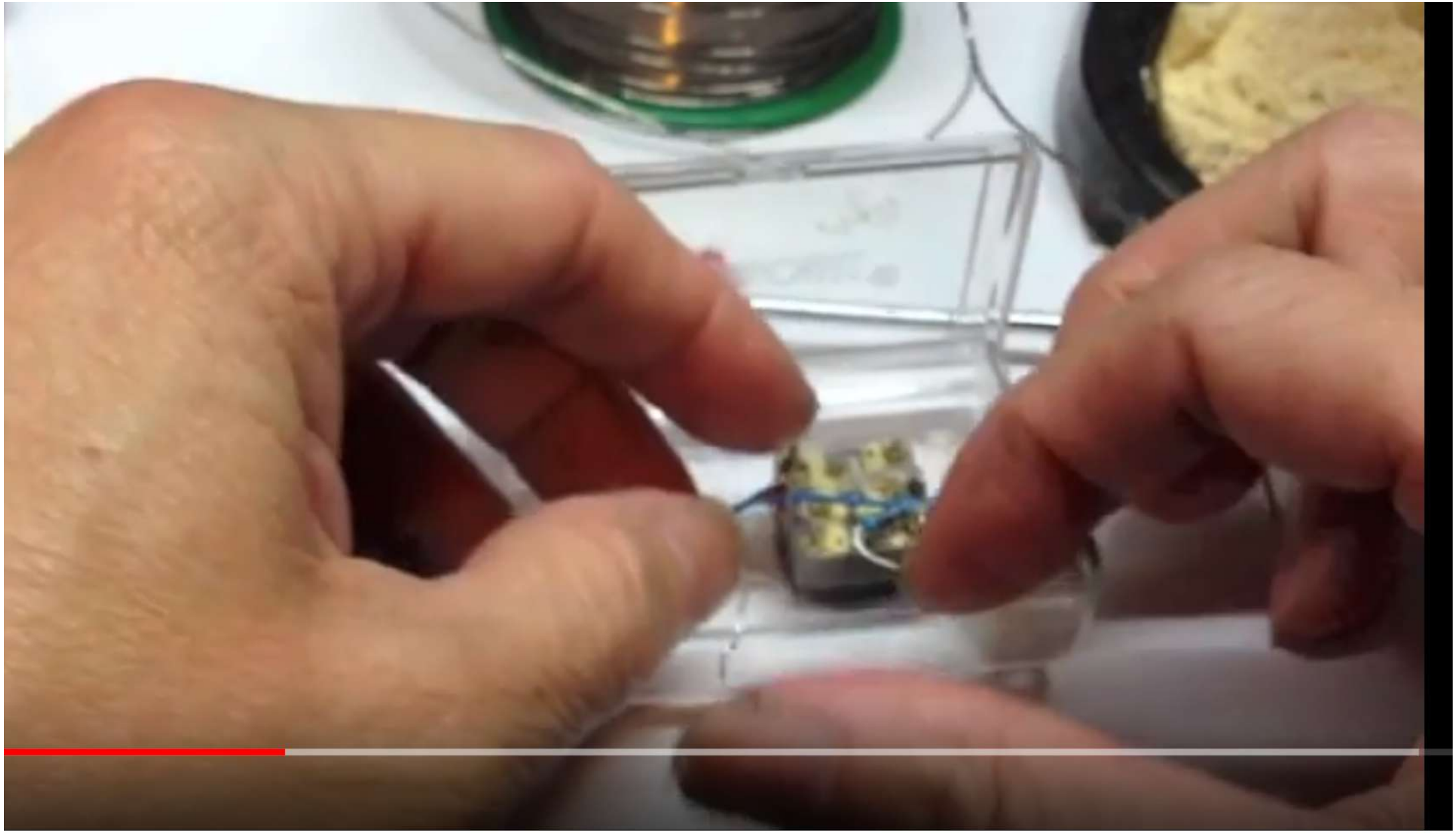

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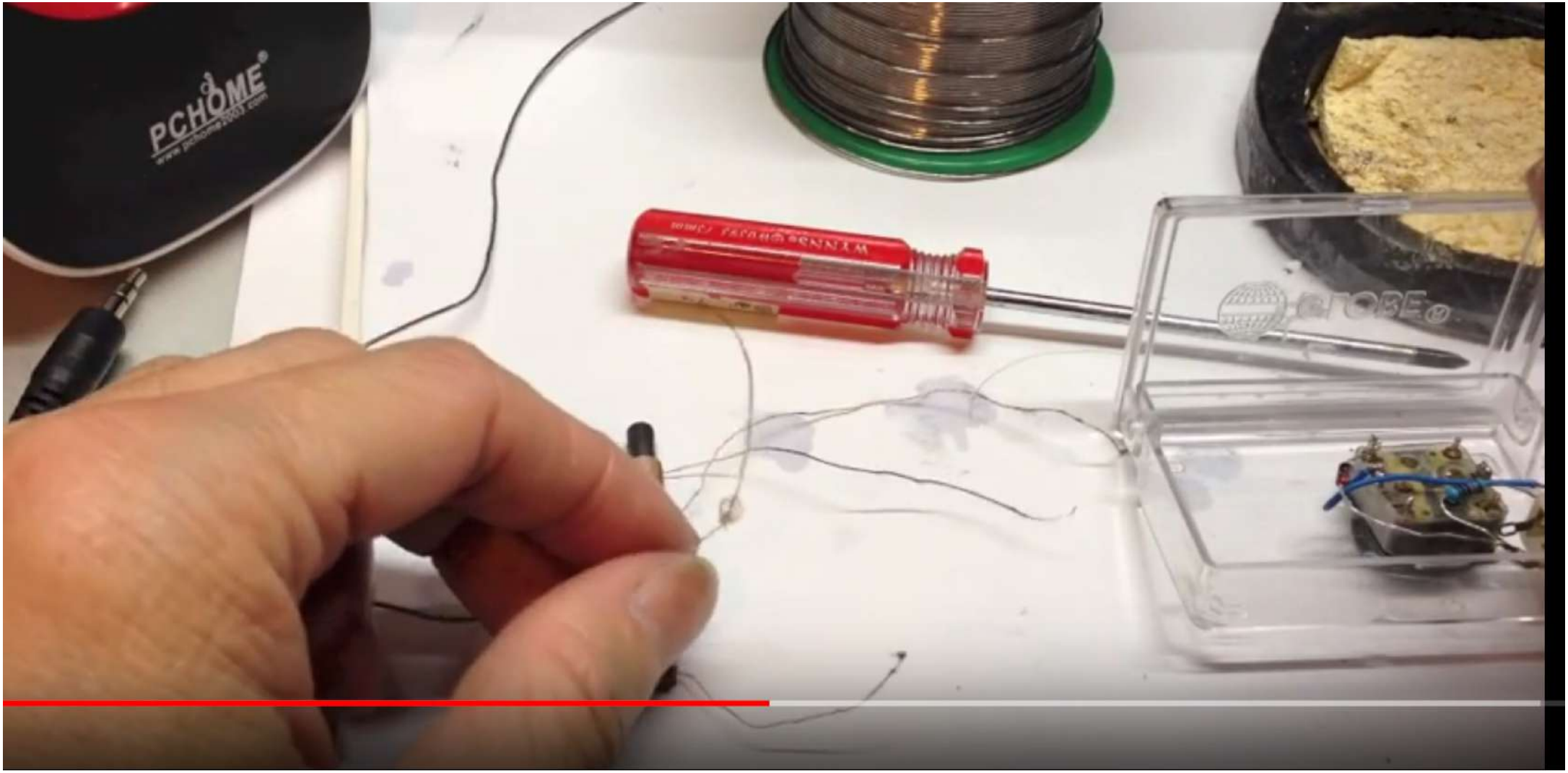


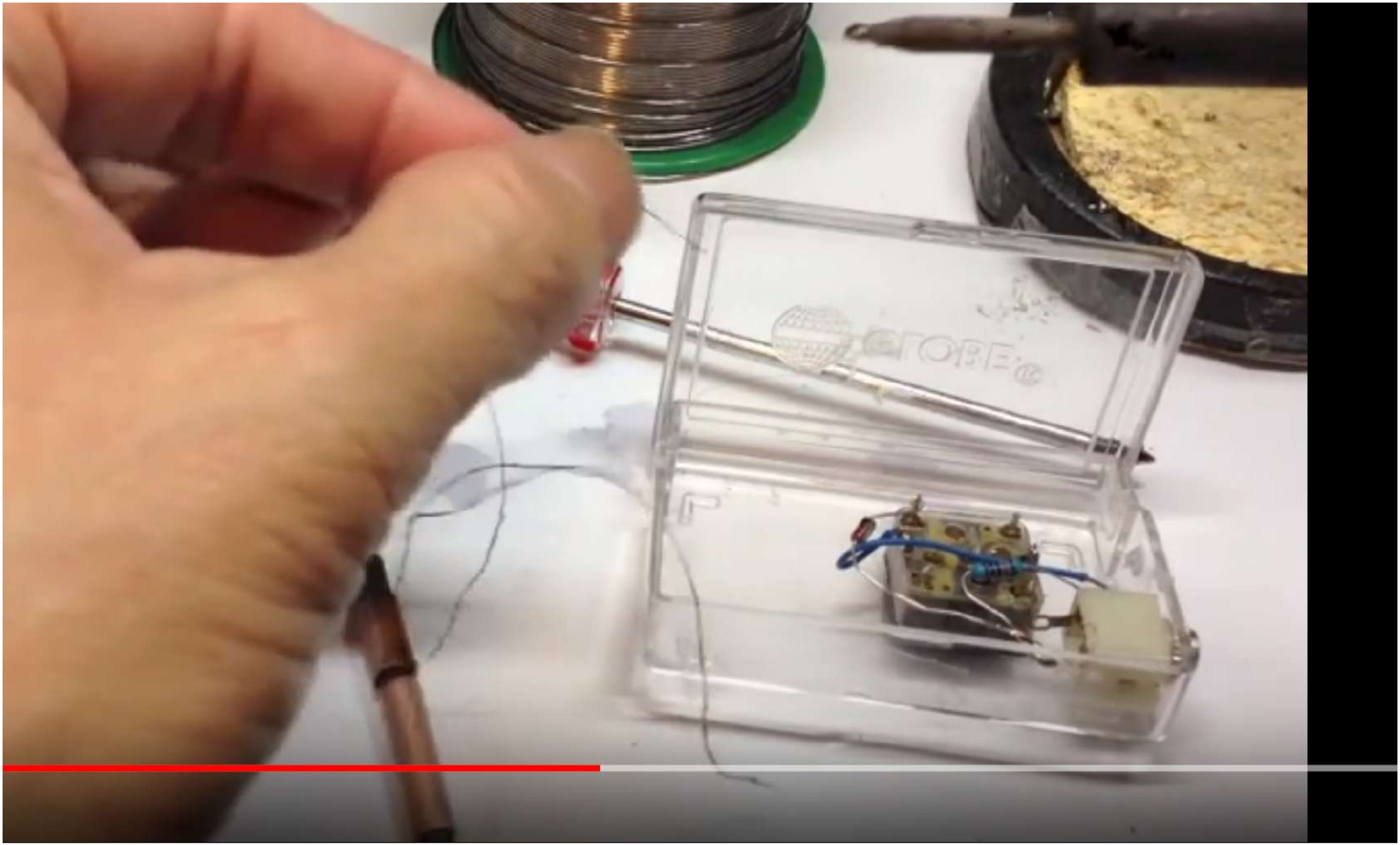


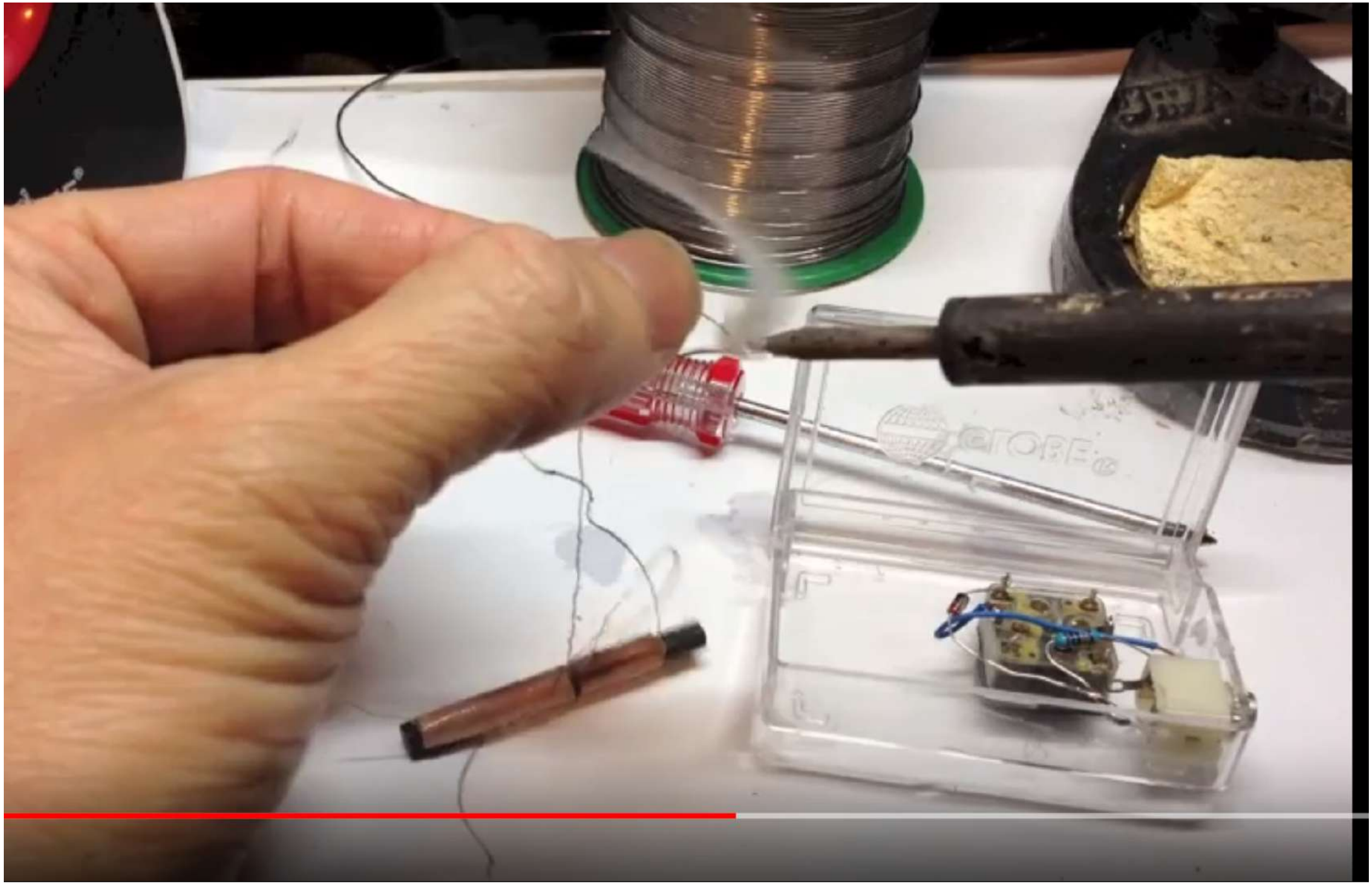


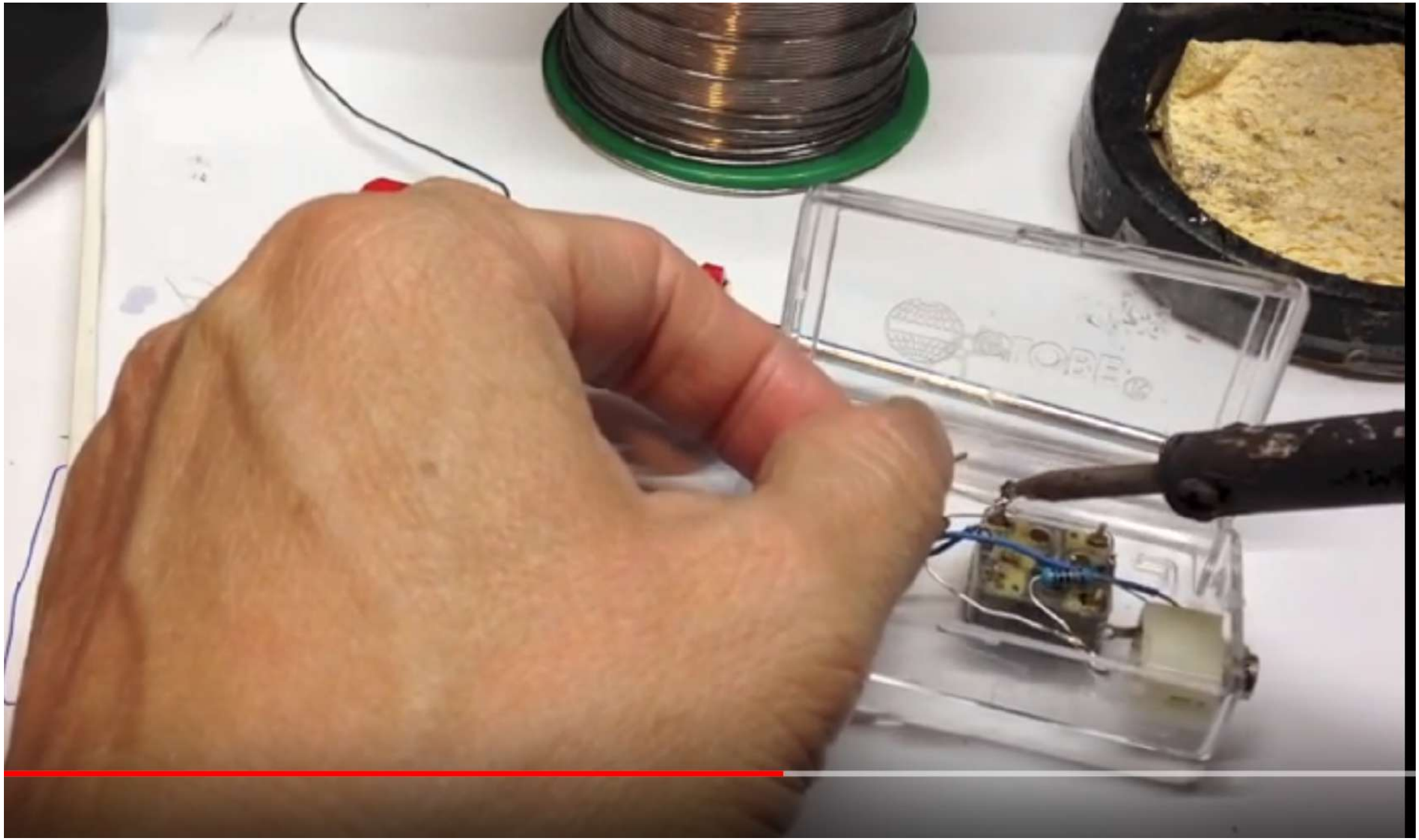


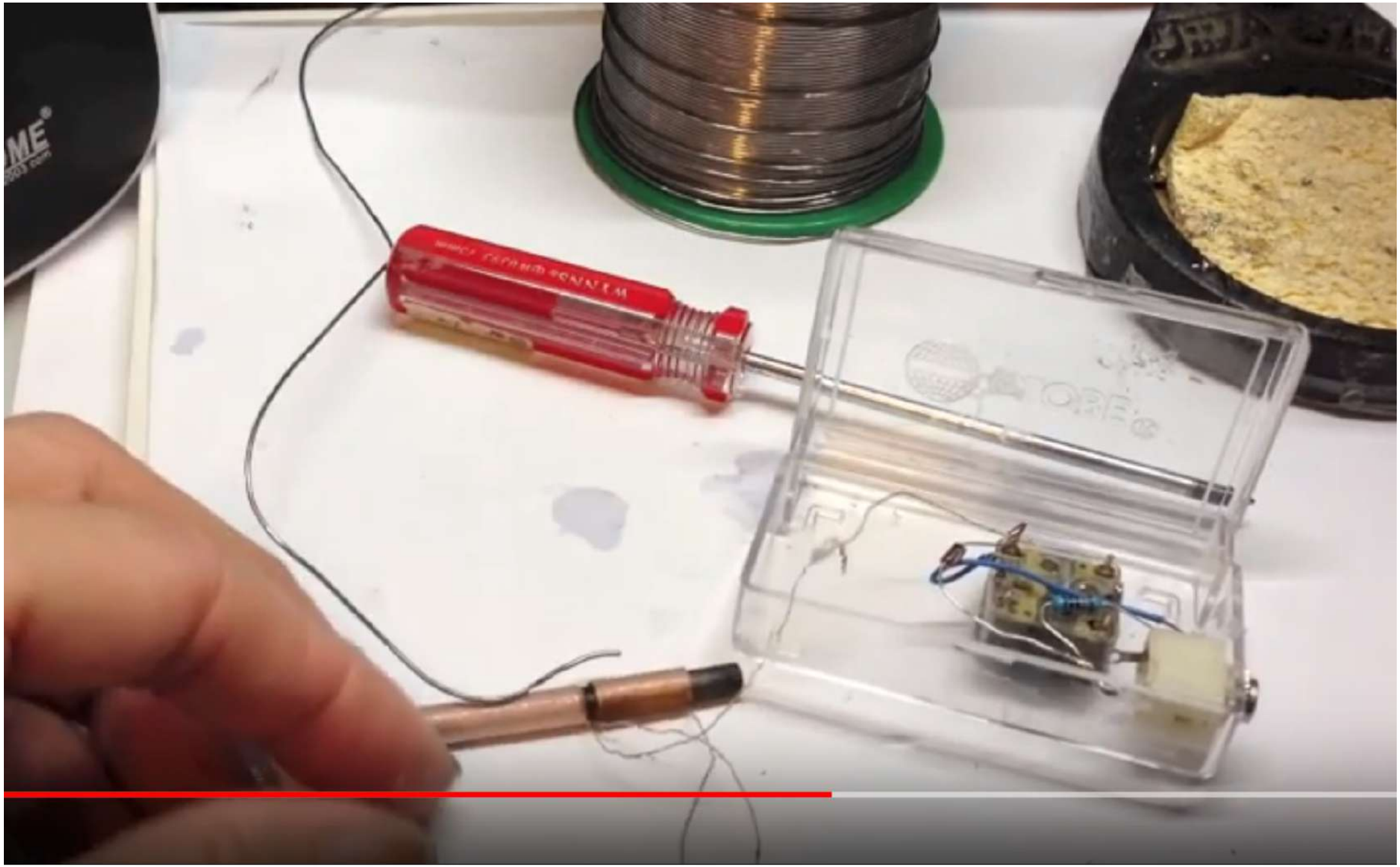


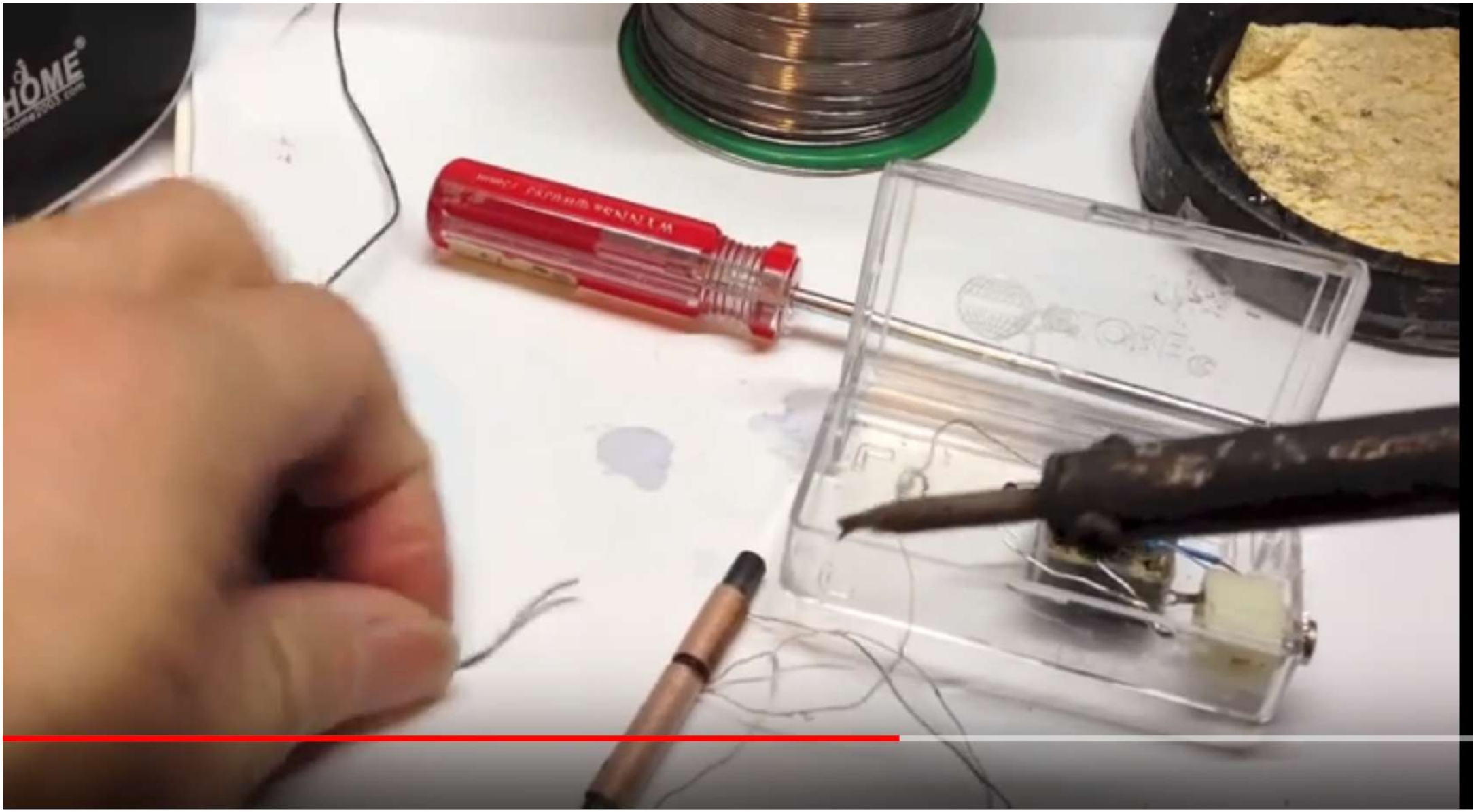

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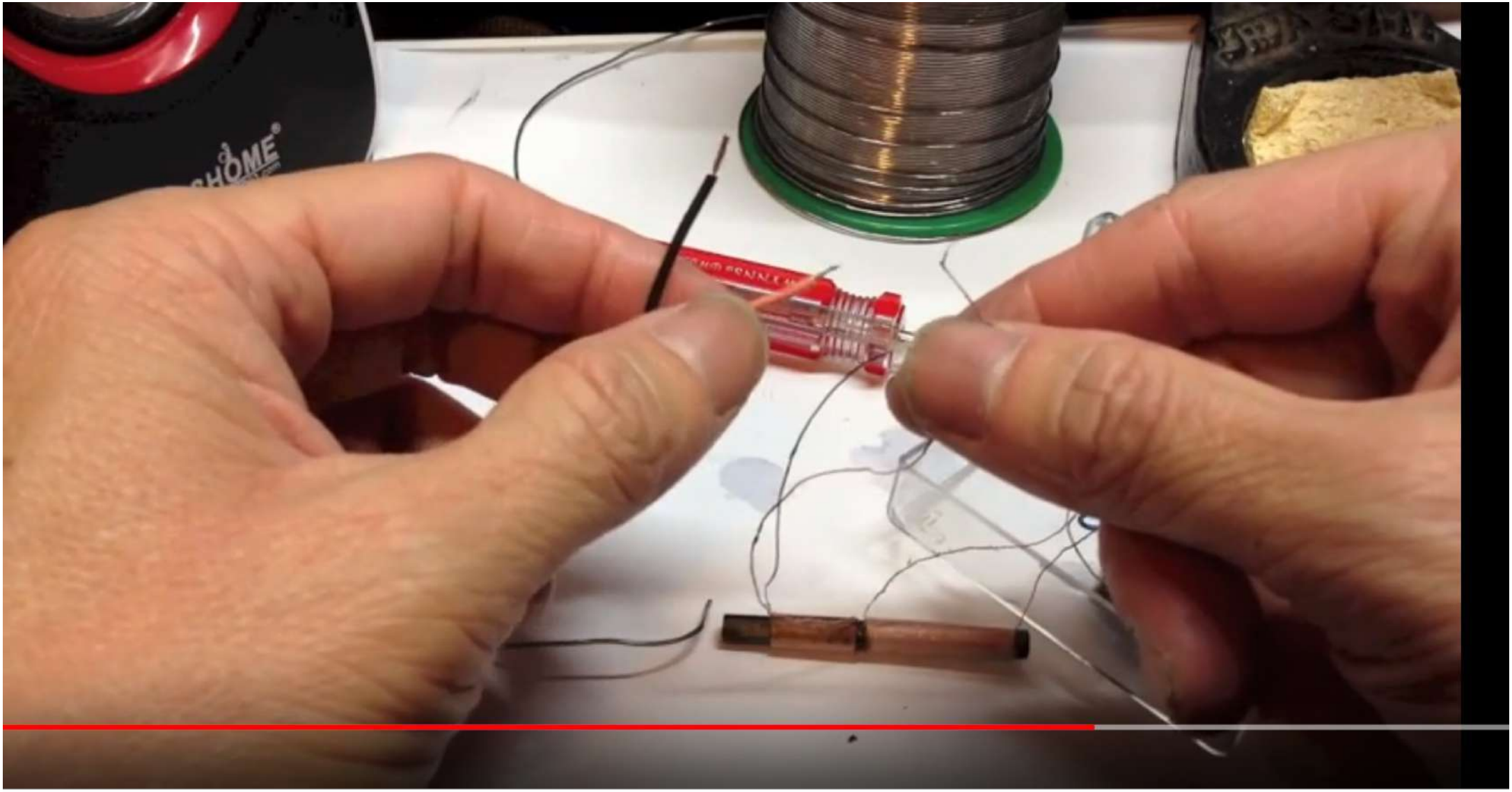


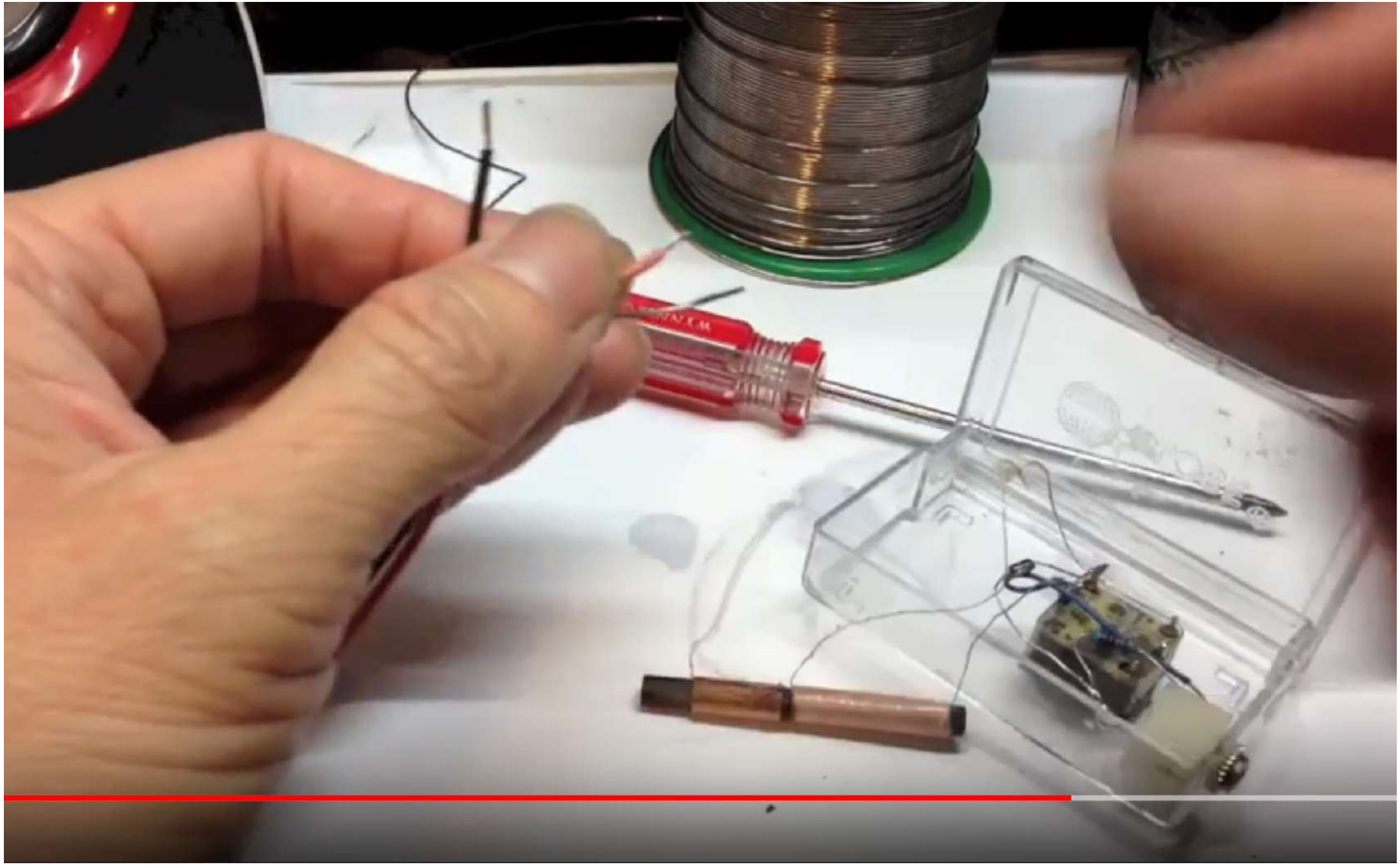


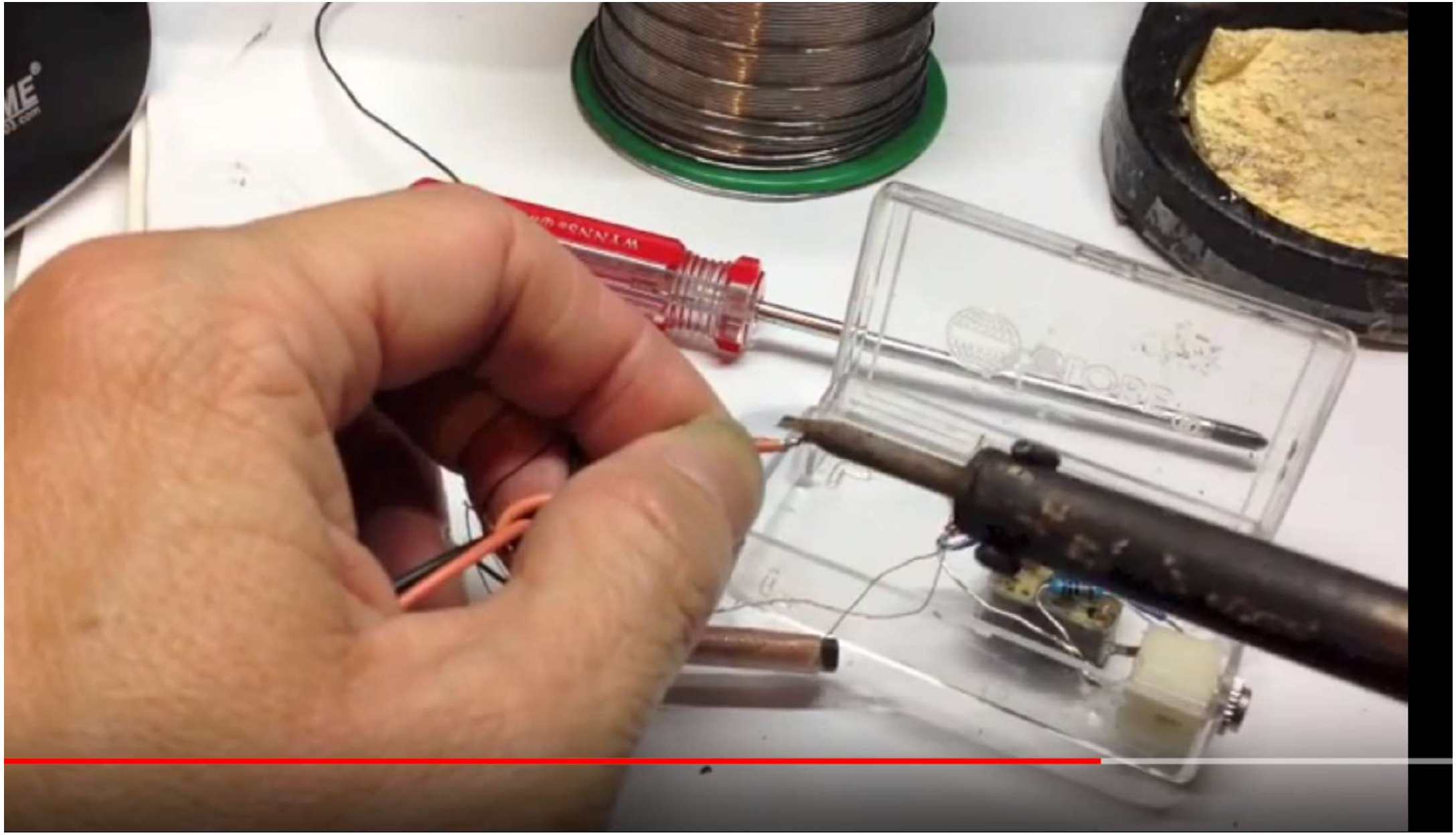






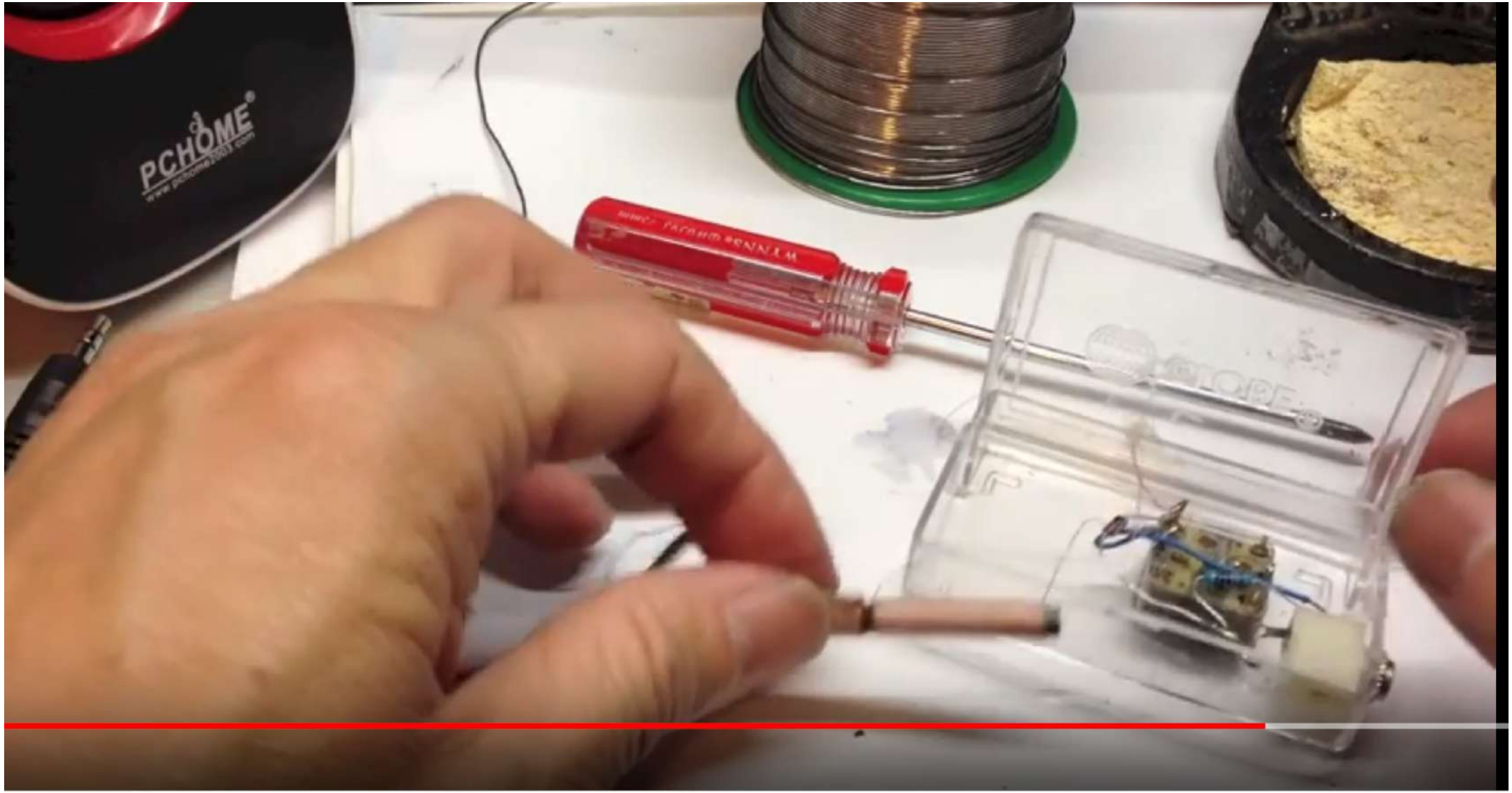






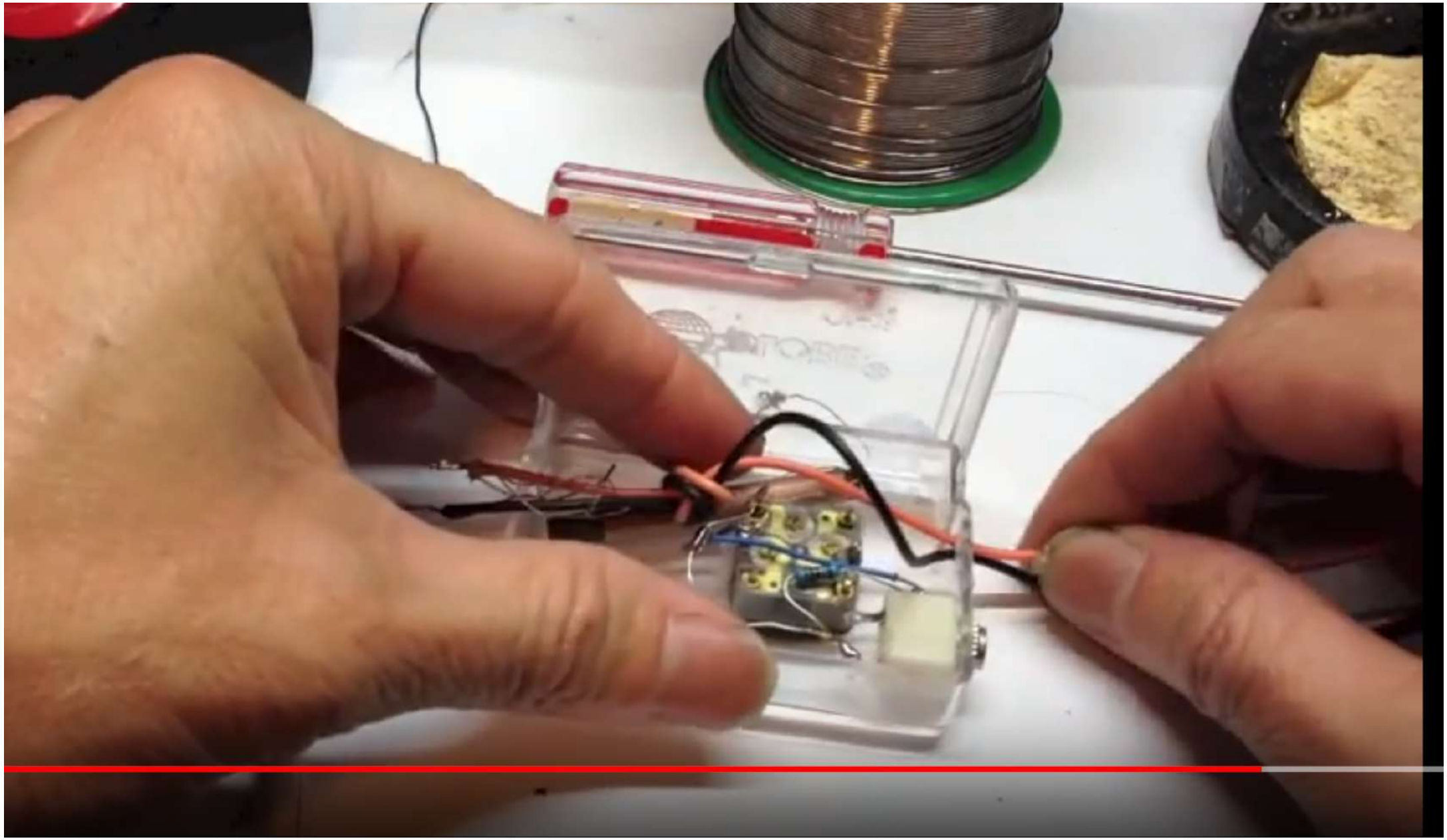

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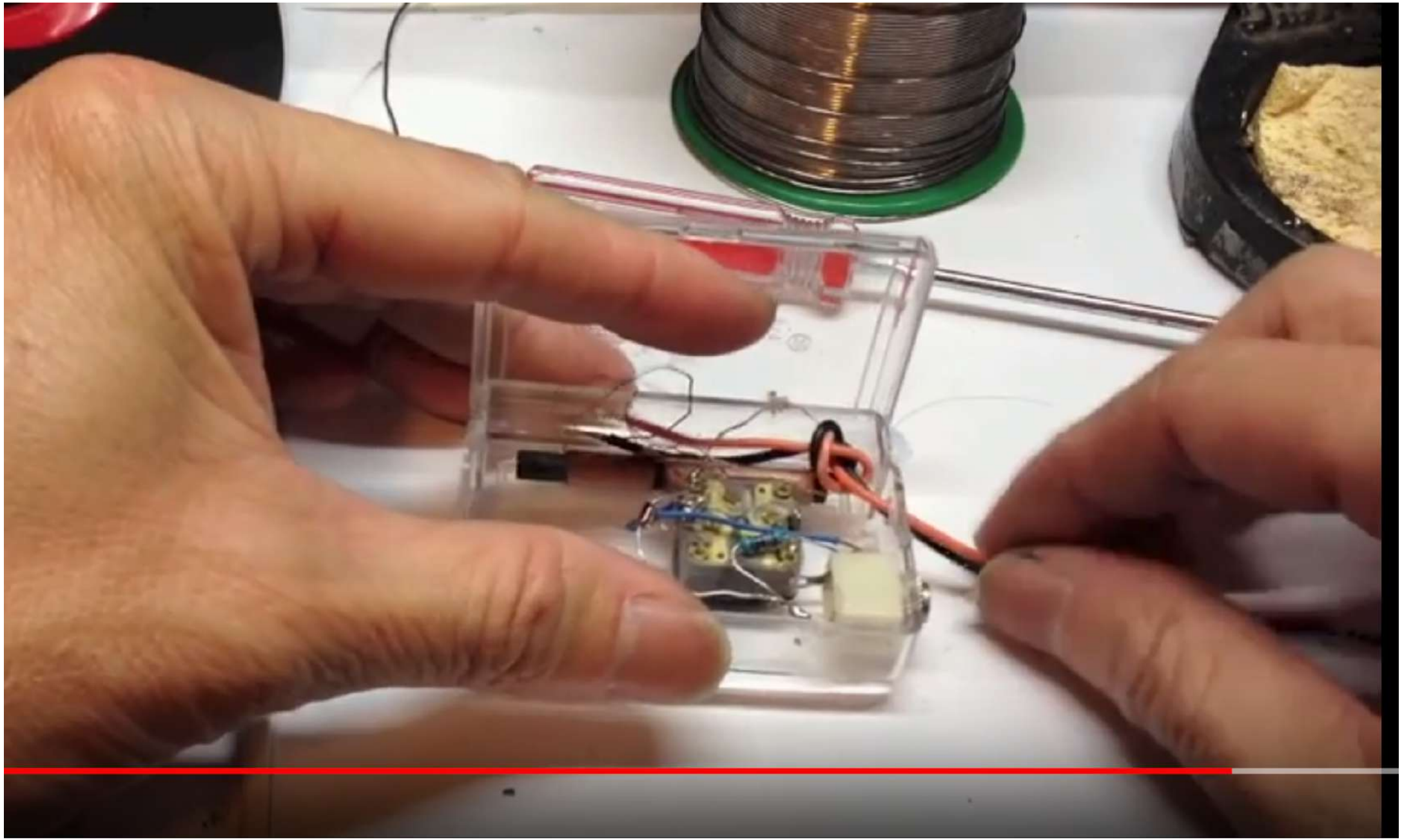


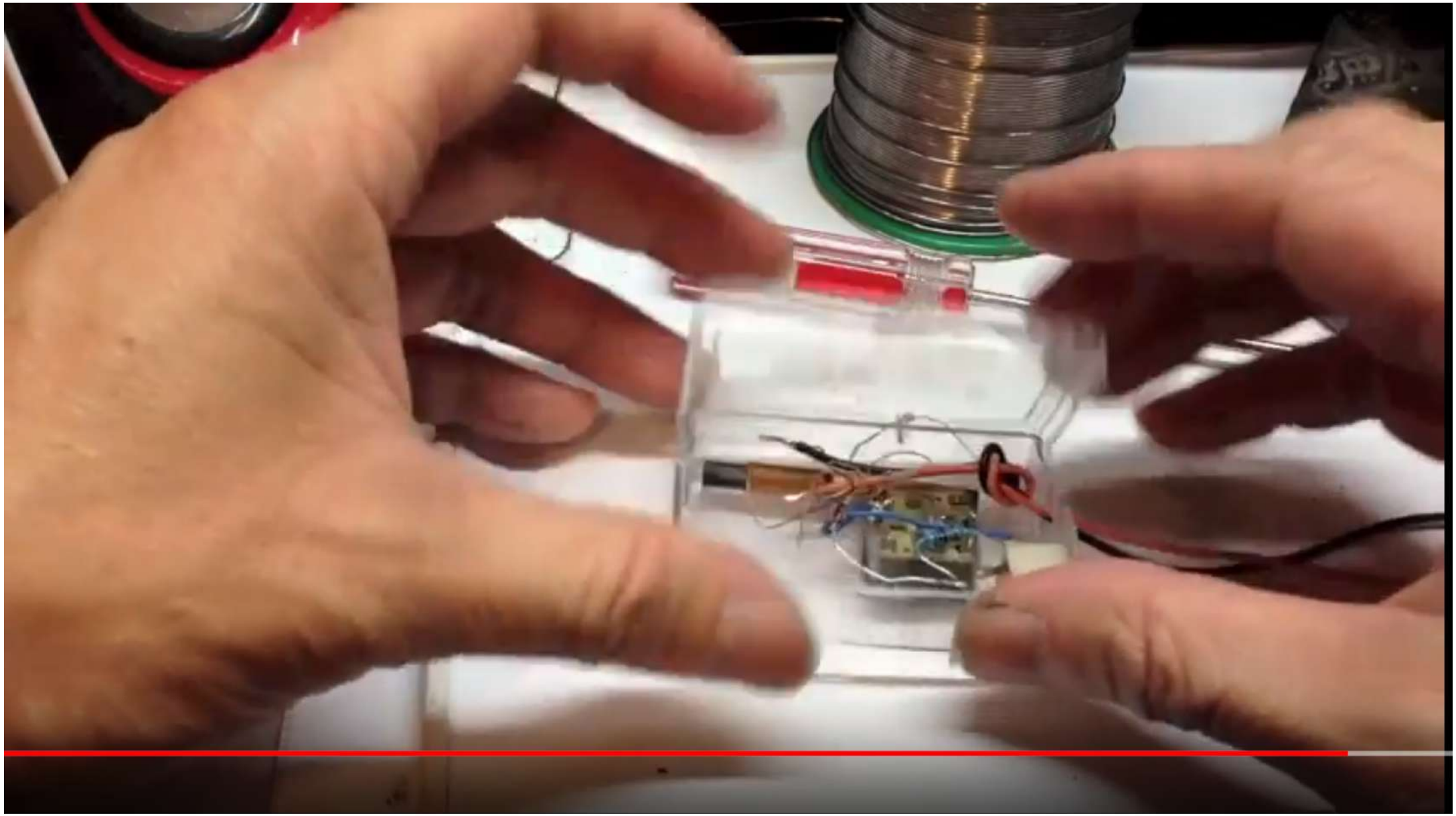

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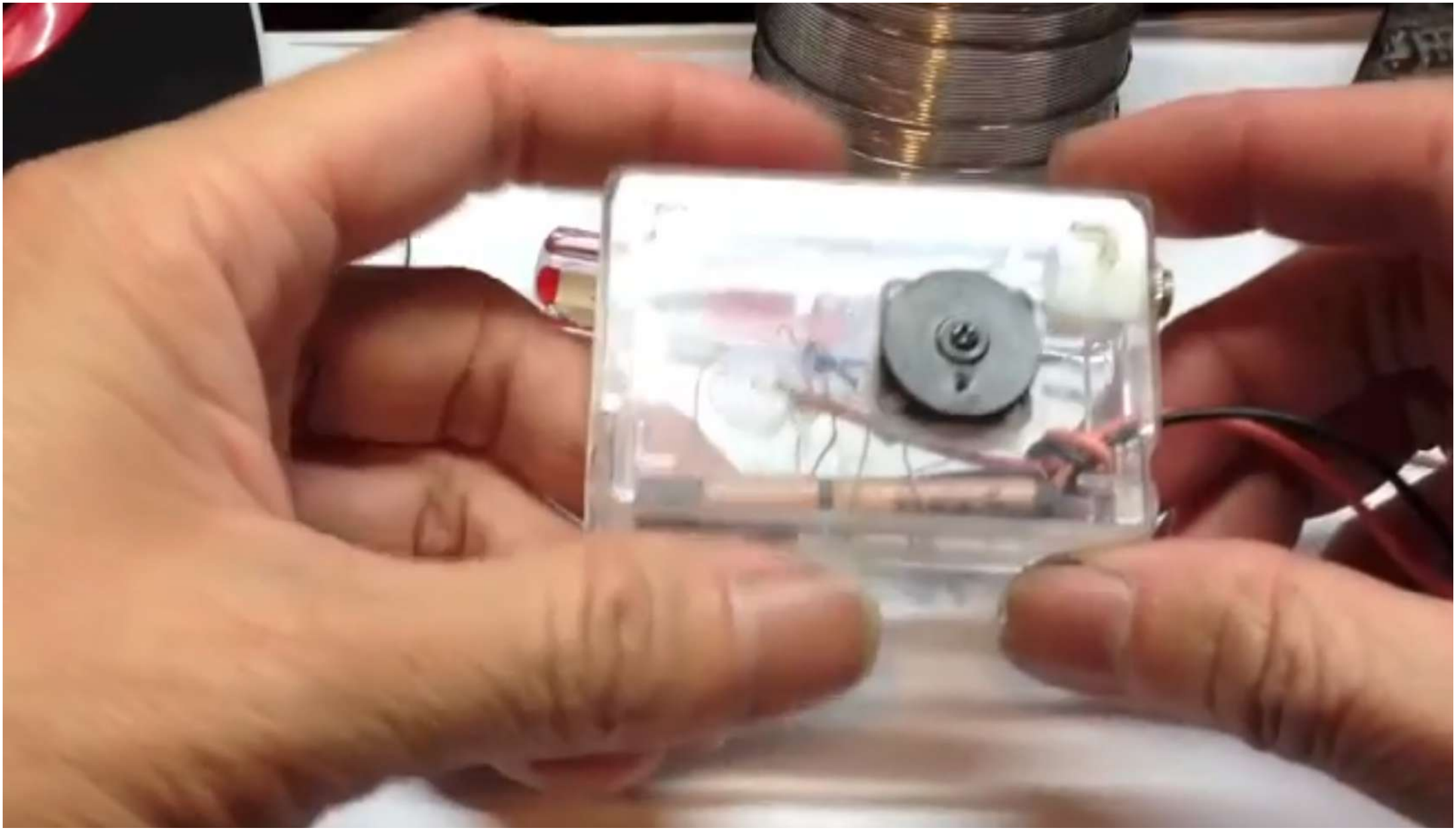


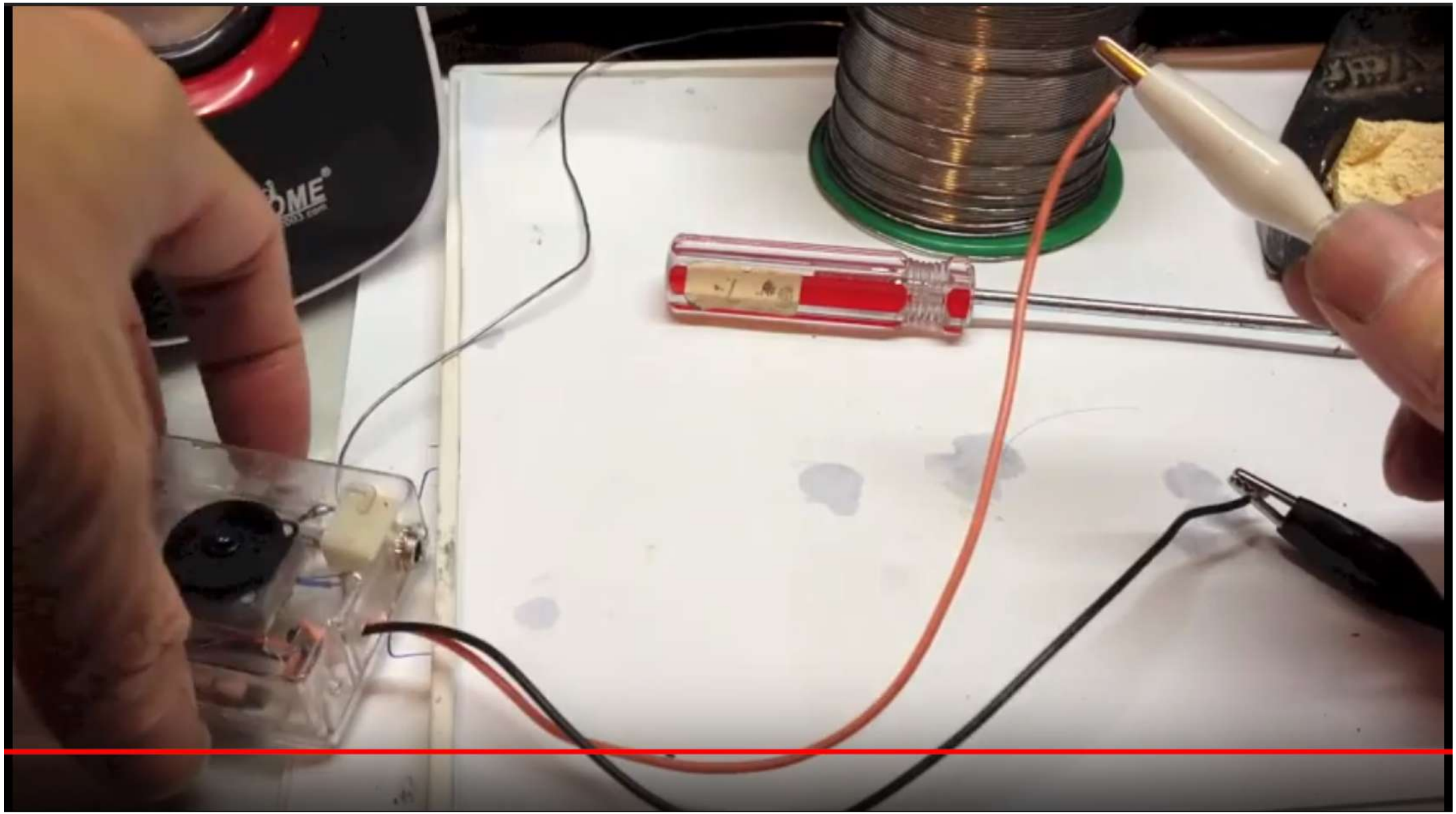


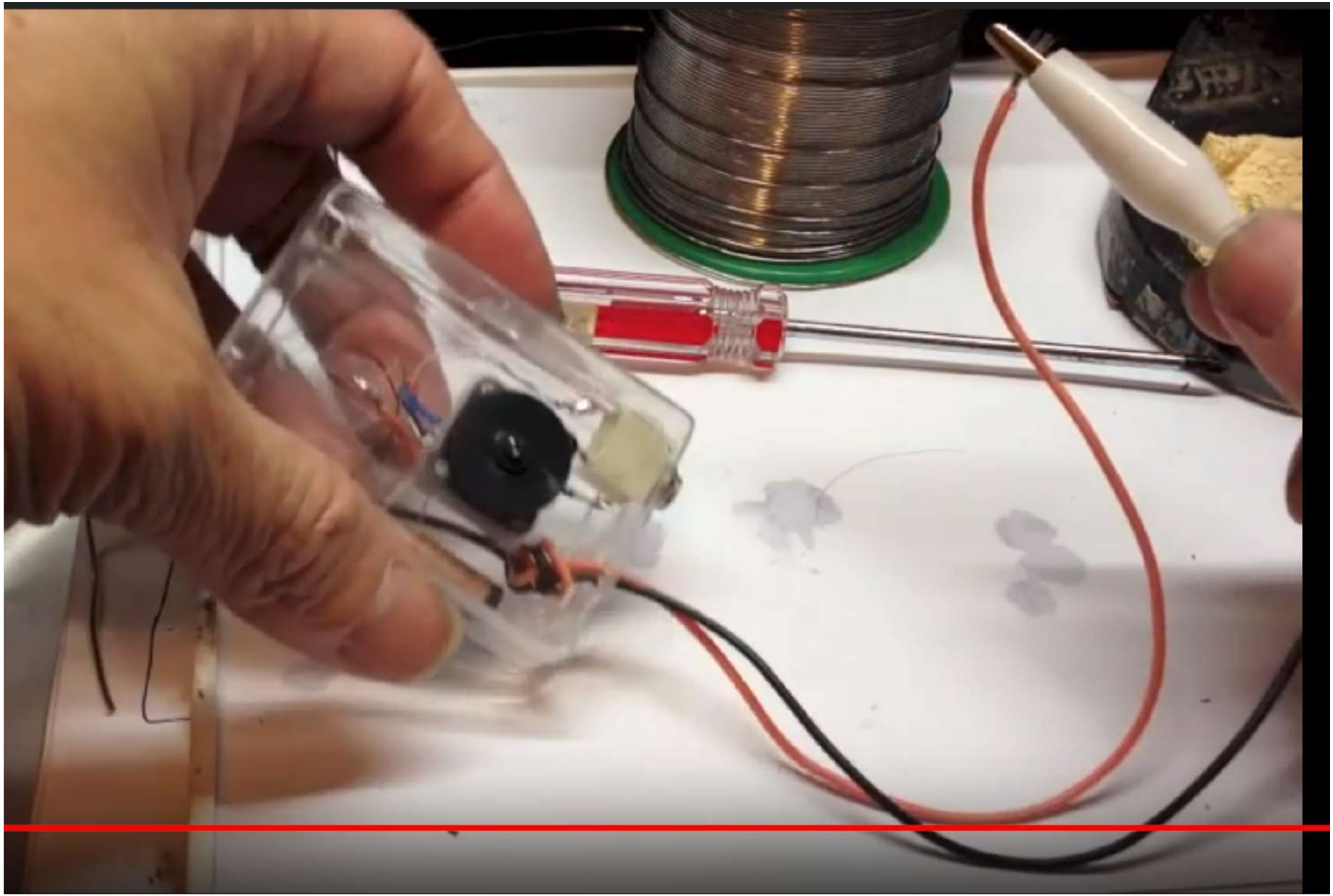


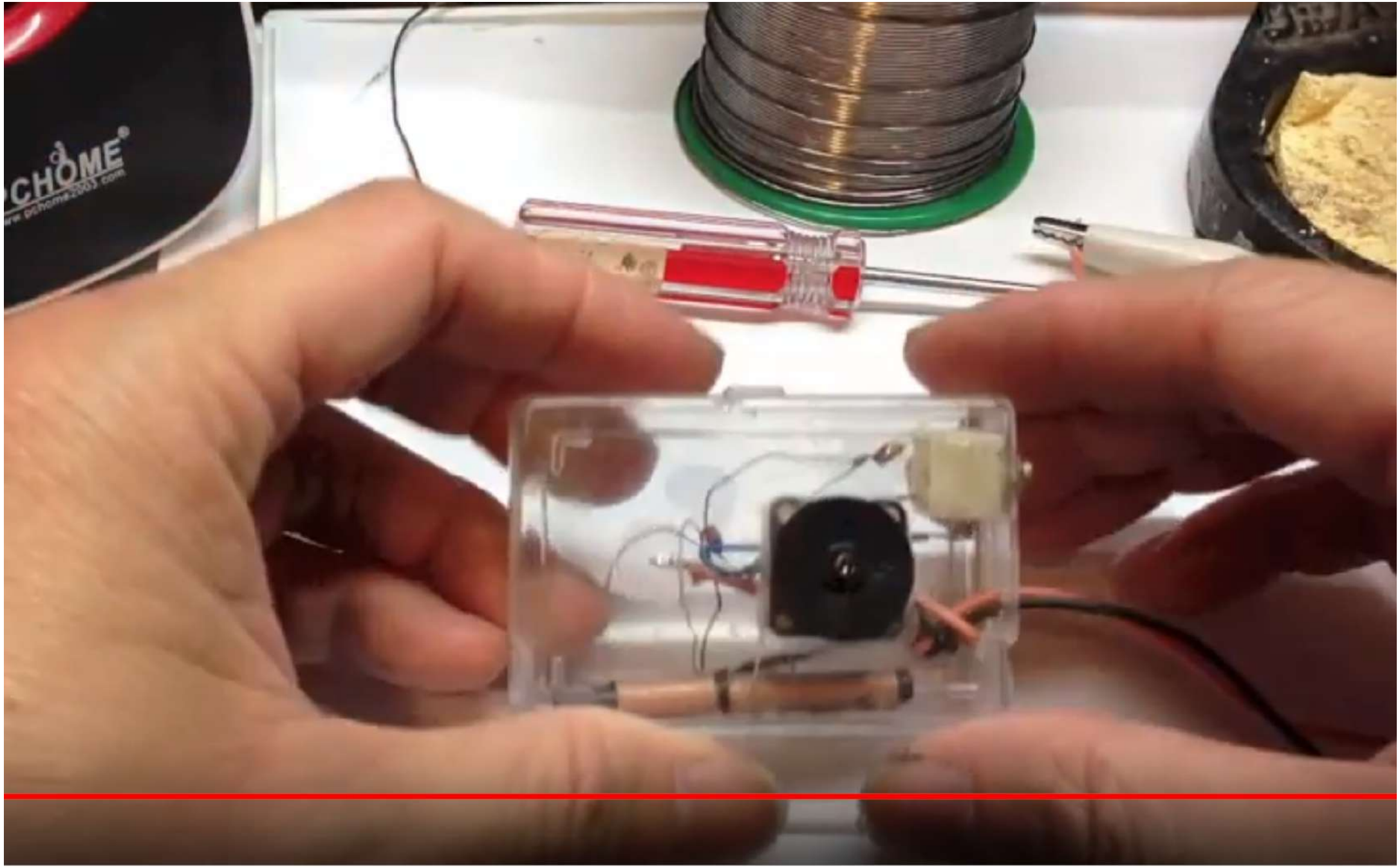






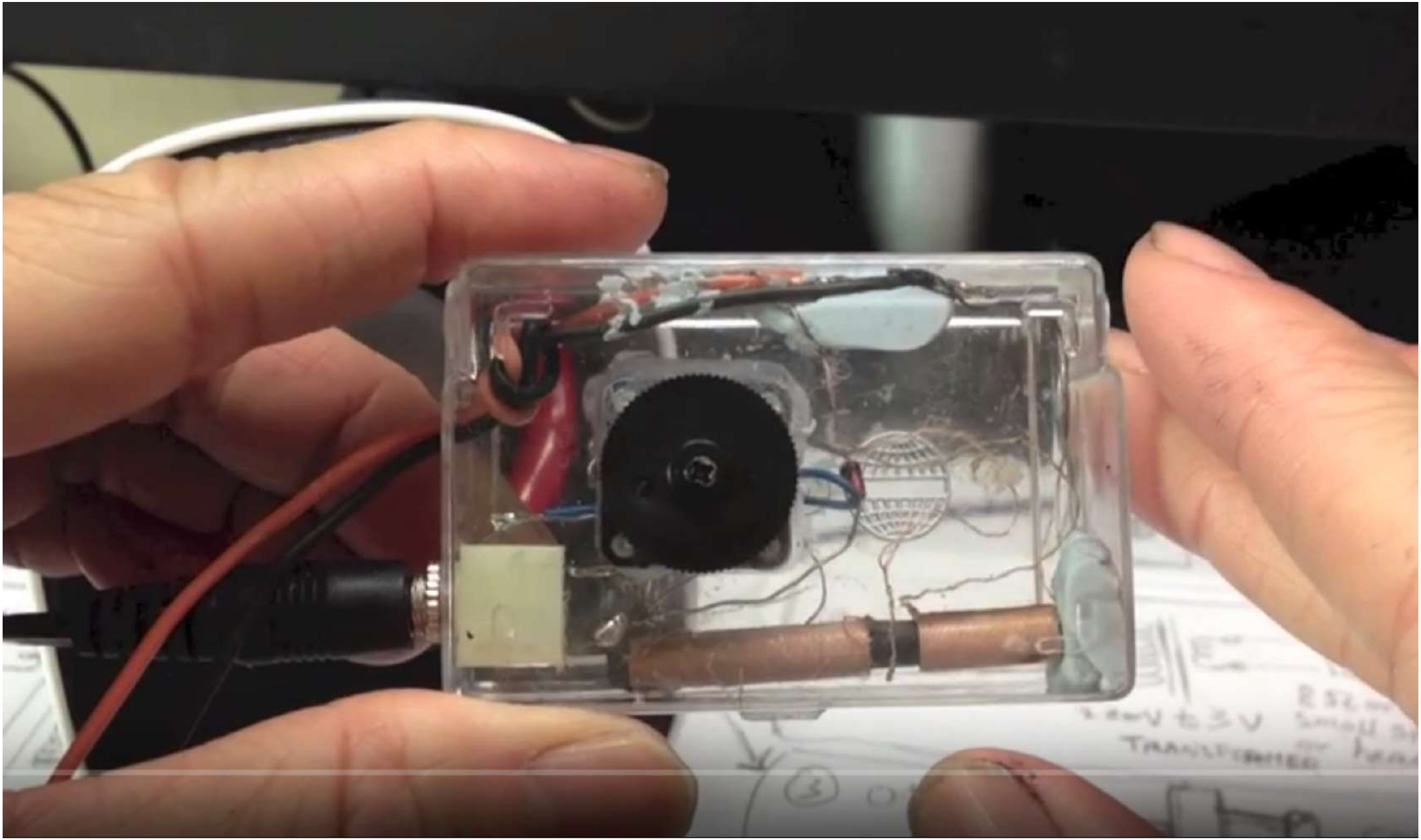


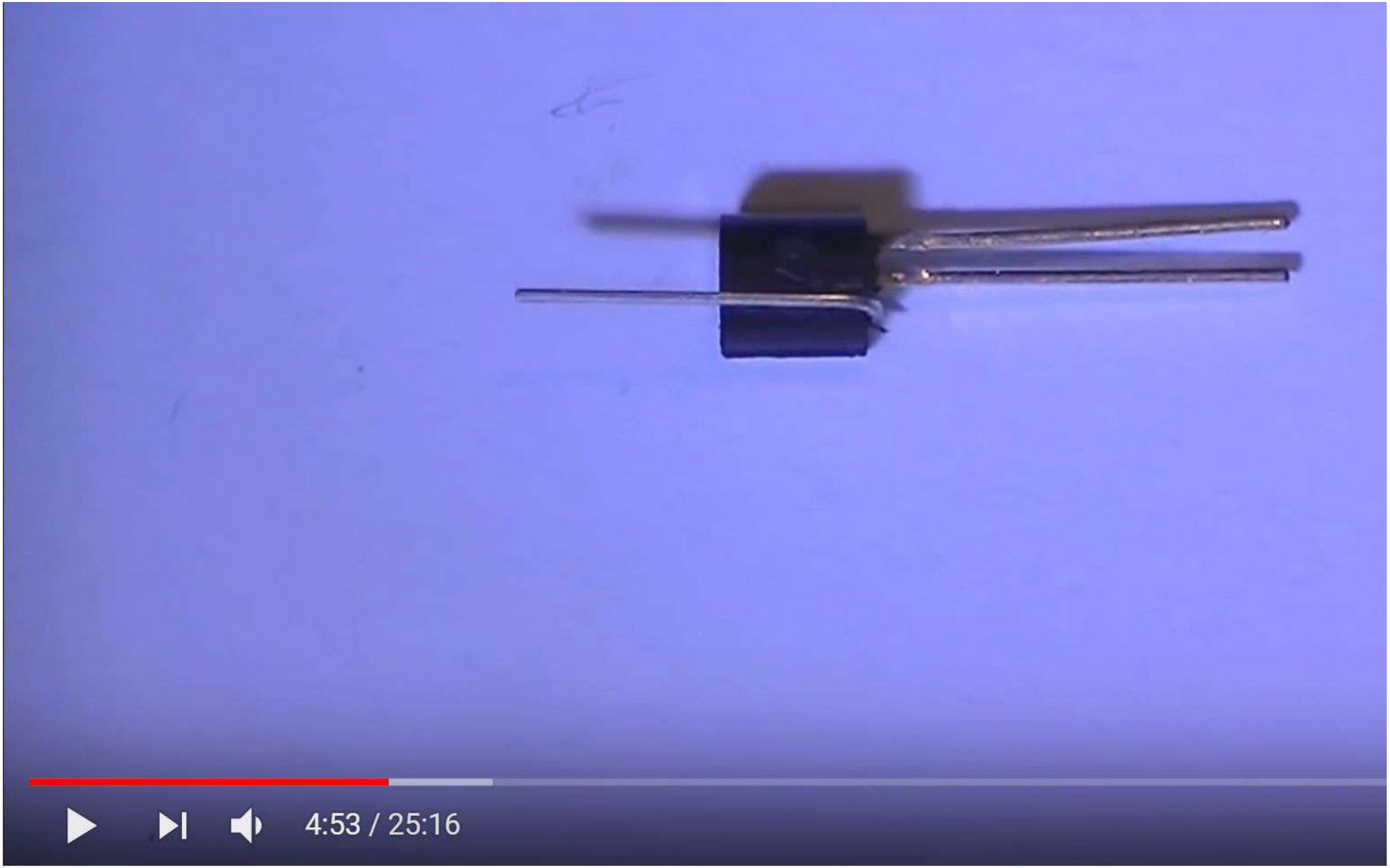



PCHOME


PCHOME







Lets build a RF Pen detector .A good tool for testing small FM transmitters.


Alloy
60/40
Sn/Pb
Weight
100gms
Diameter
0.7mm
Rapid
You can buy FM transmitters from :
www.bug-transmitter.com
5:24 / 25:16



Lets build a RF Pen detector .A good tool for testing small FM transmitters.

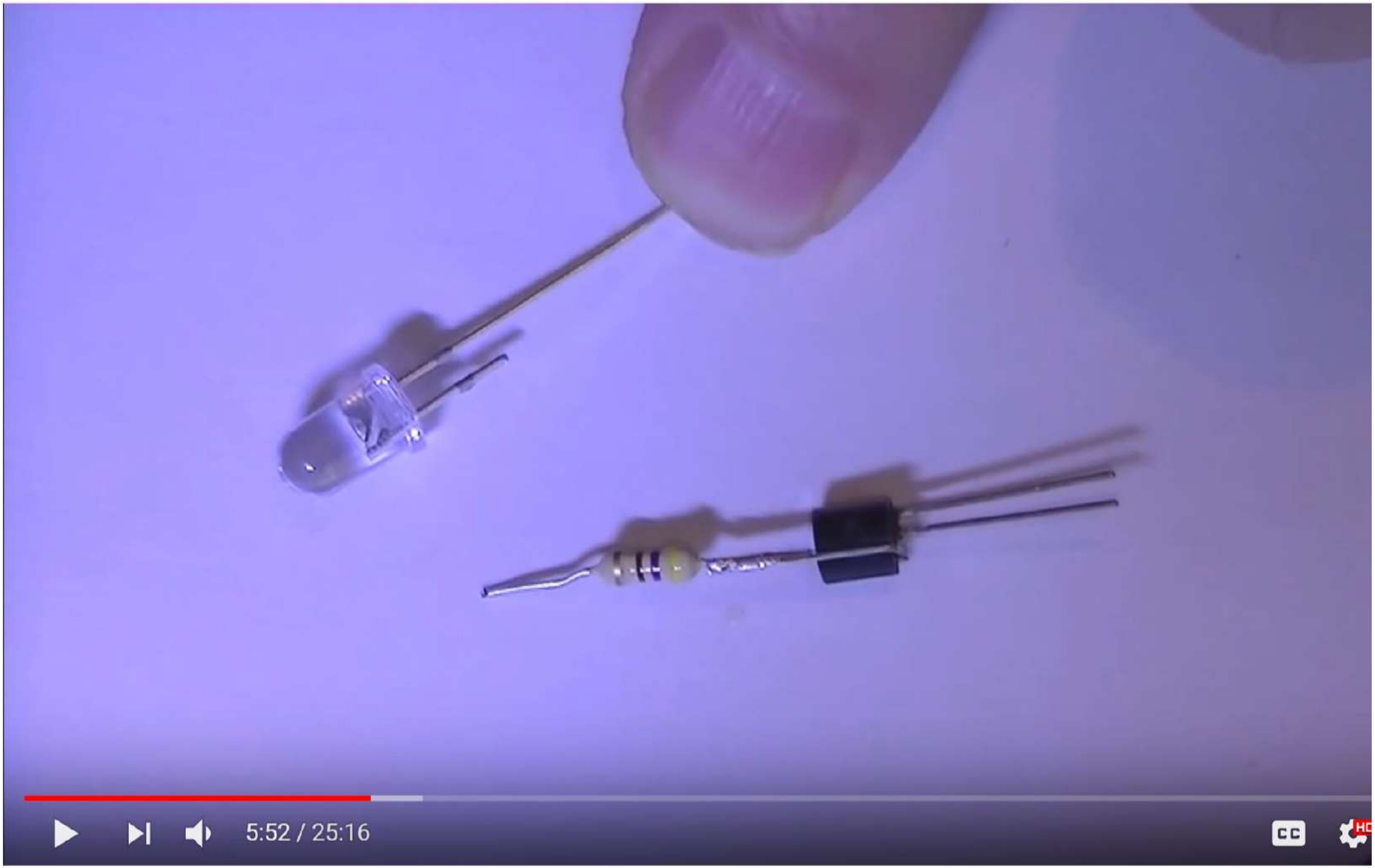
48,706 views

420

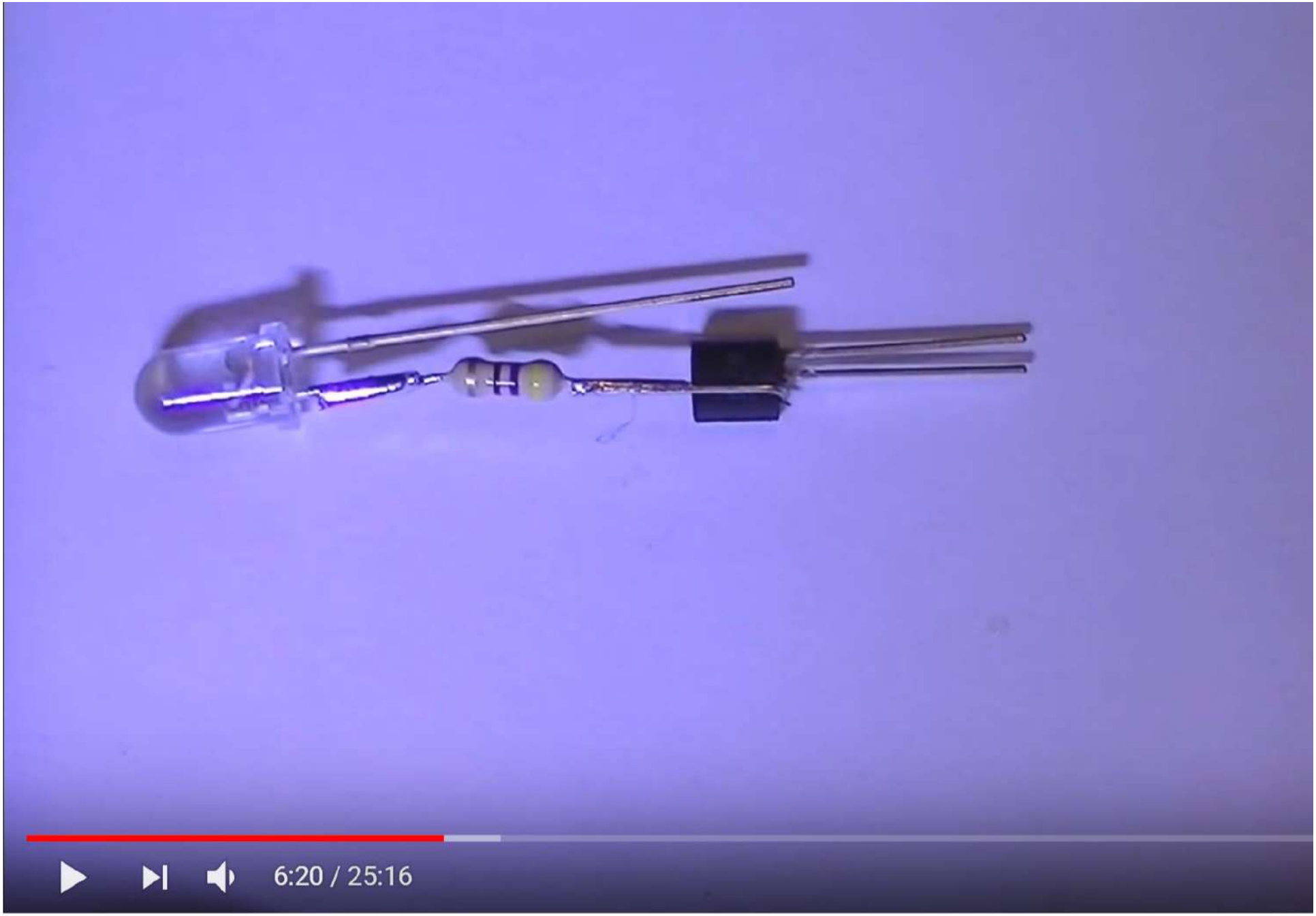


ets build a RF Pen detector .A good tool for testing small FM transmitters.

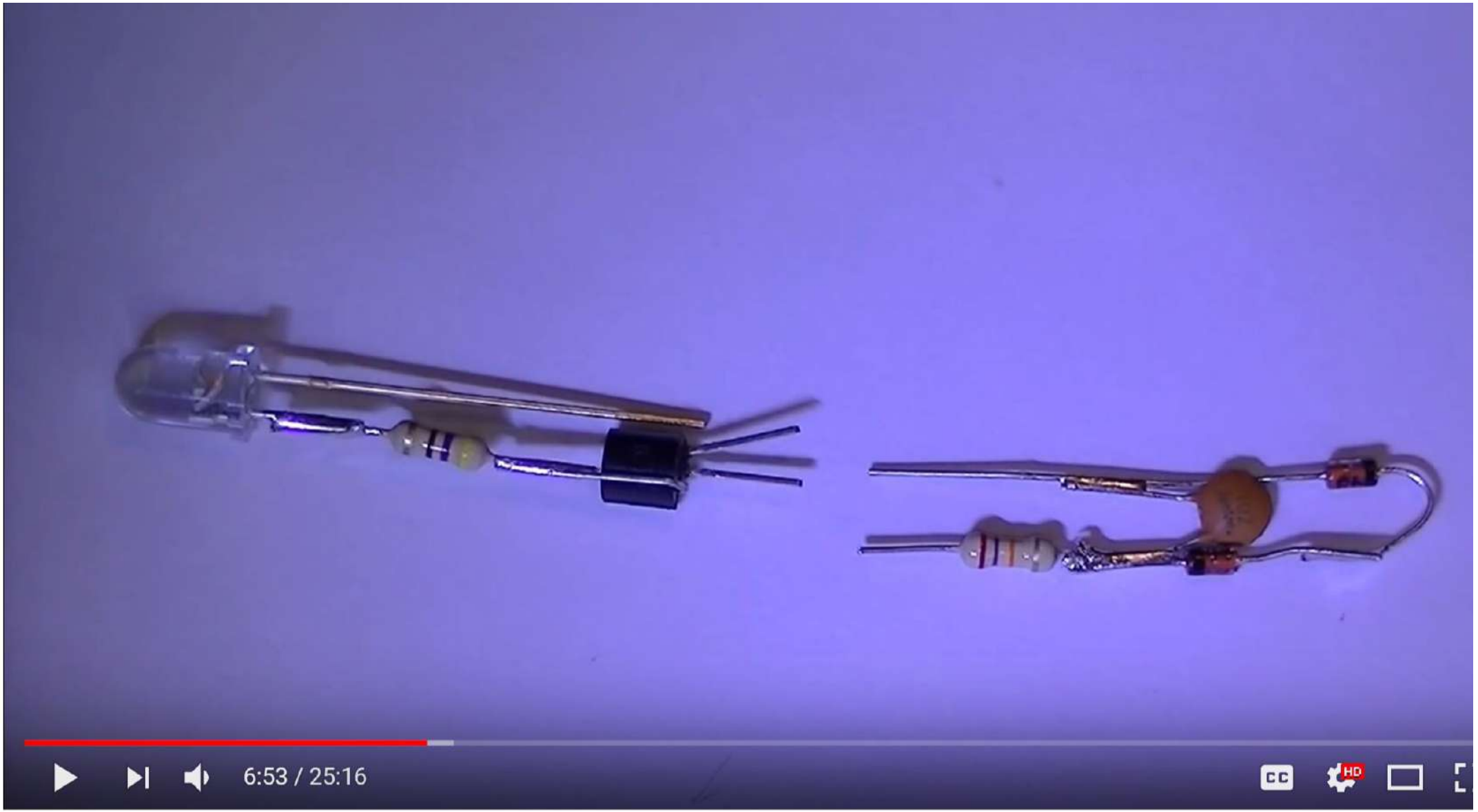
8,706 views



Lets build a RF Pen detector .A good tool for testing small FM transmitters.

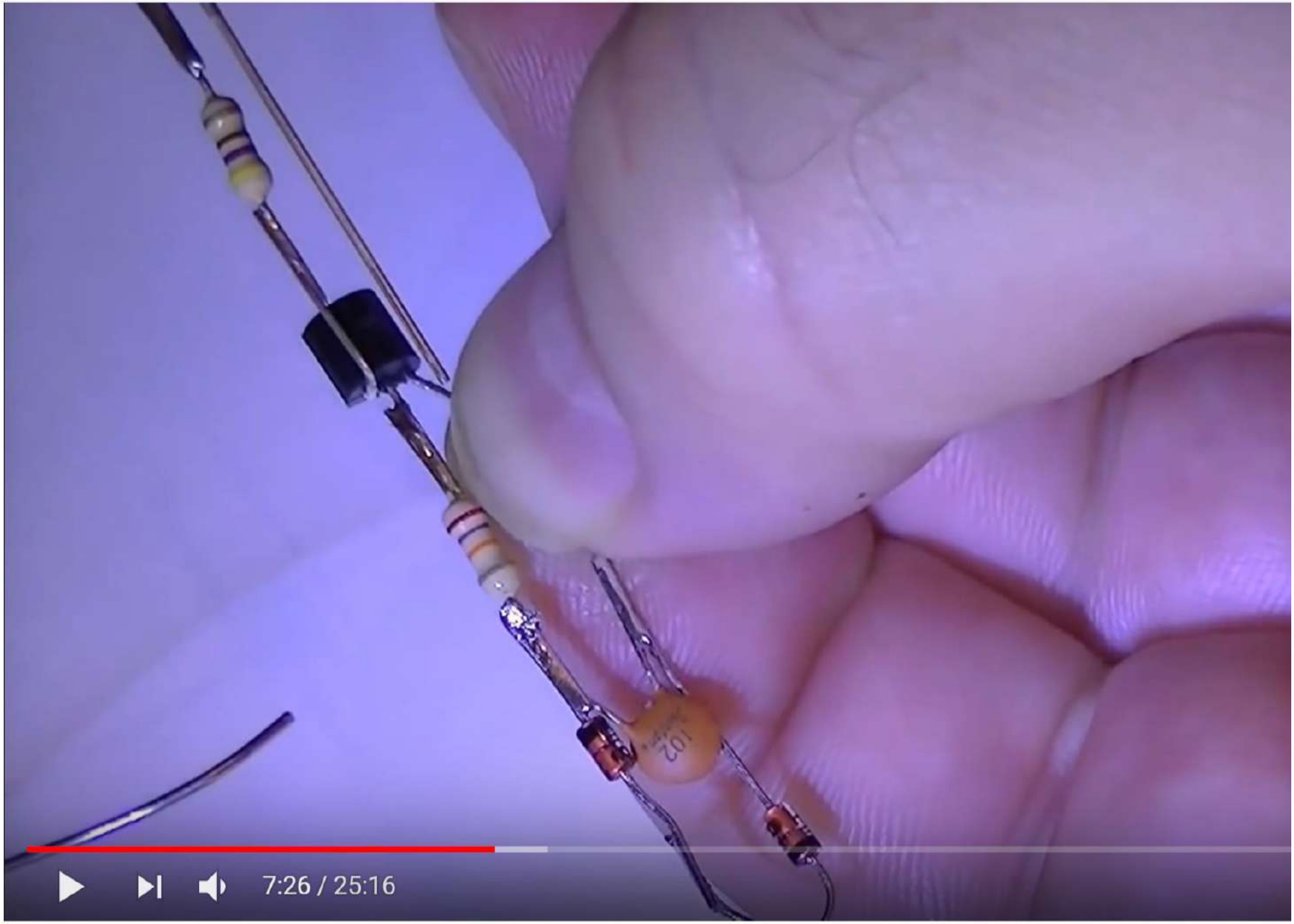


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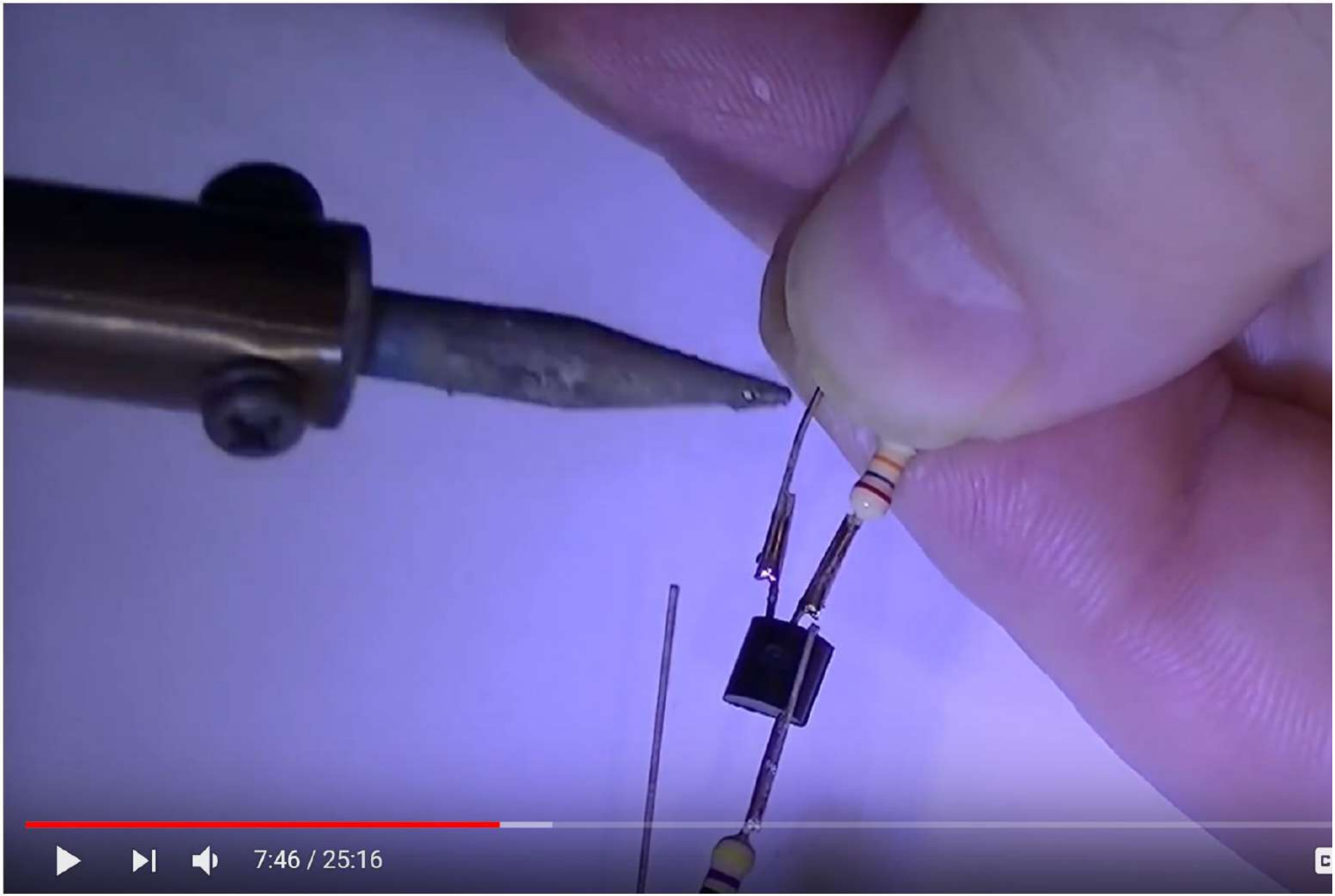


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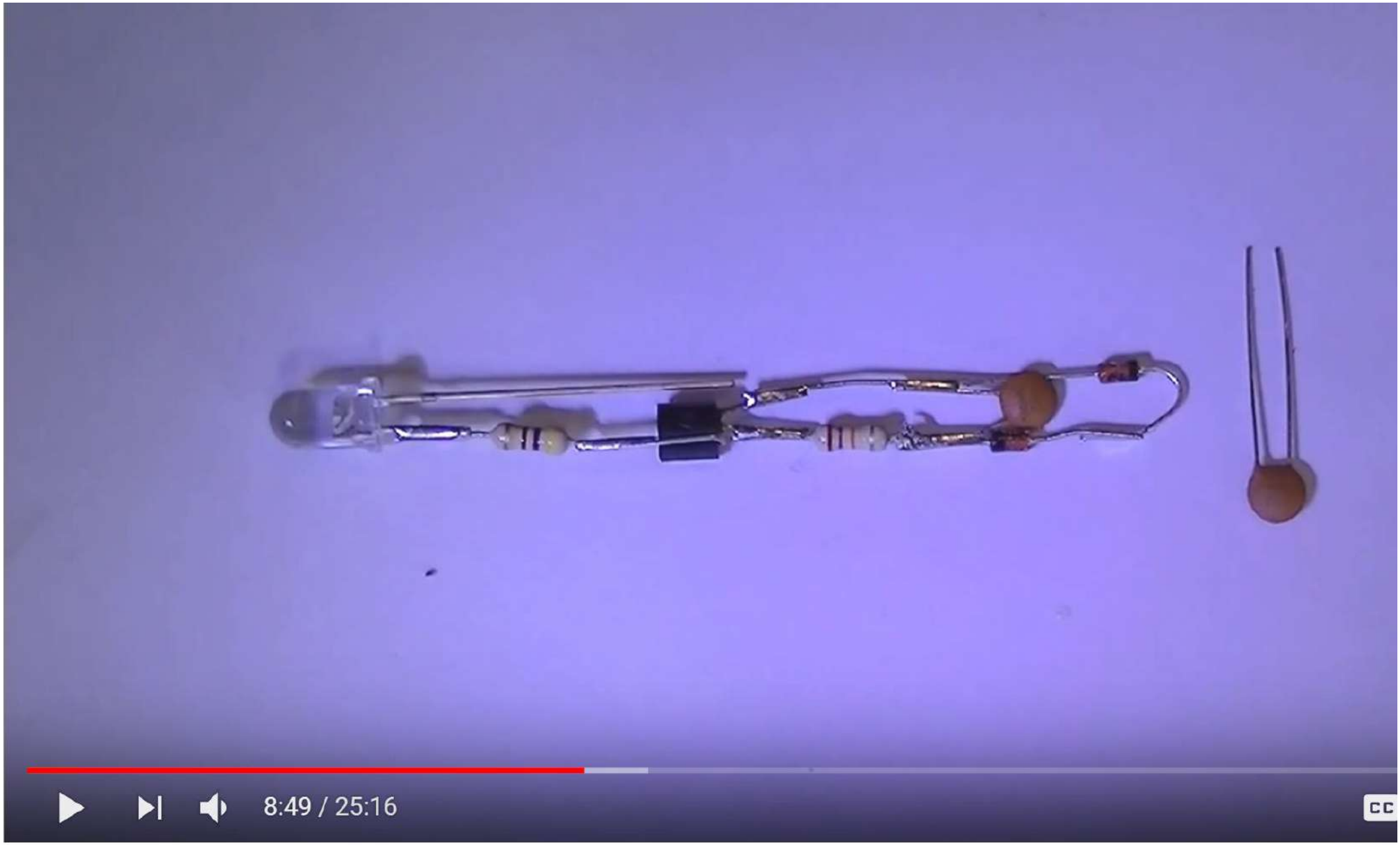
48,706 views



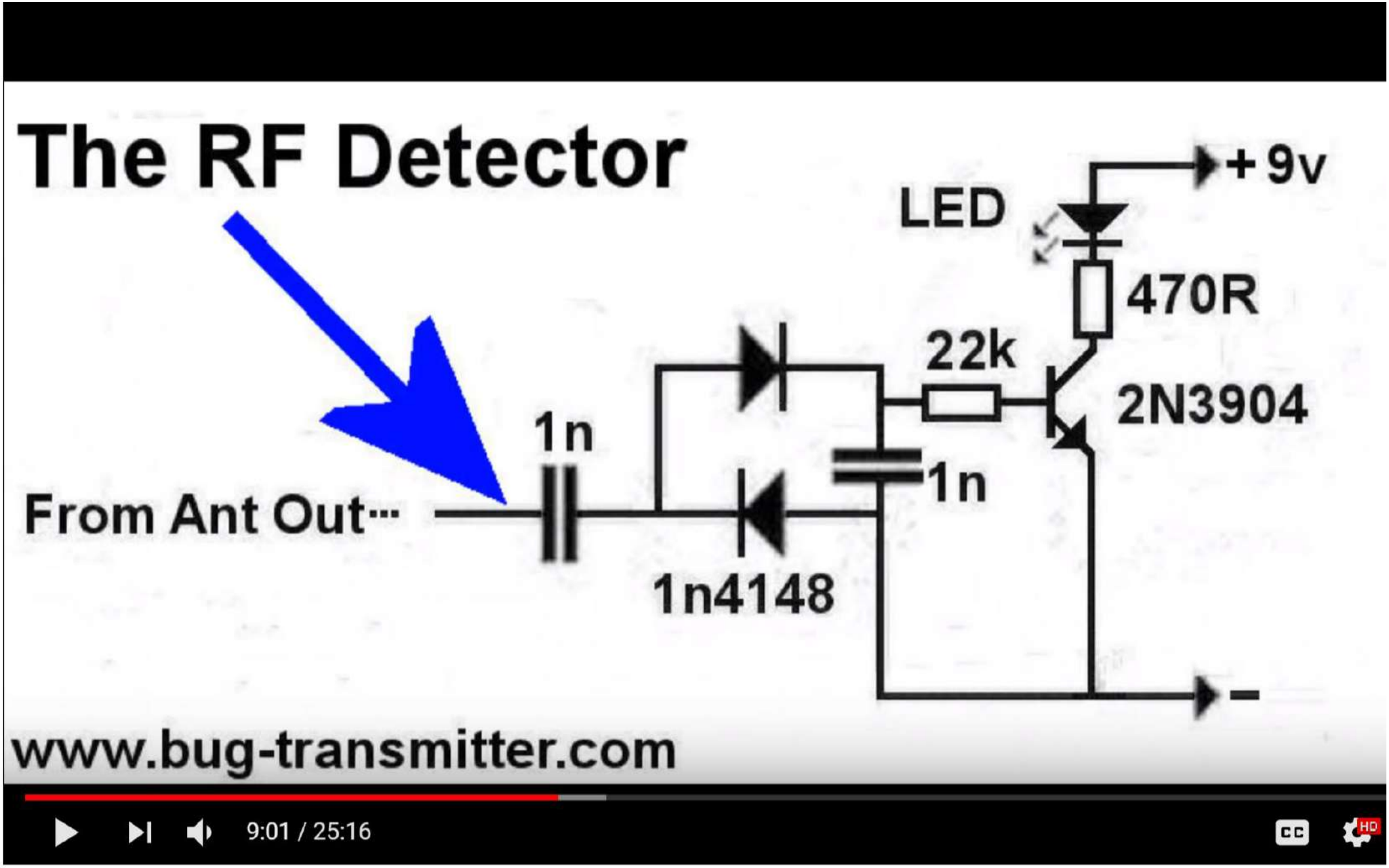
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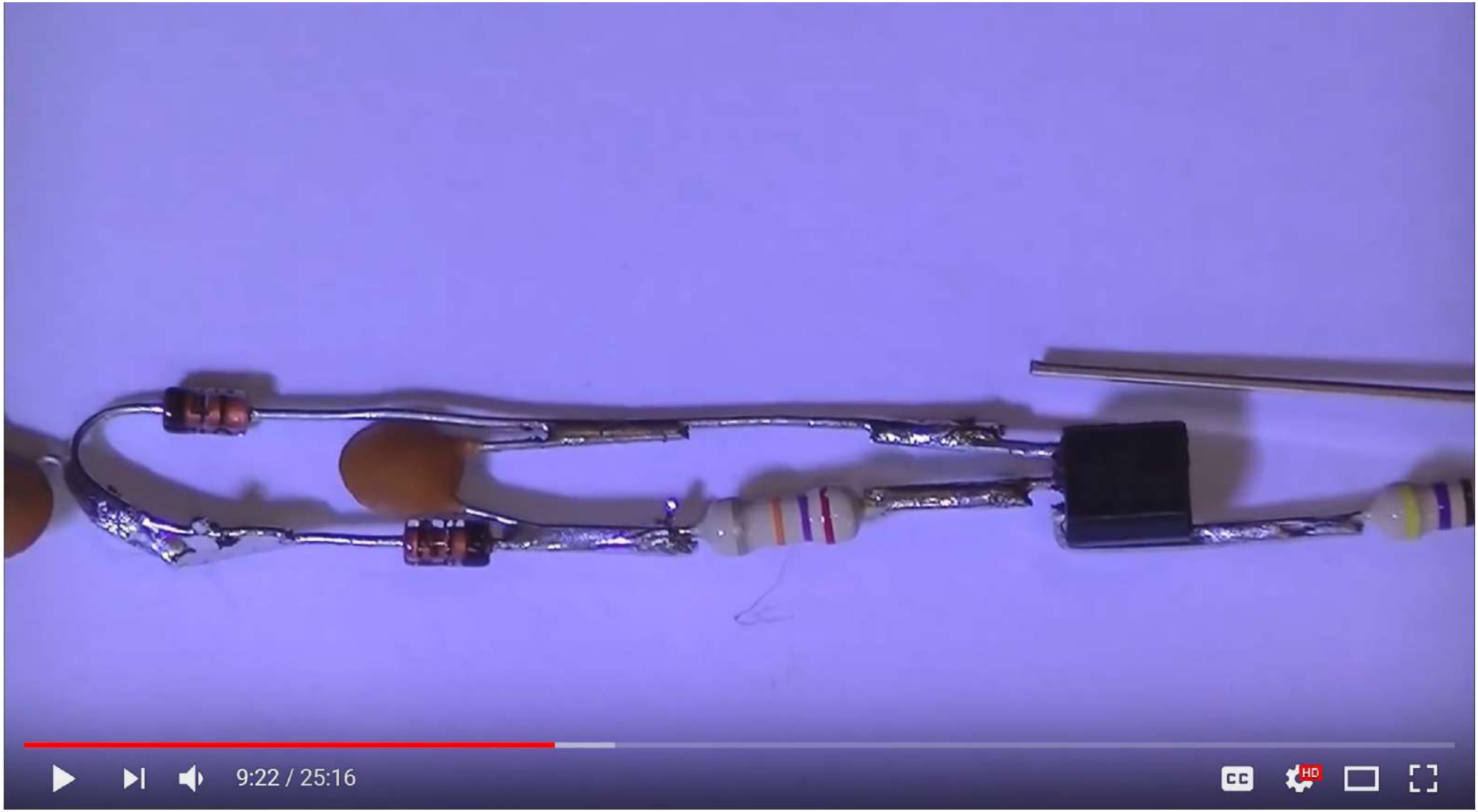


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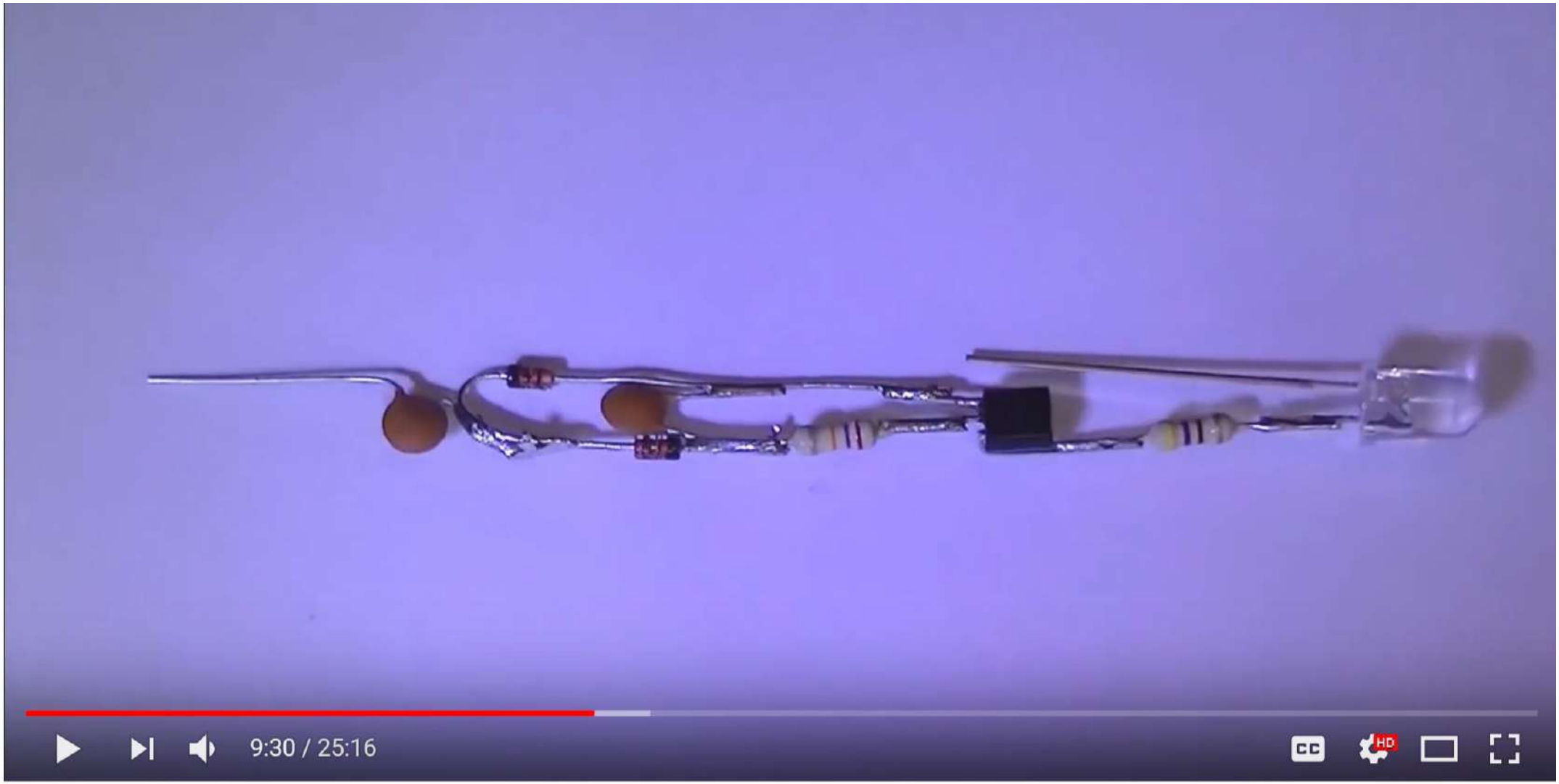
48,706 views

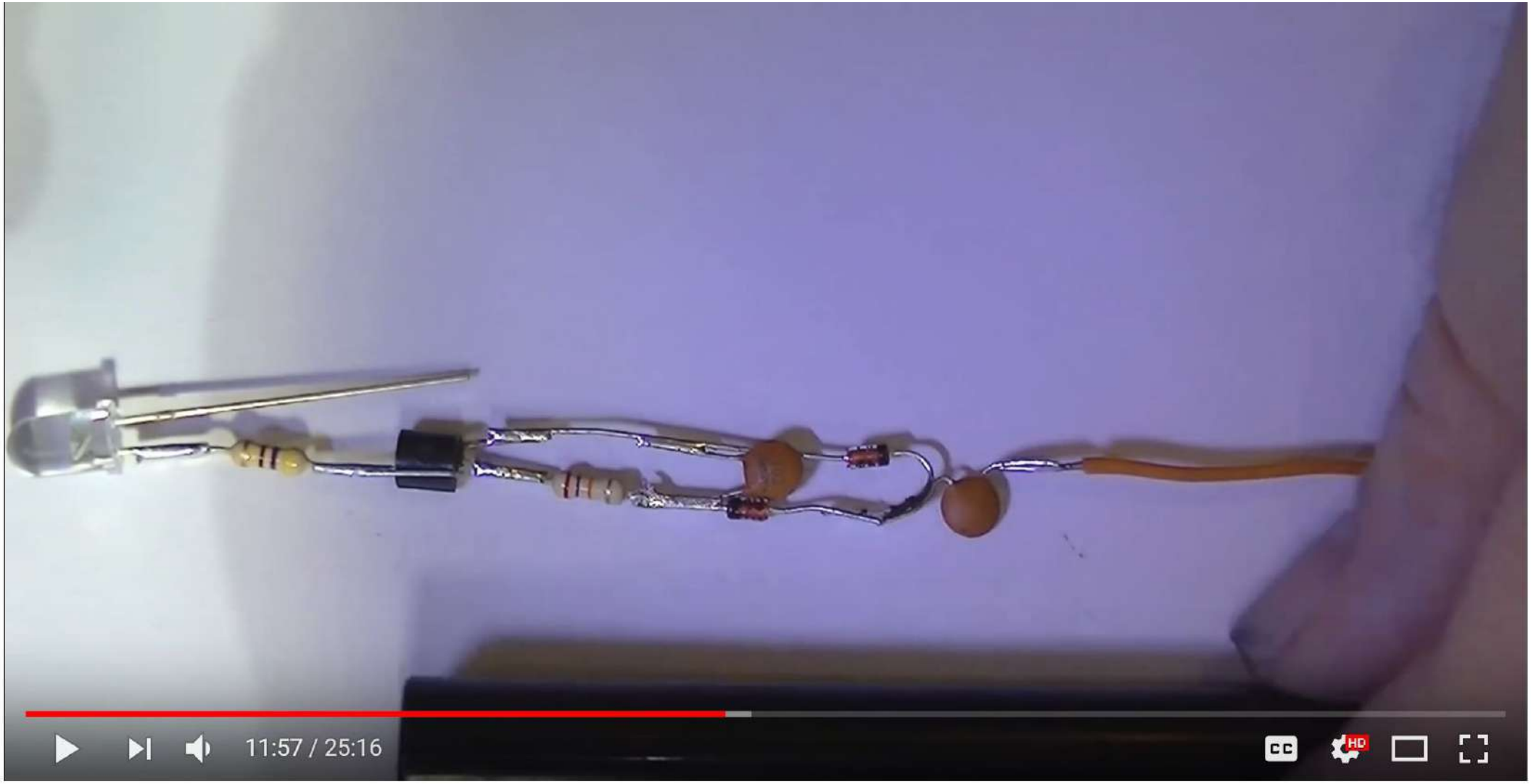
420 18 SHARE


9:11 / 25:16

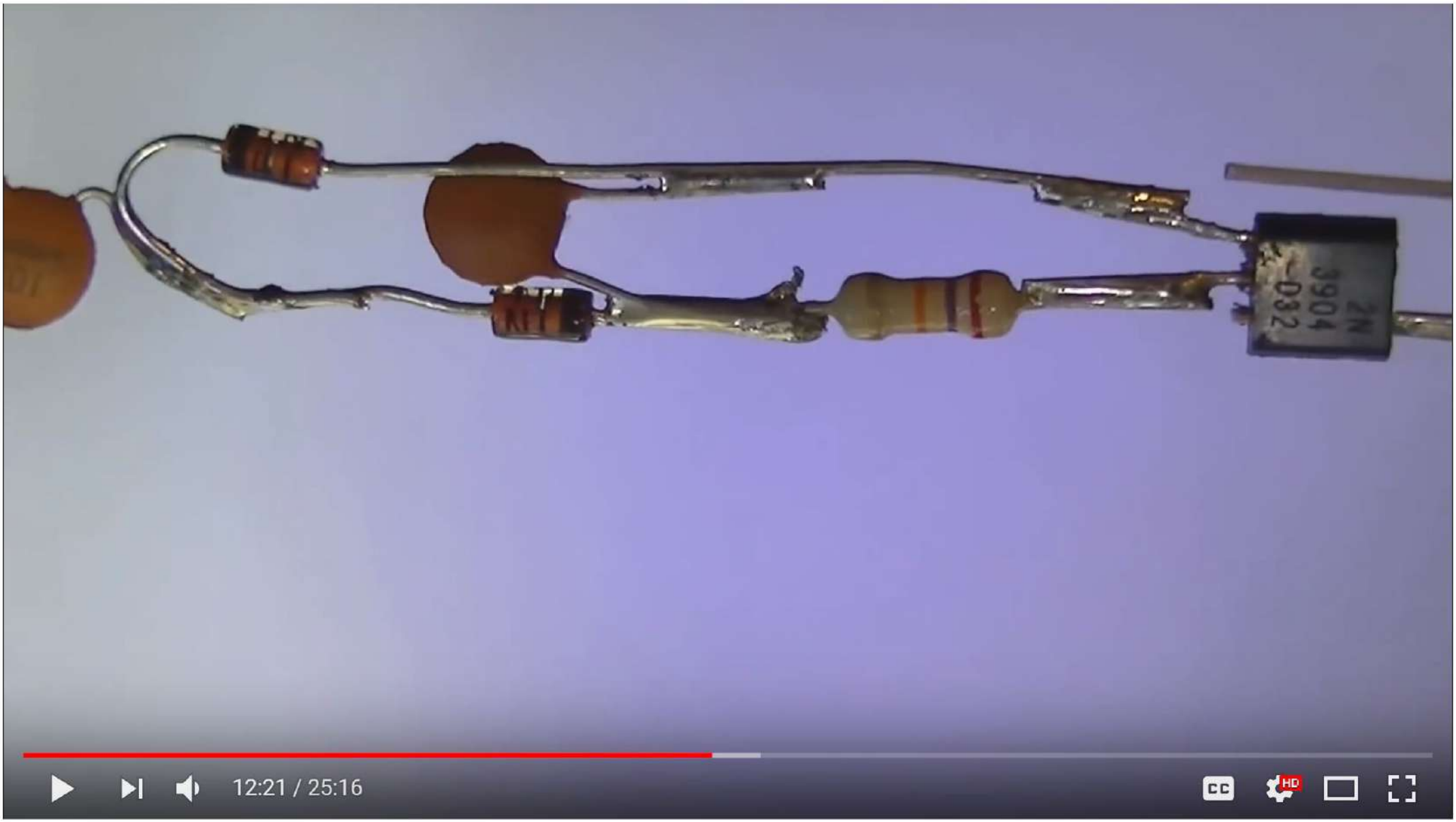


Lets build a RF Pen detector .A good tool for testing small FM transmitters.

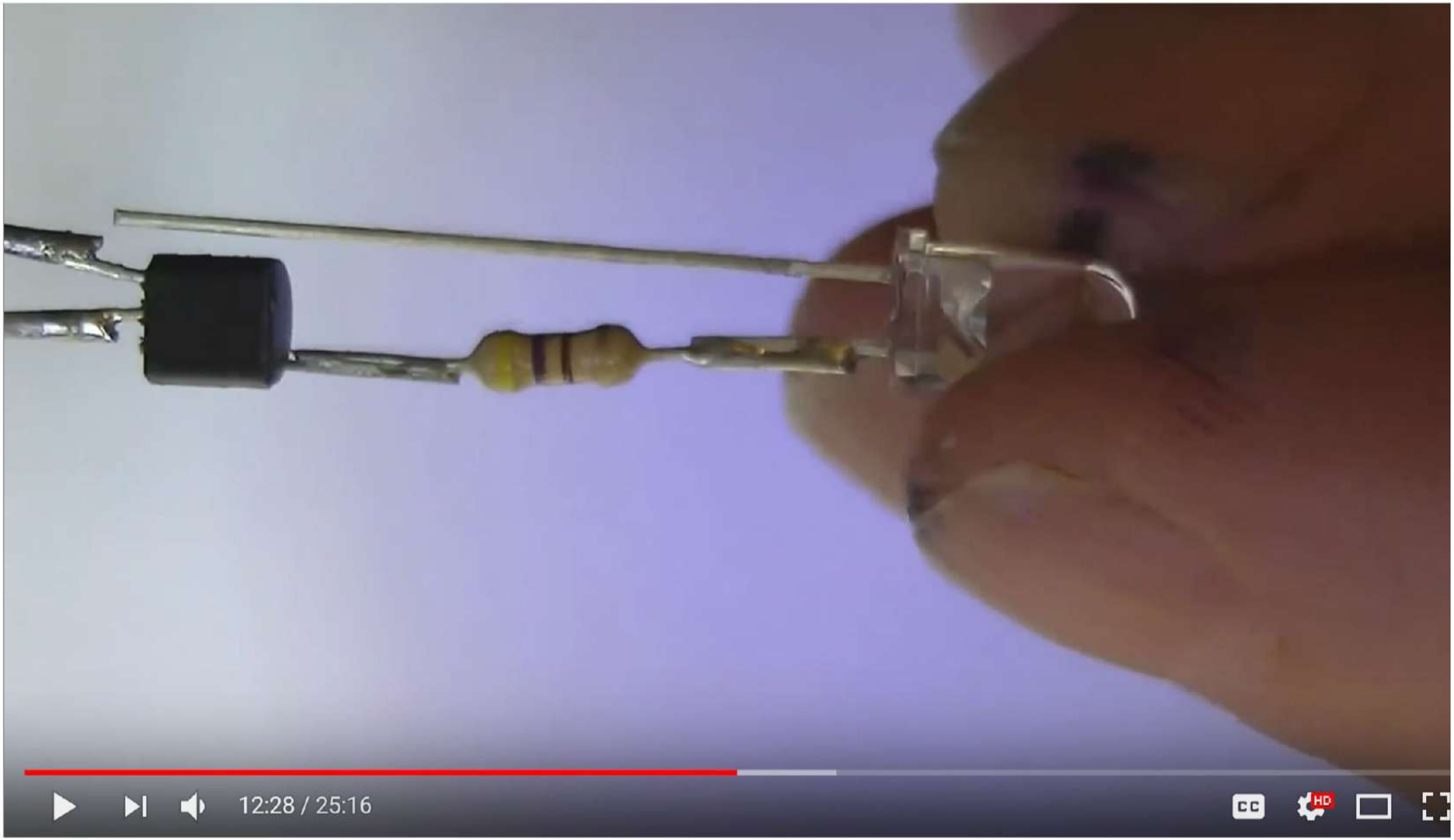

9:30 / 25:16
CC
HD



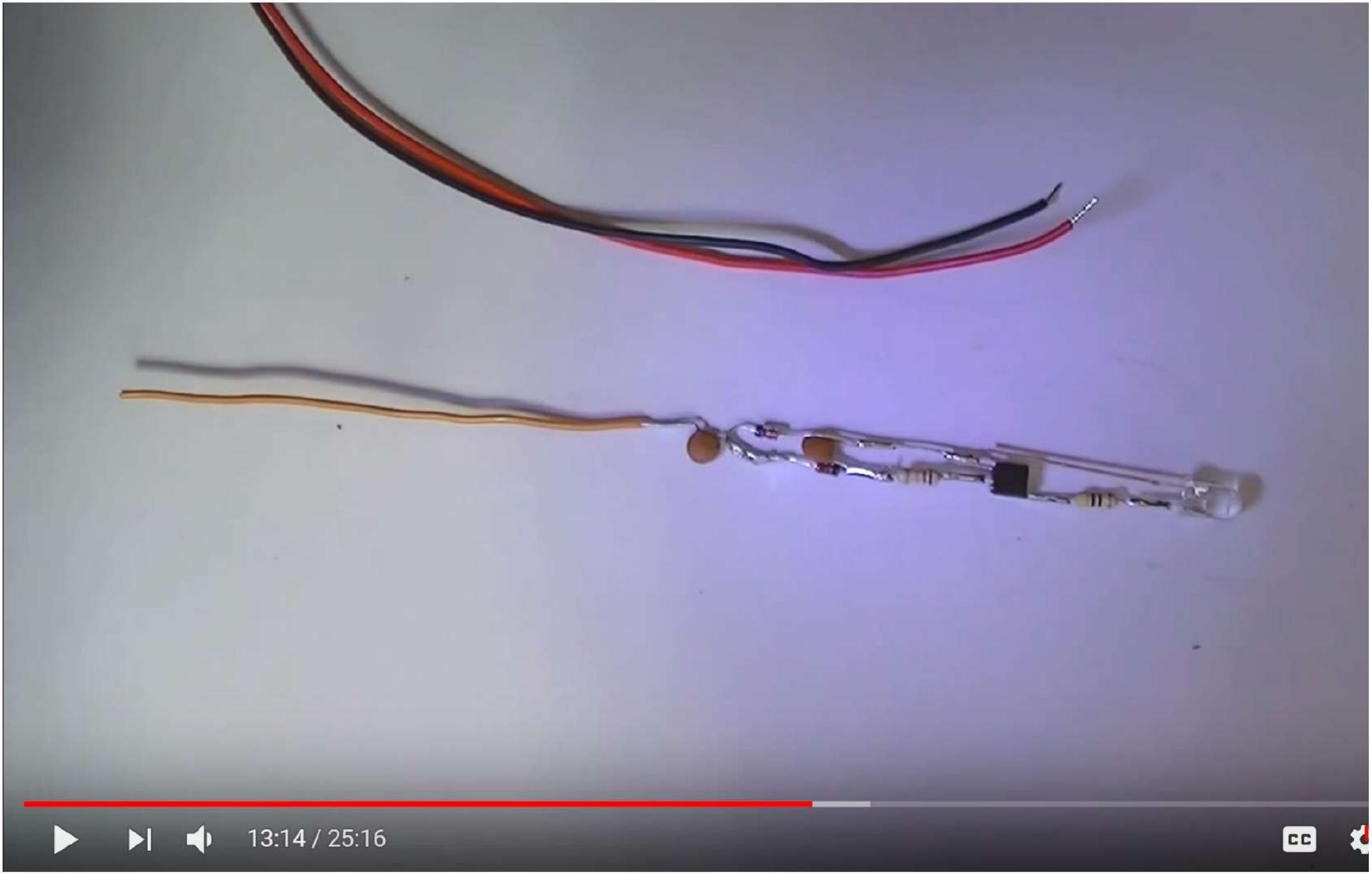
Lets build a RF Pen detector. A good tool for testing small FM transmitters



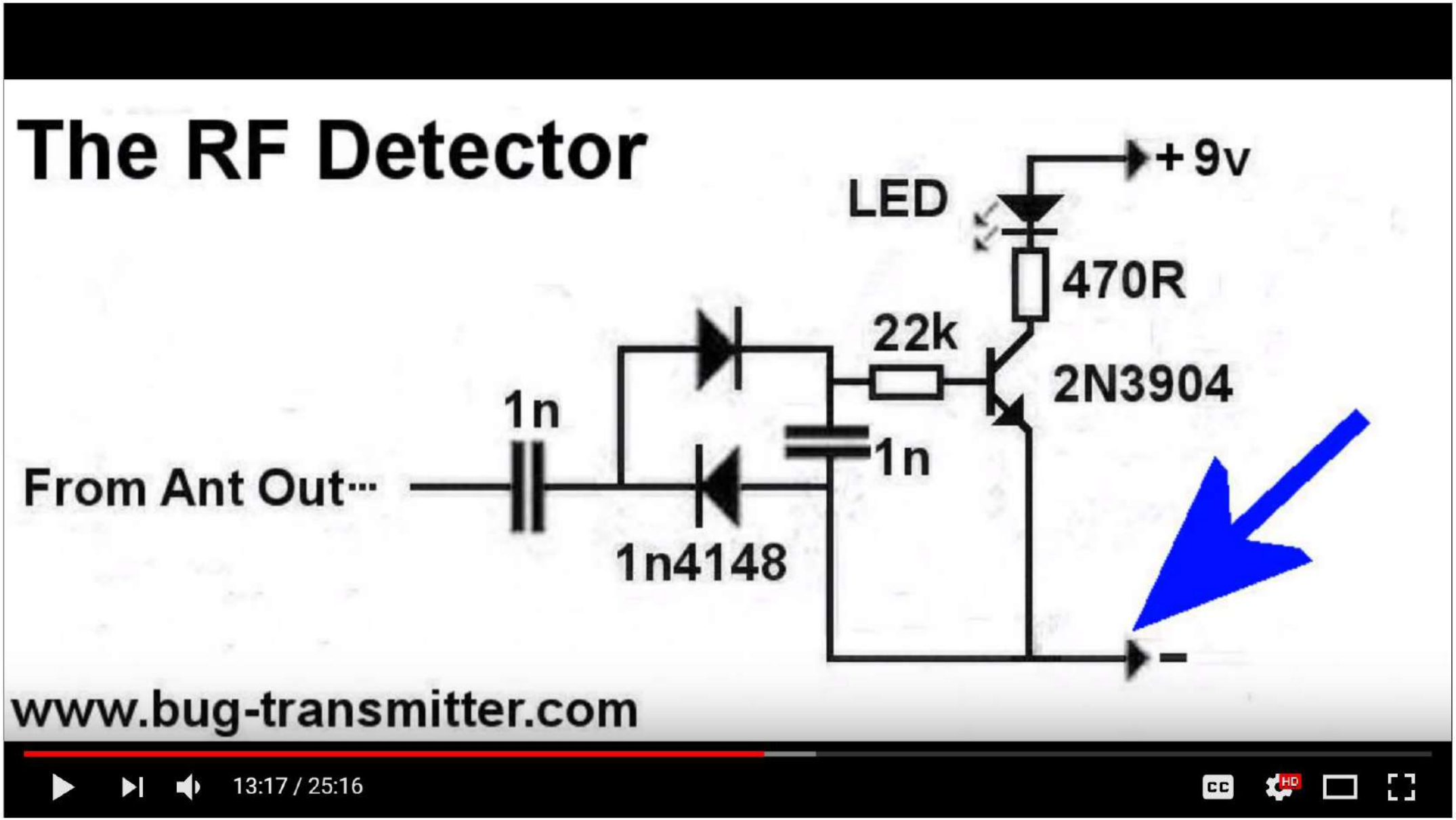
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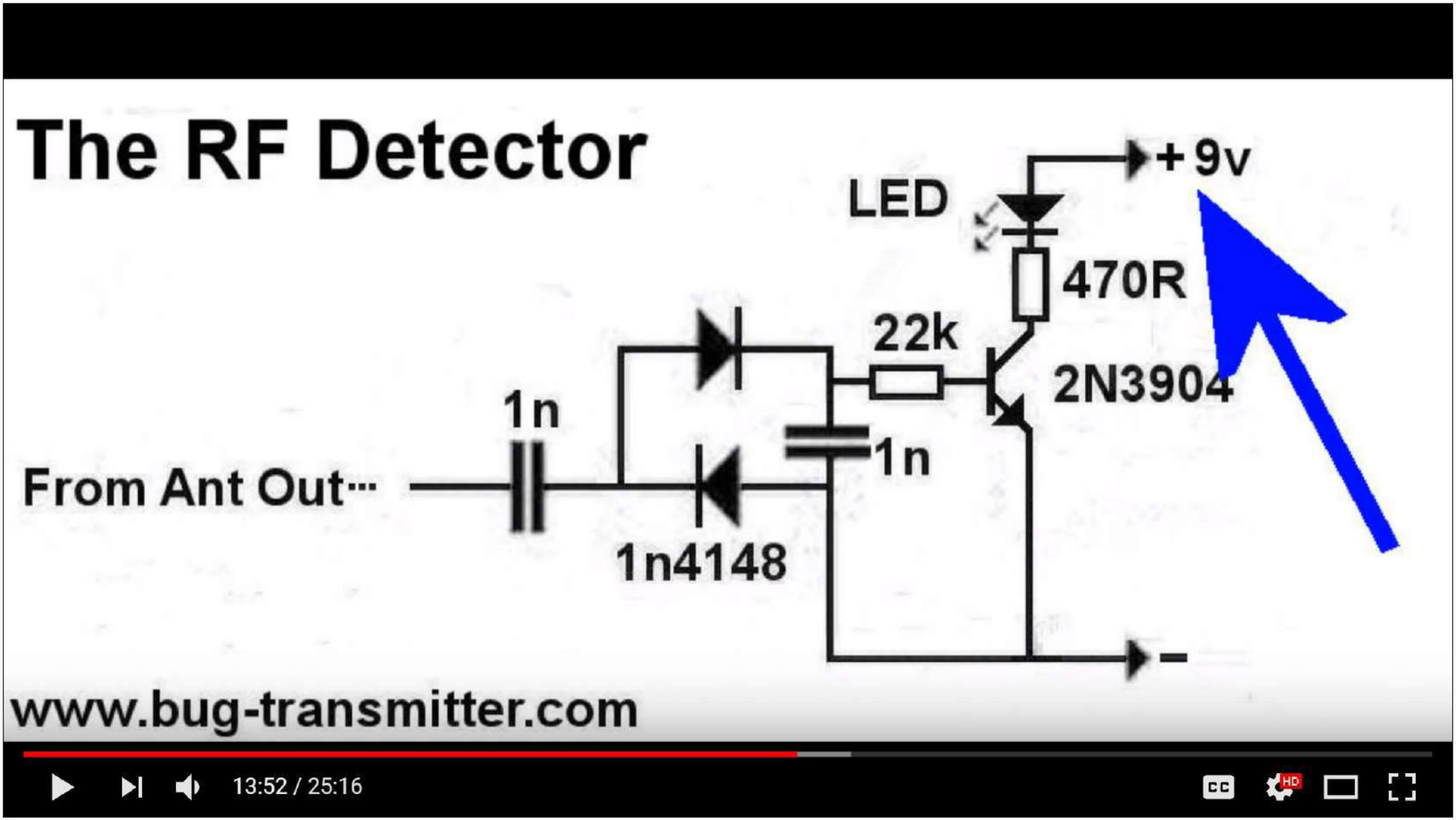


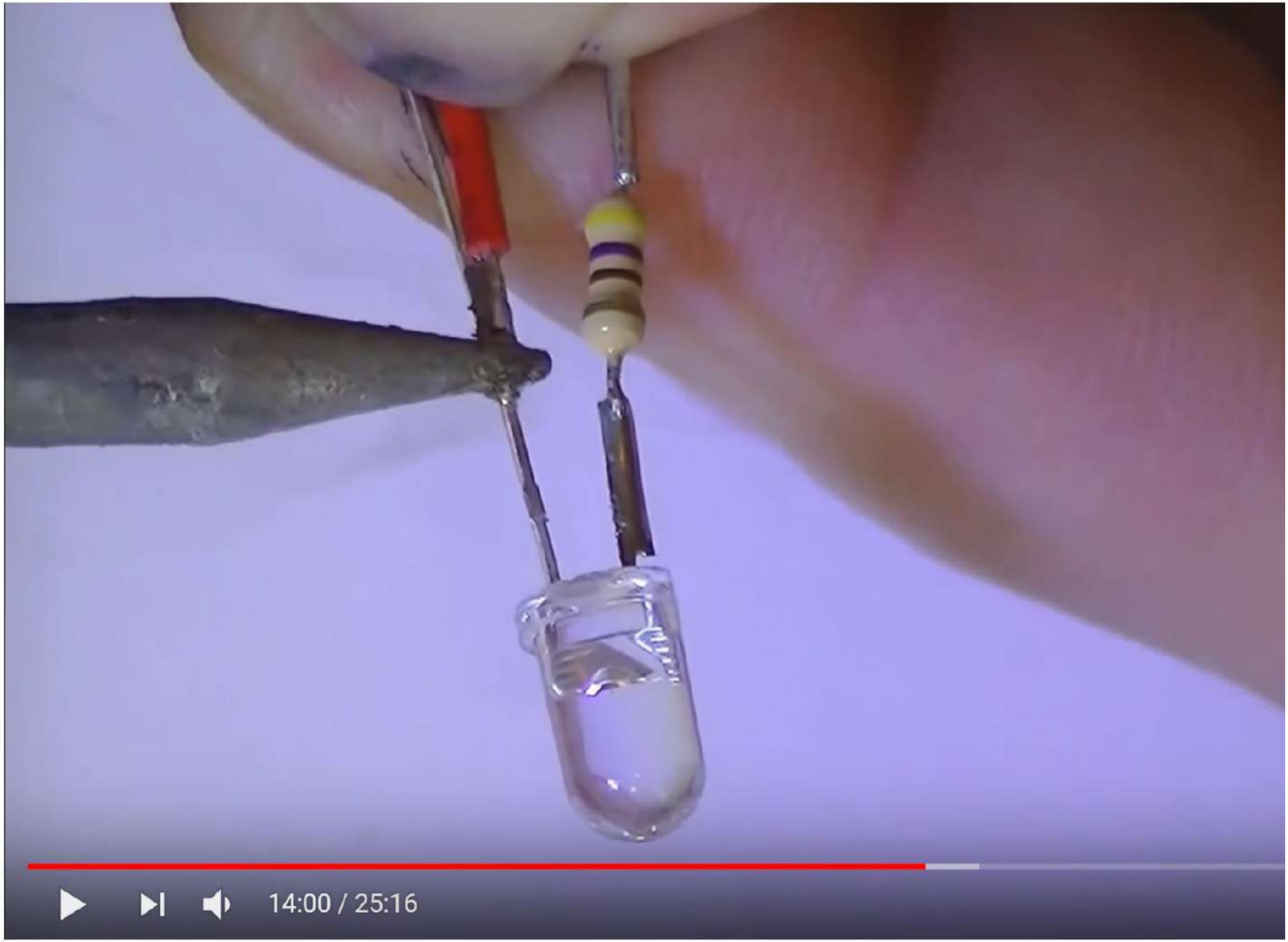
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The RF Detector
+9v
LED
470R
22k
2N3904
1n
1n
From Ant Out···
1n4148
-
www.bug-transmitter.com
13:17 / 25:16

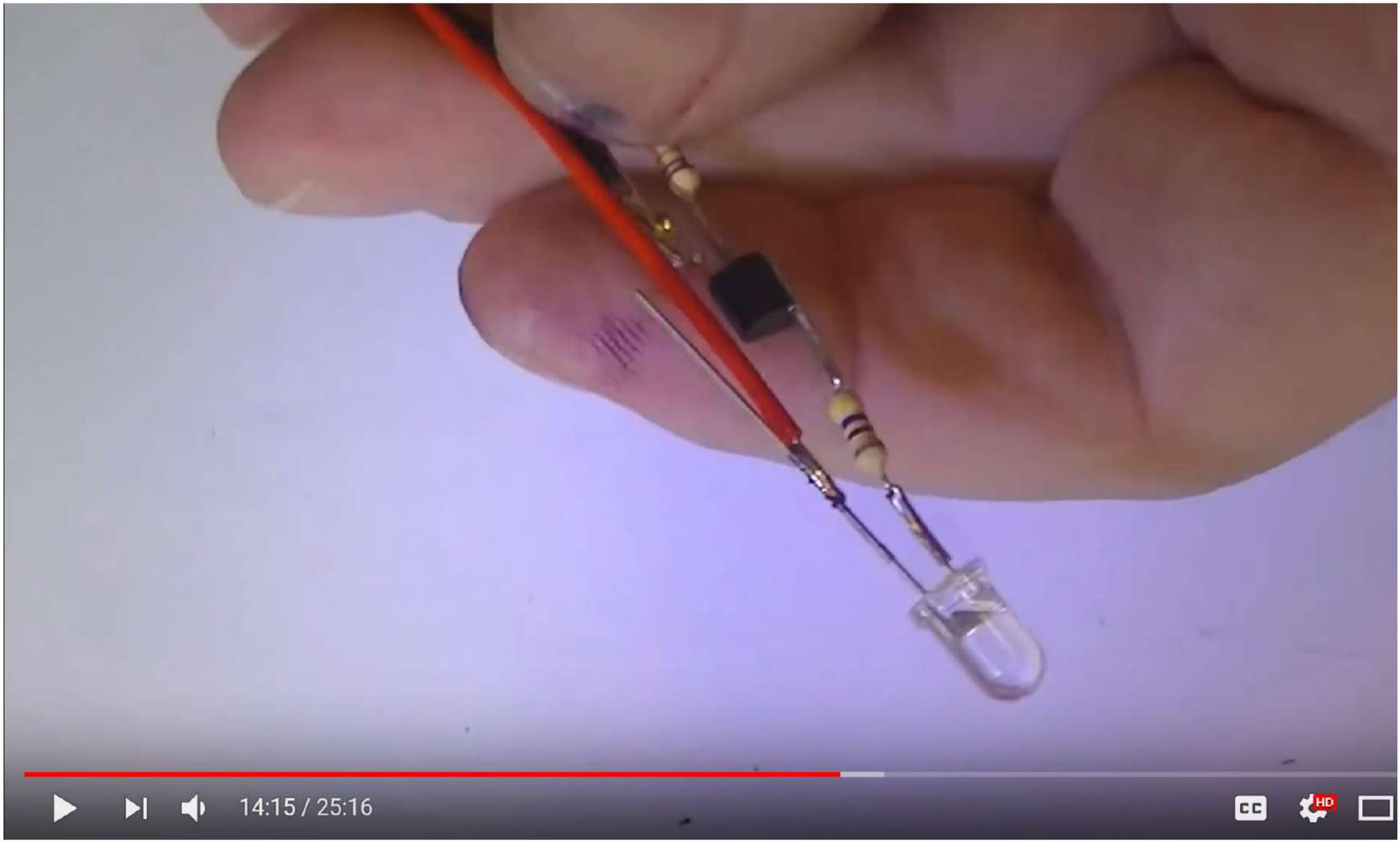


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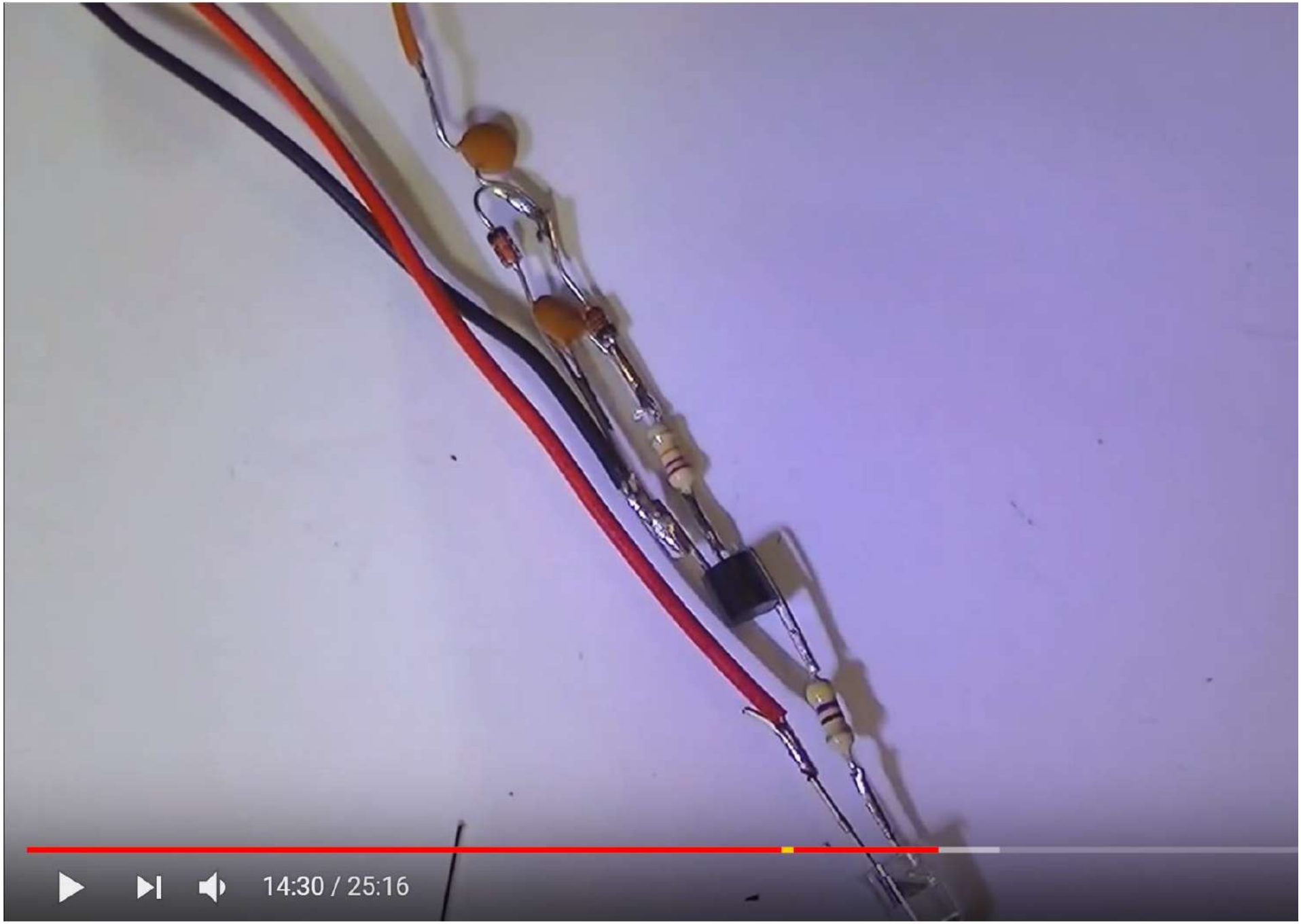

The RF Detector
+ 9v
LED
470R
22k
2N3904
1n
1n
From Ant Out···
1n4148
–
www.bug-transmitter.com
13:52 / 25:16



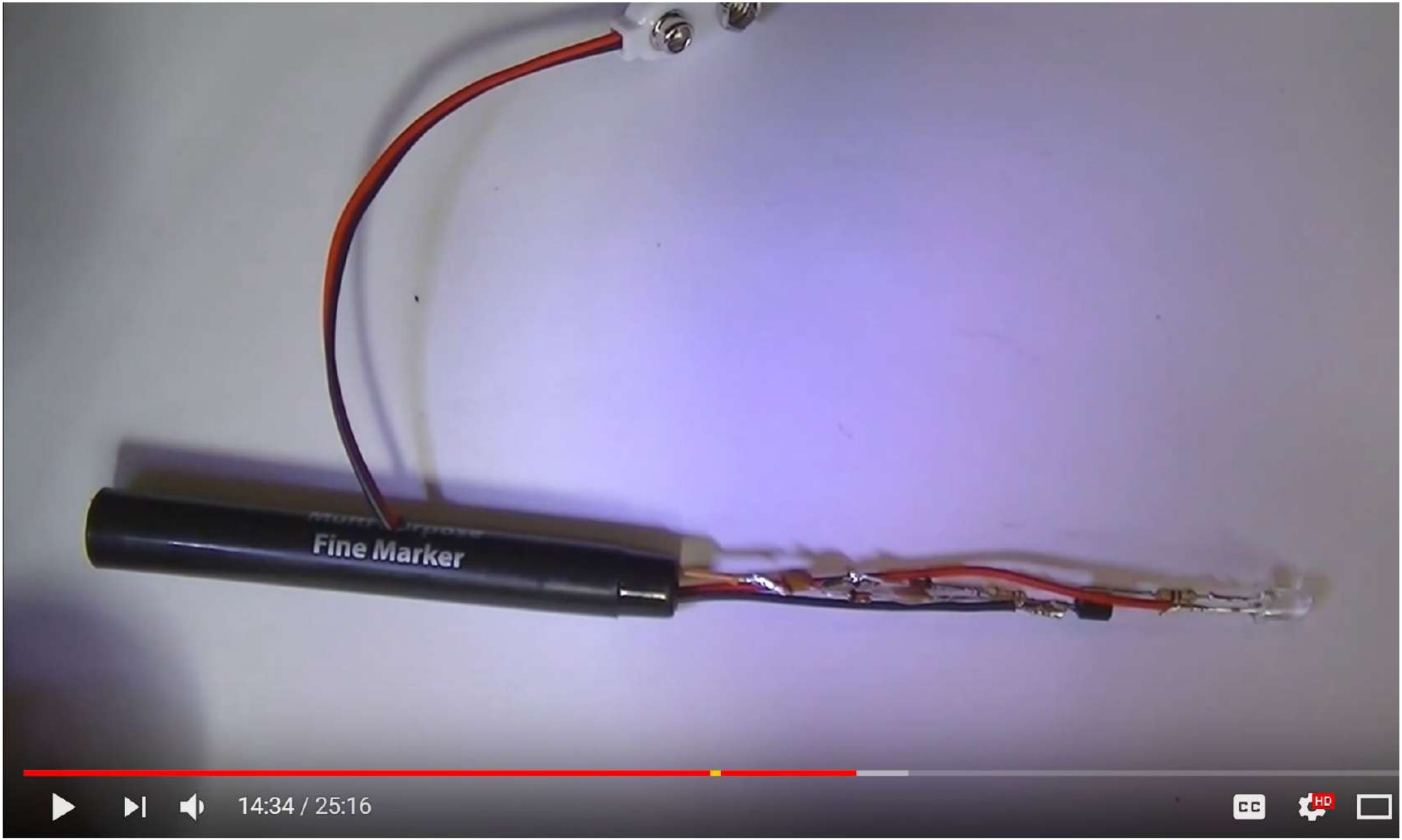
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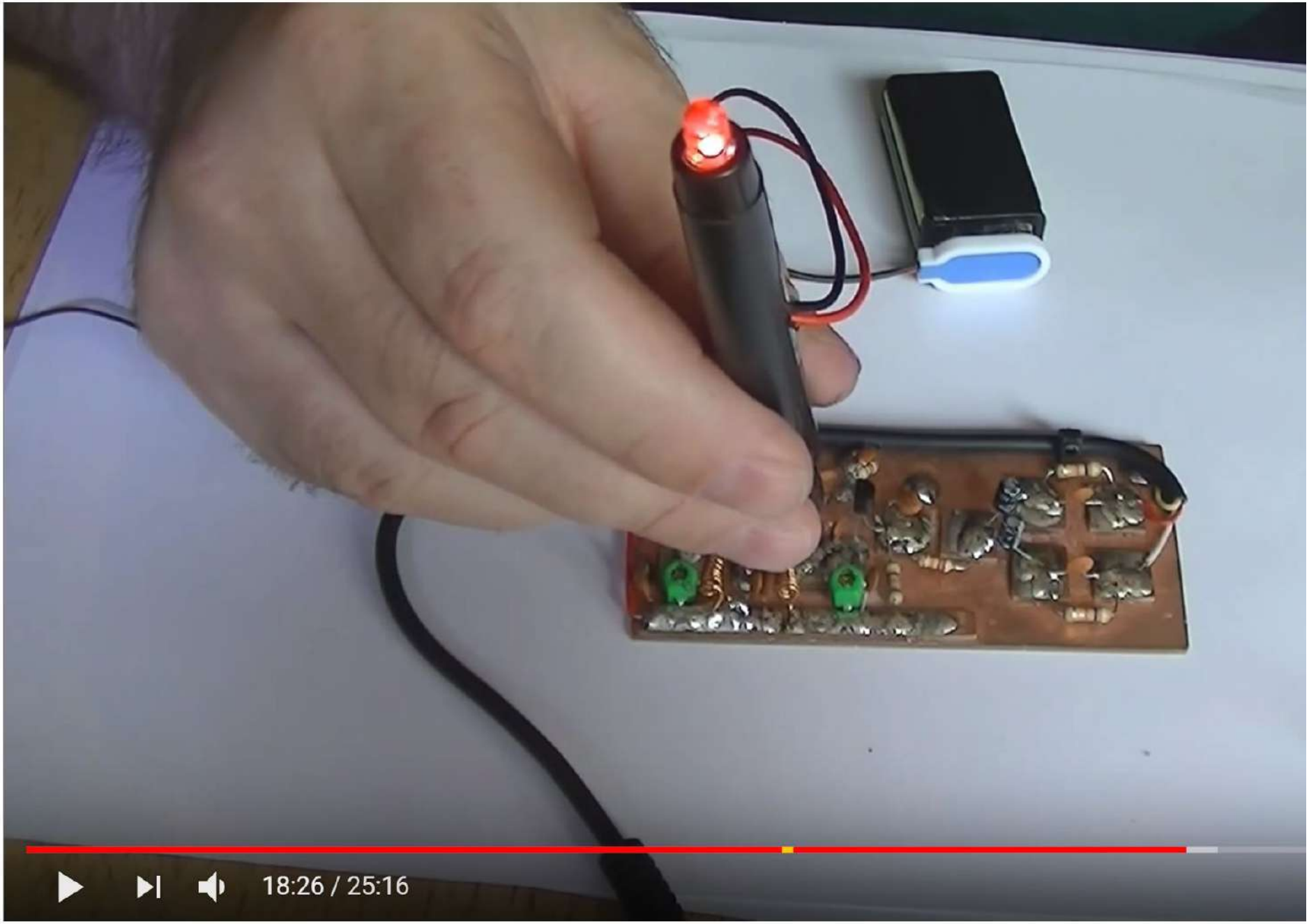
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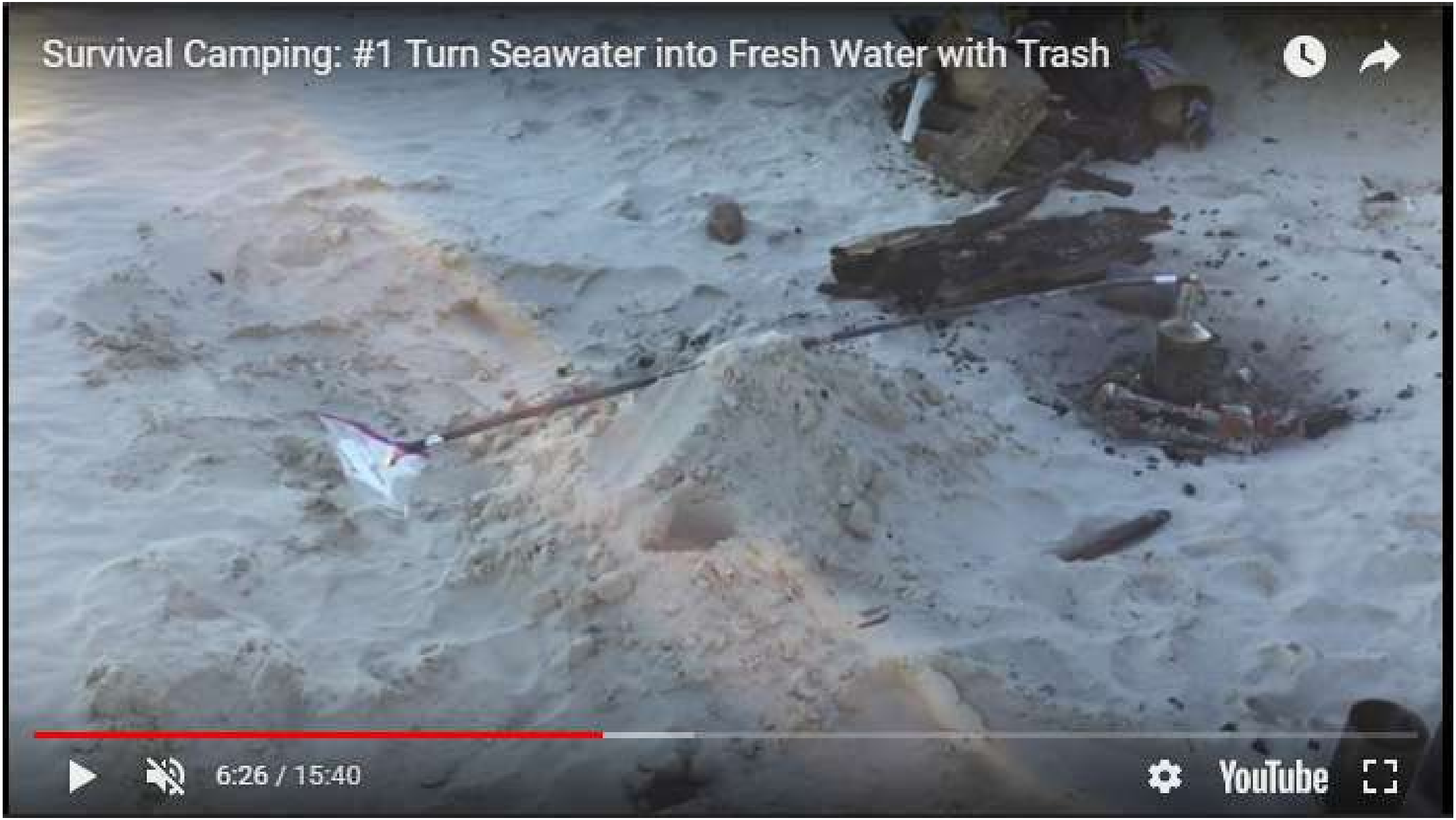
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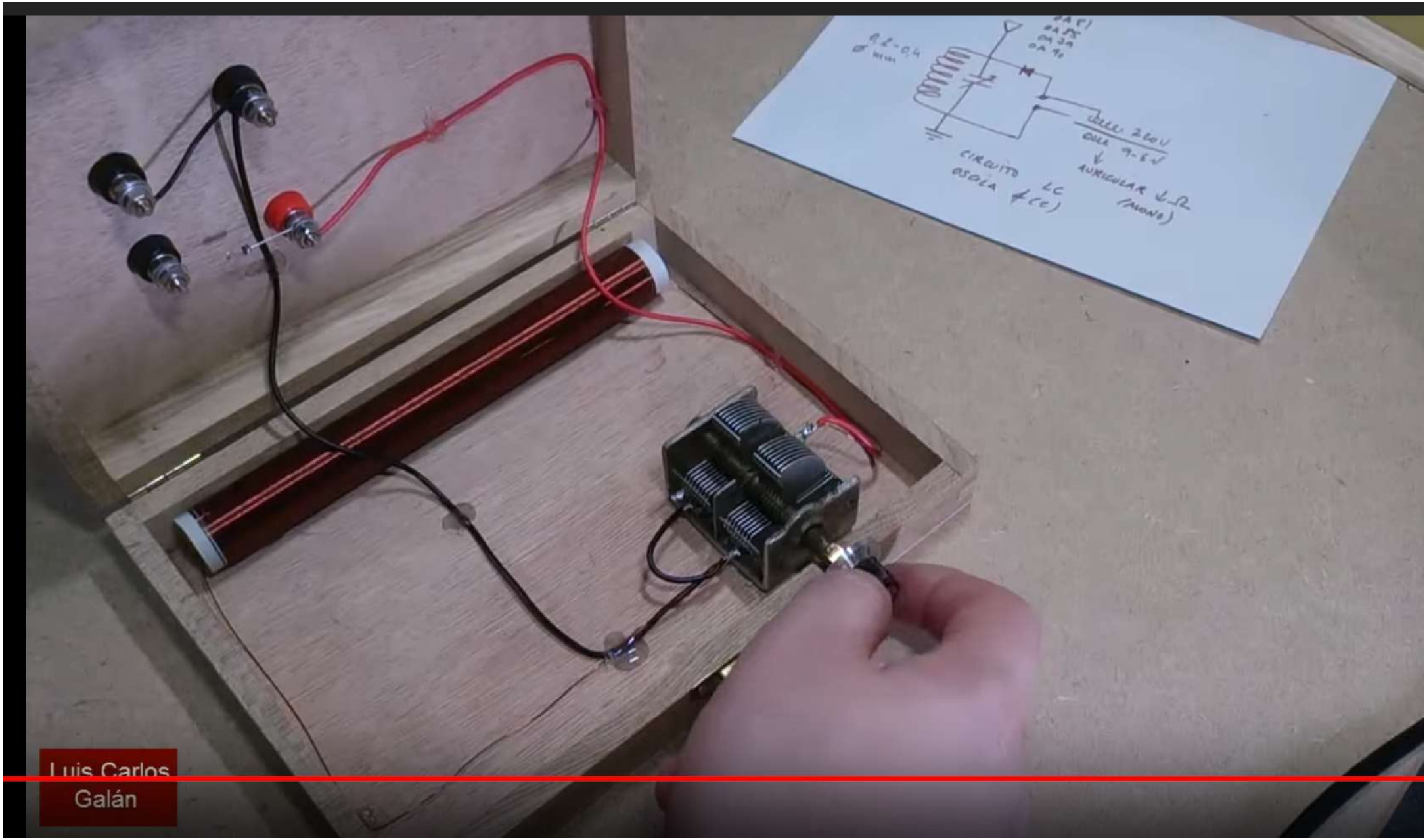

Survival Camping: #1 Turn Seawater into Fresh Water with Trash
5:30 / 15:40
YouTube


Survival Camping: #1 Turn Seawater into Fresh Water with Trash
5:37 / 15:40
YouTube

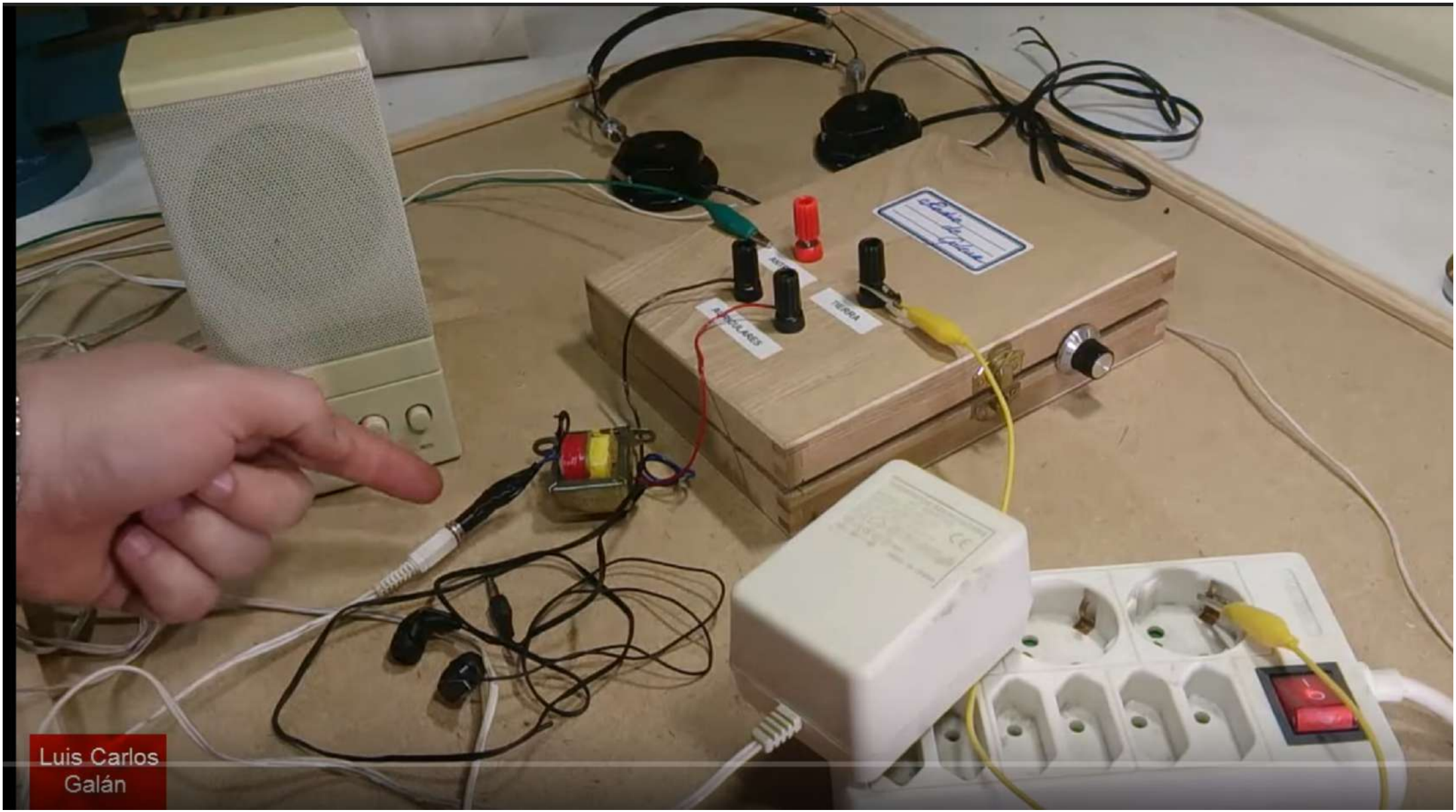

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YouTube

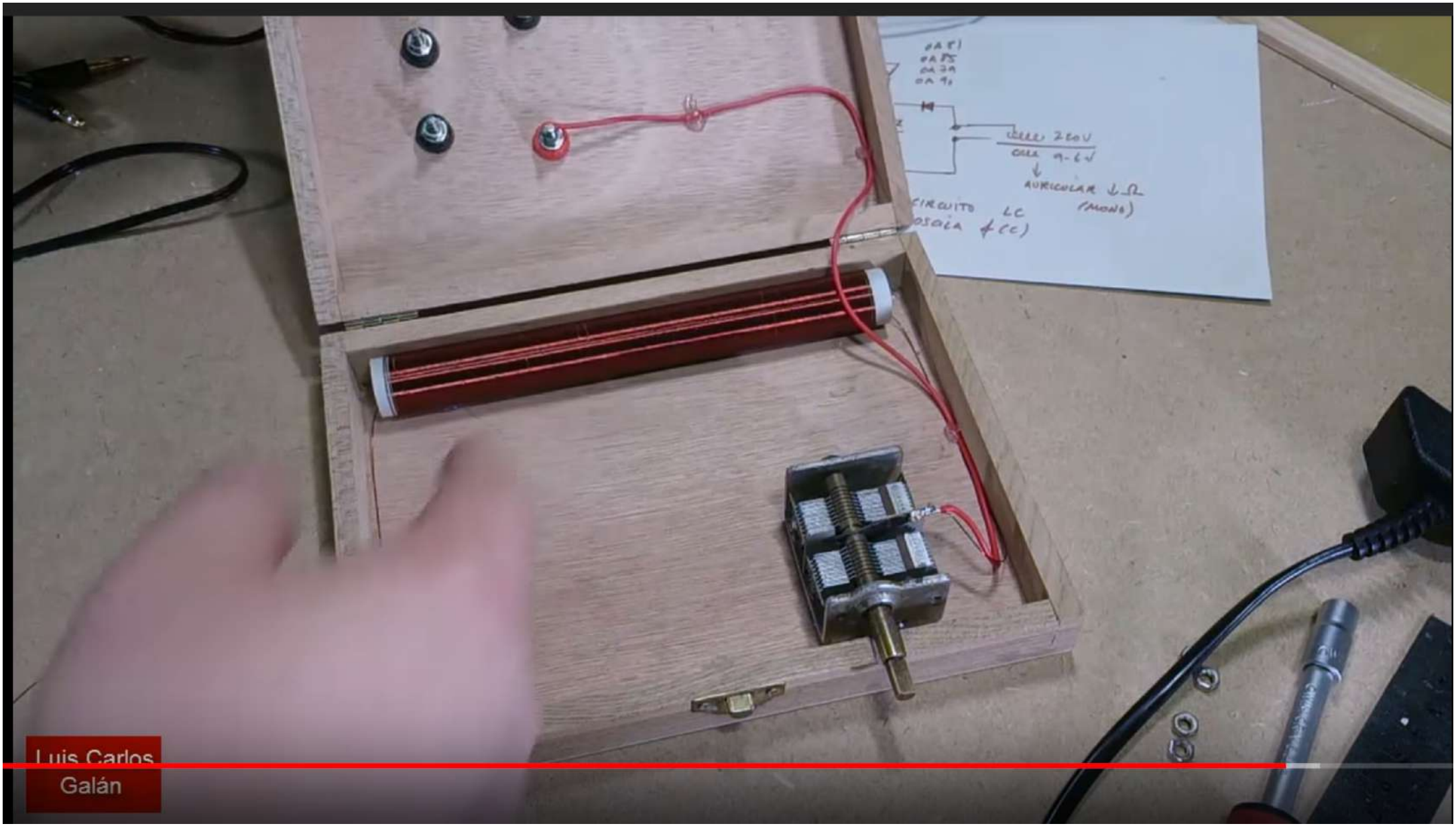

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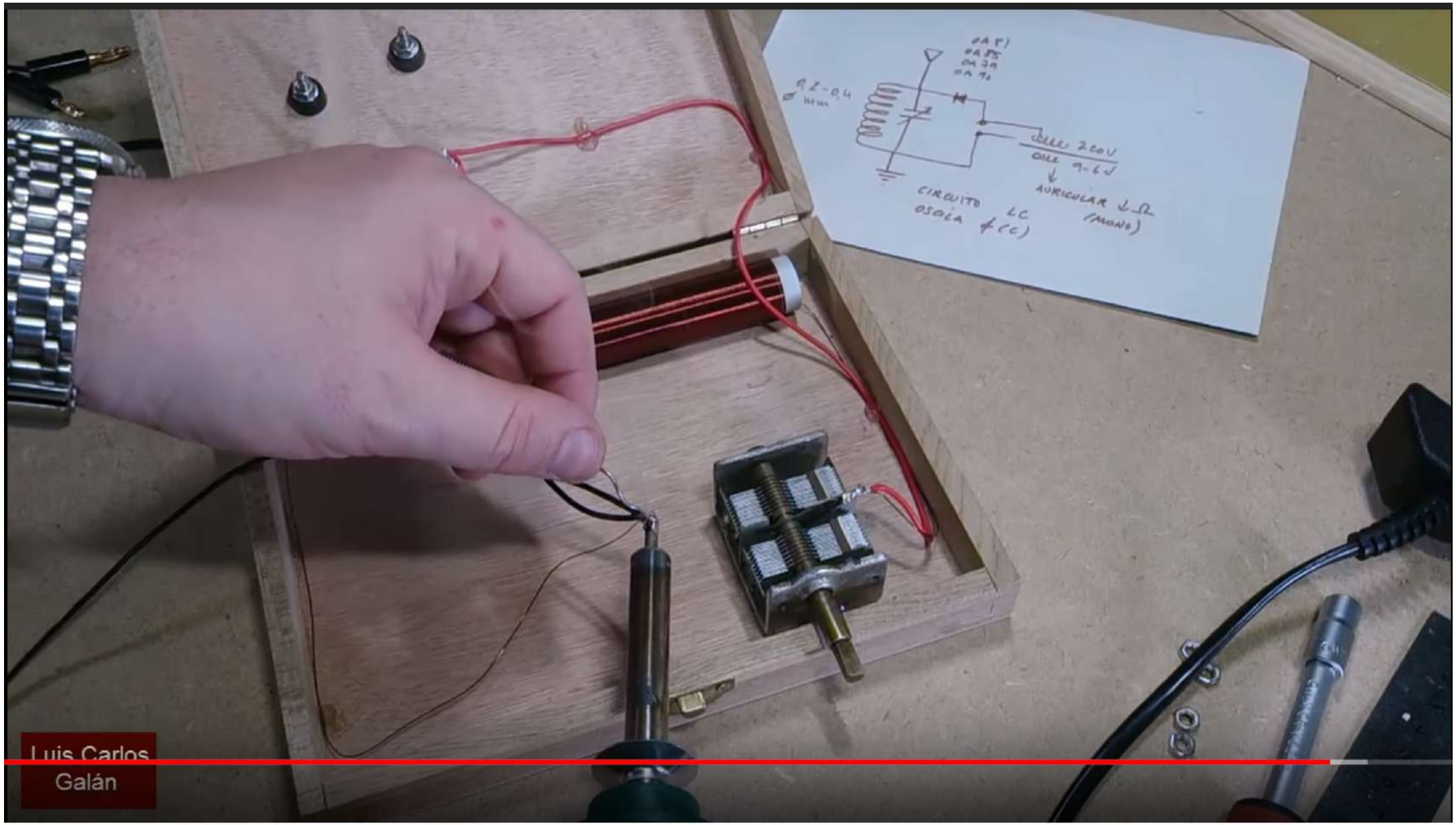

Luis Carlos
Galán



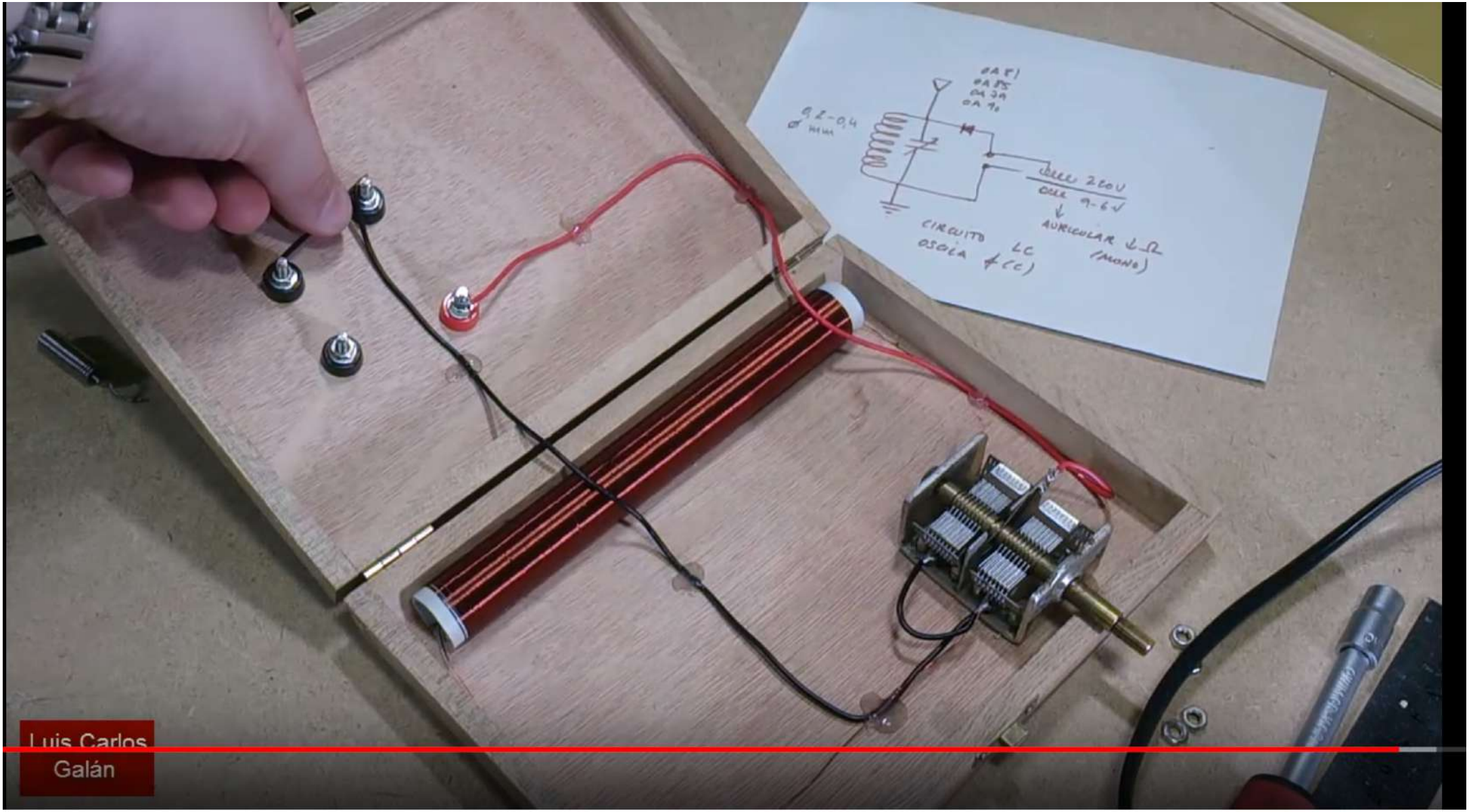
Luis Carlos
Galán


TIERRA
Luis Carlos
Galán

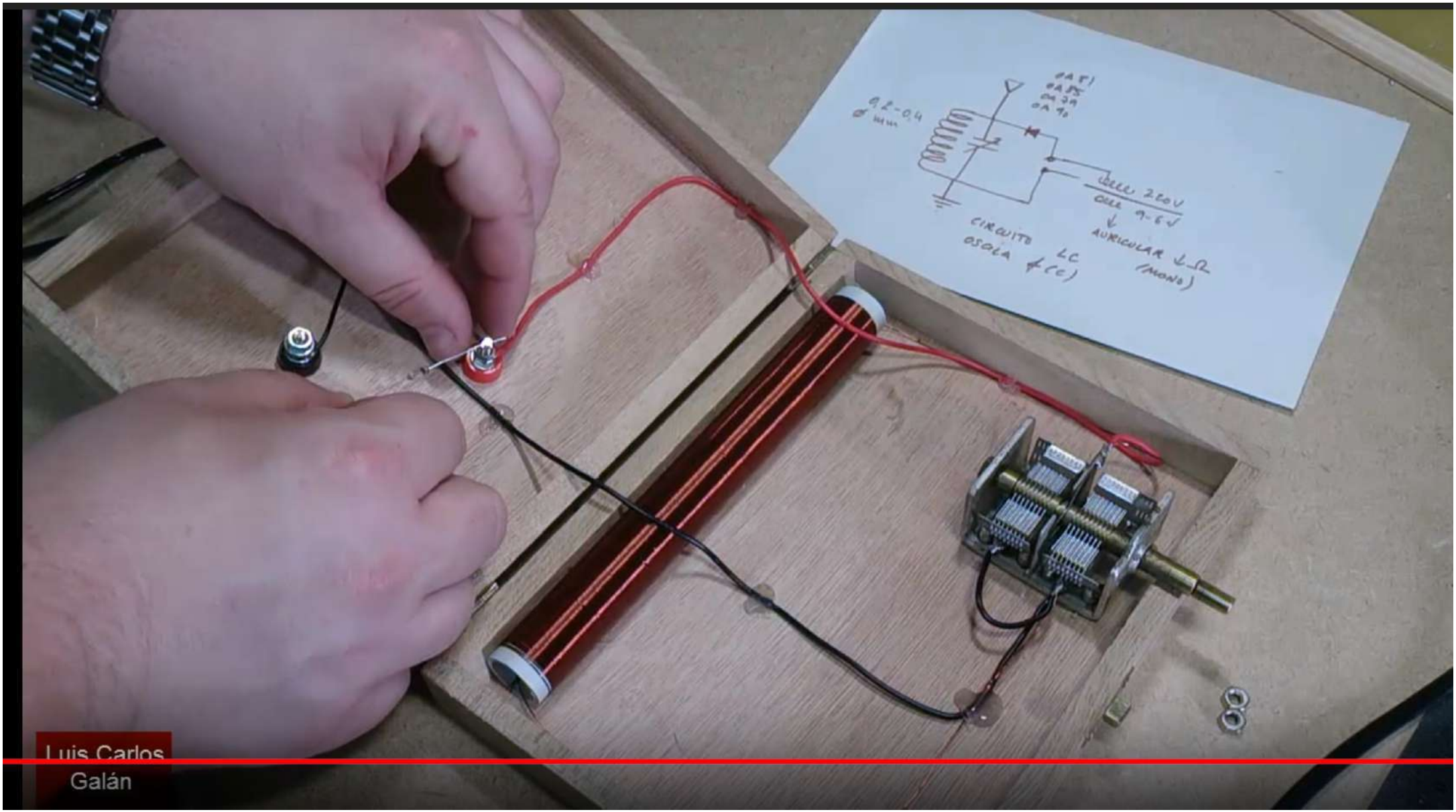

Luis Carlos
Galán



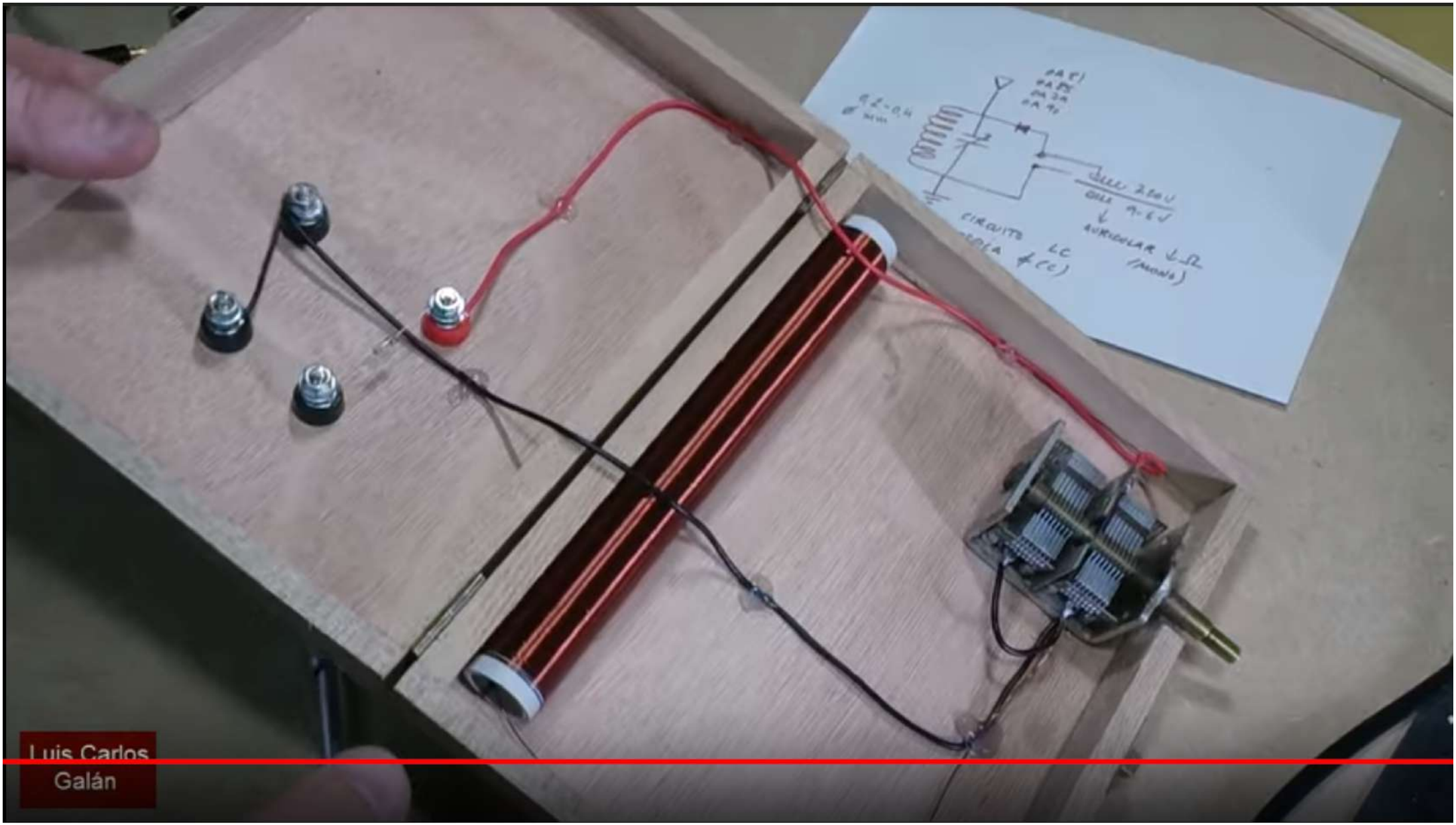
Luis Carlos Galán

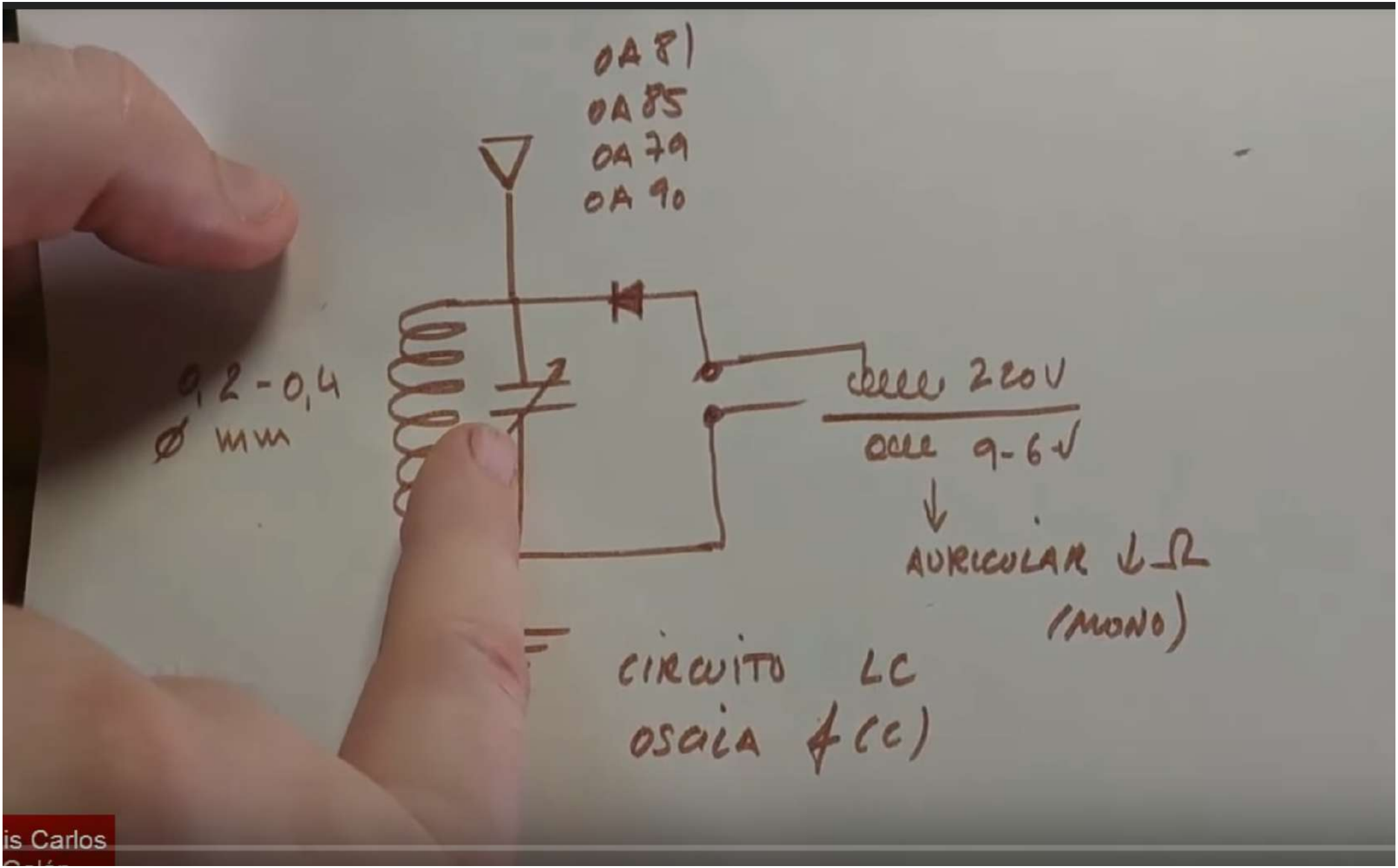


Luis Carlos
Galán

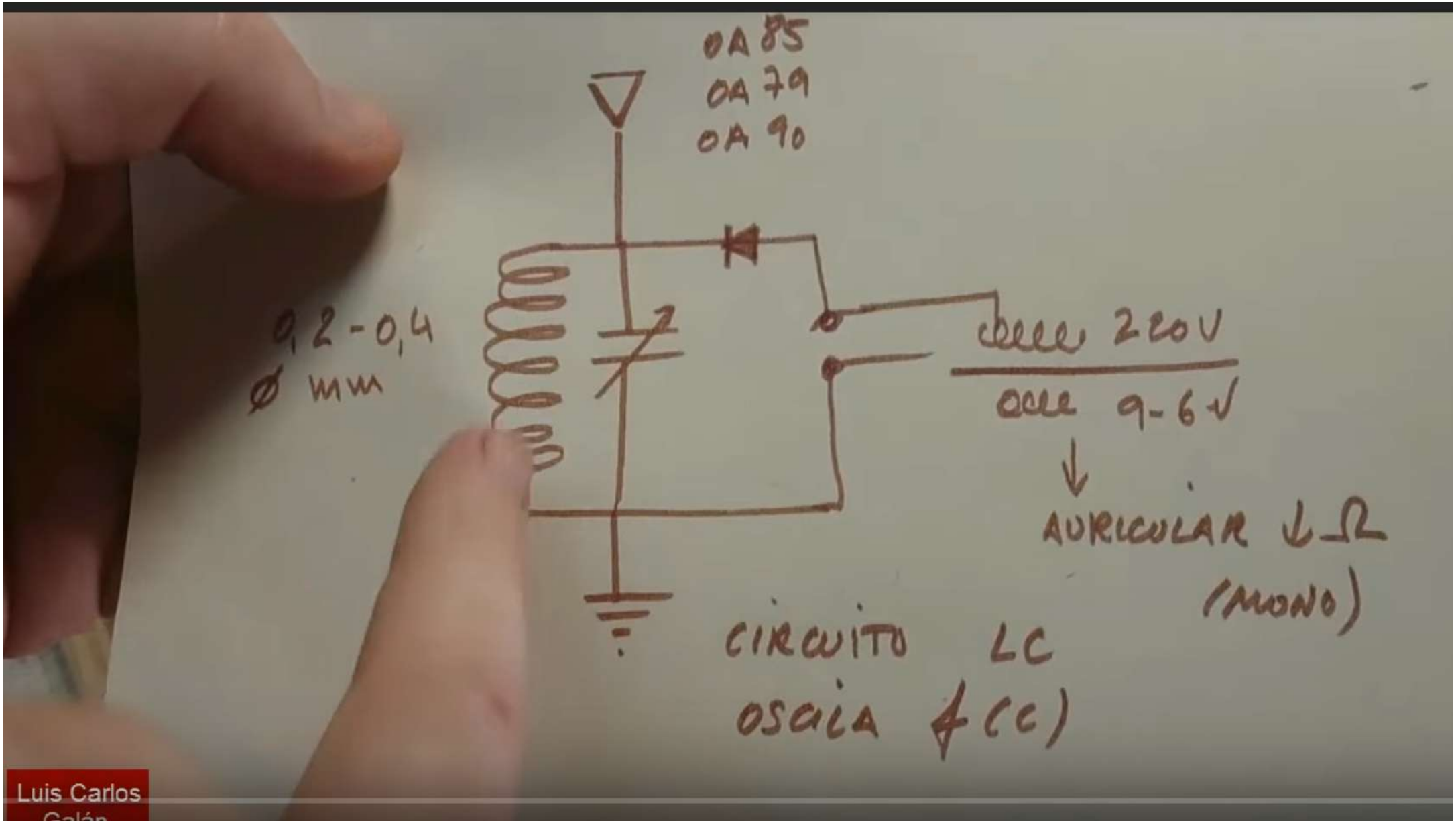


Luis Carlos
Galán

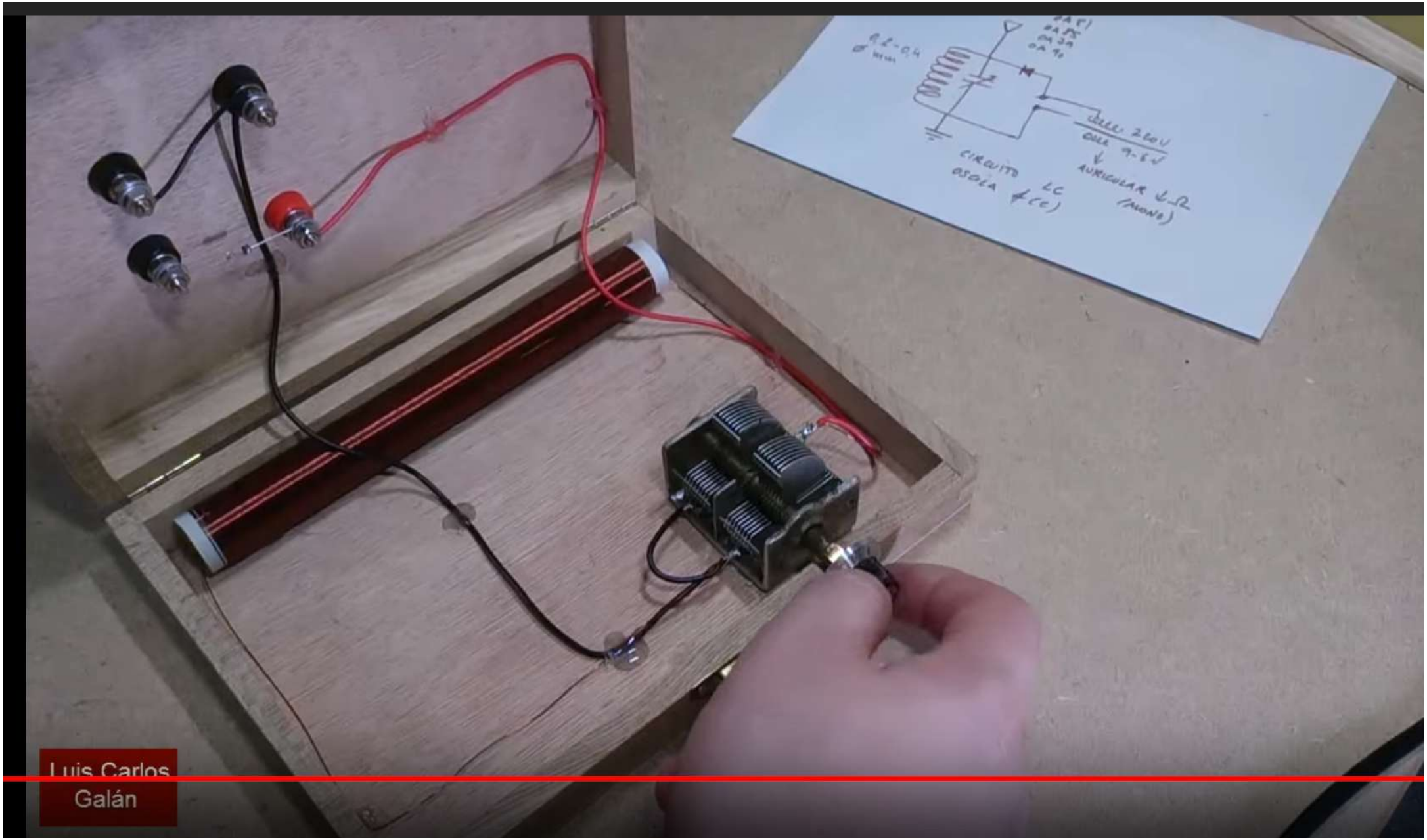

Luis Carlos
Galán


OA 81
OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
cable 220V
cable 9-6V
AURICULAR 4Ω
(MONO)
CIRCUITO LC
OSCILA (CC)

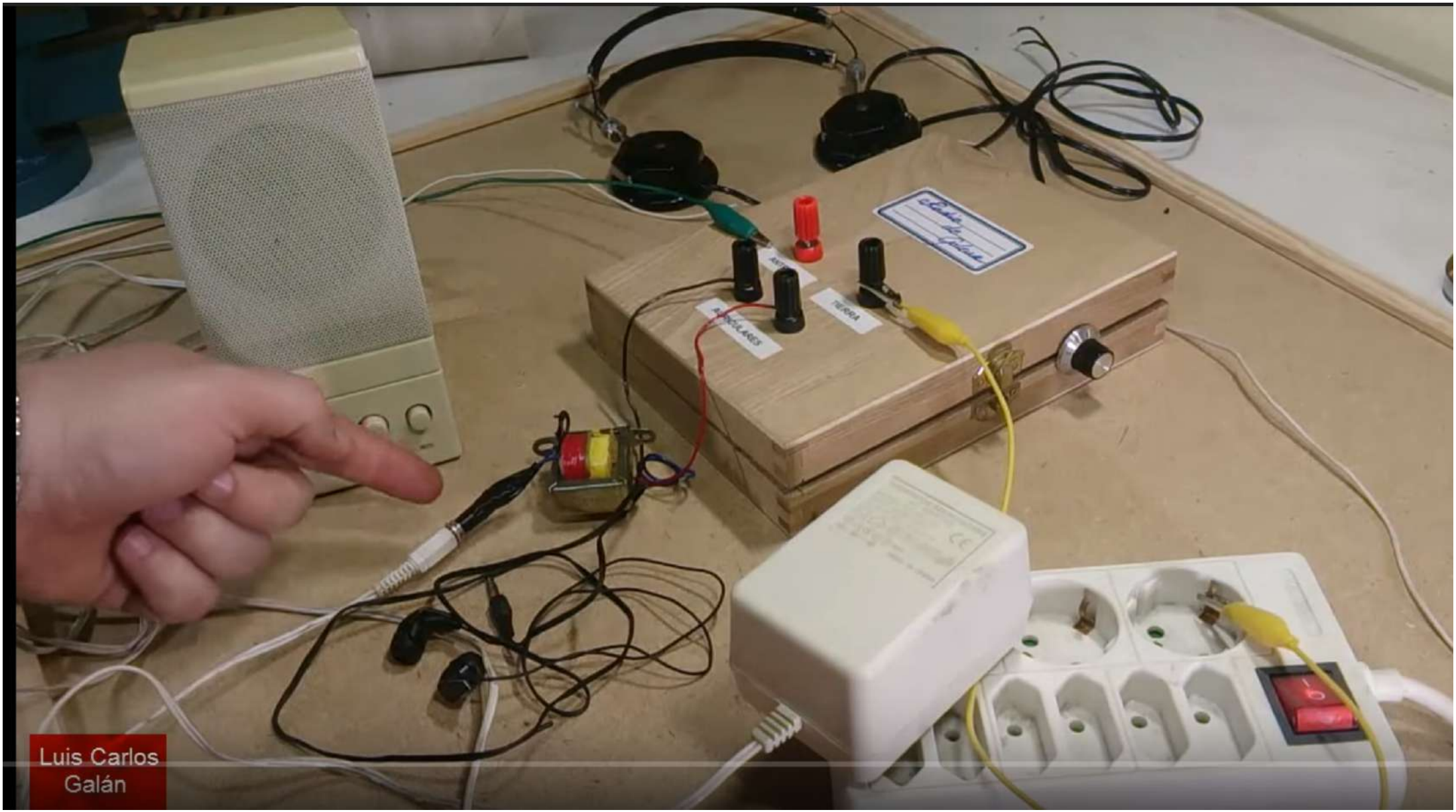

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Galán

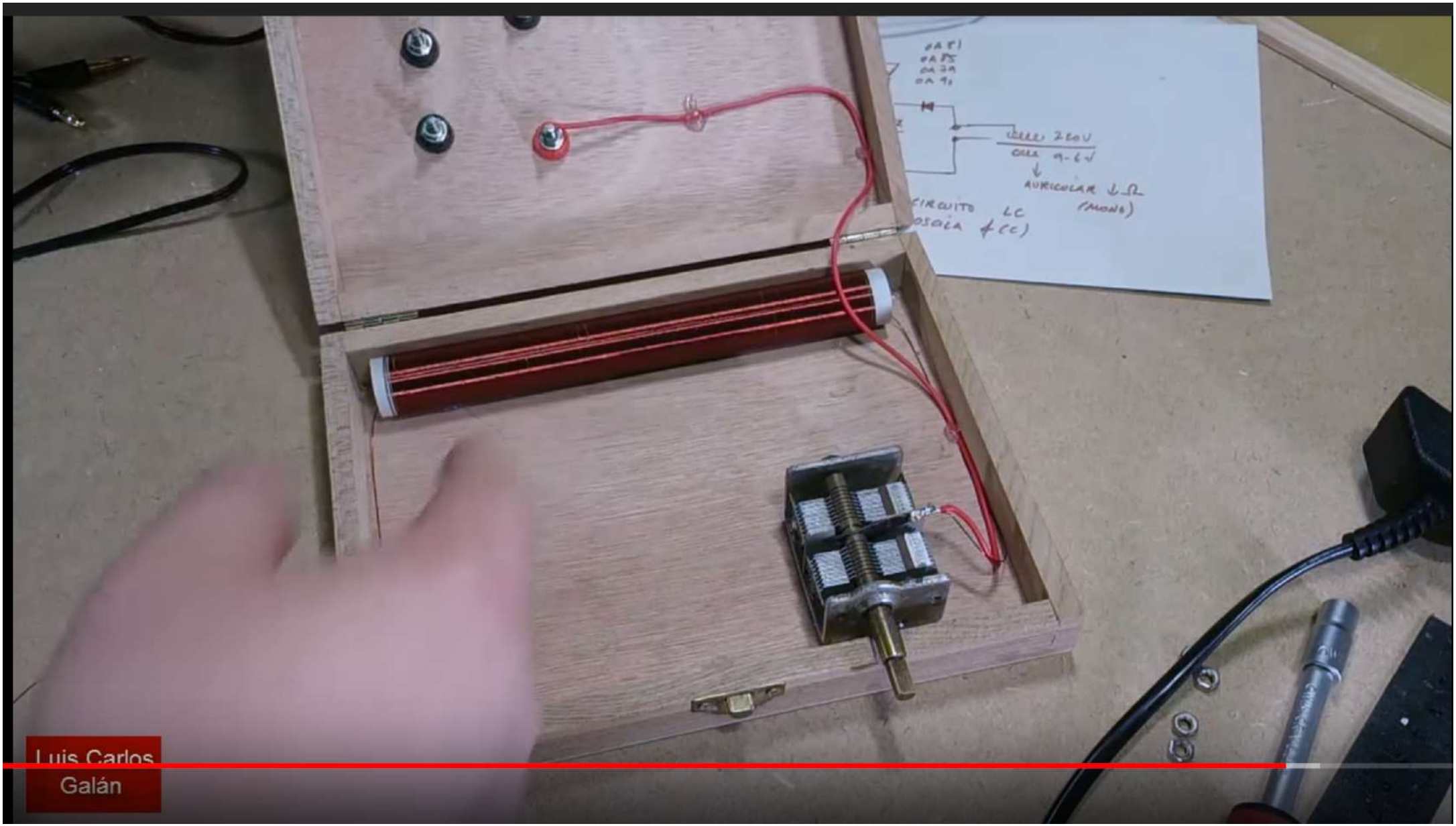

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OA 79
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0,2 - 0,4
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AURICULAR
(MONO)
CIRCUITO LC
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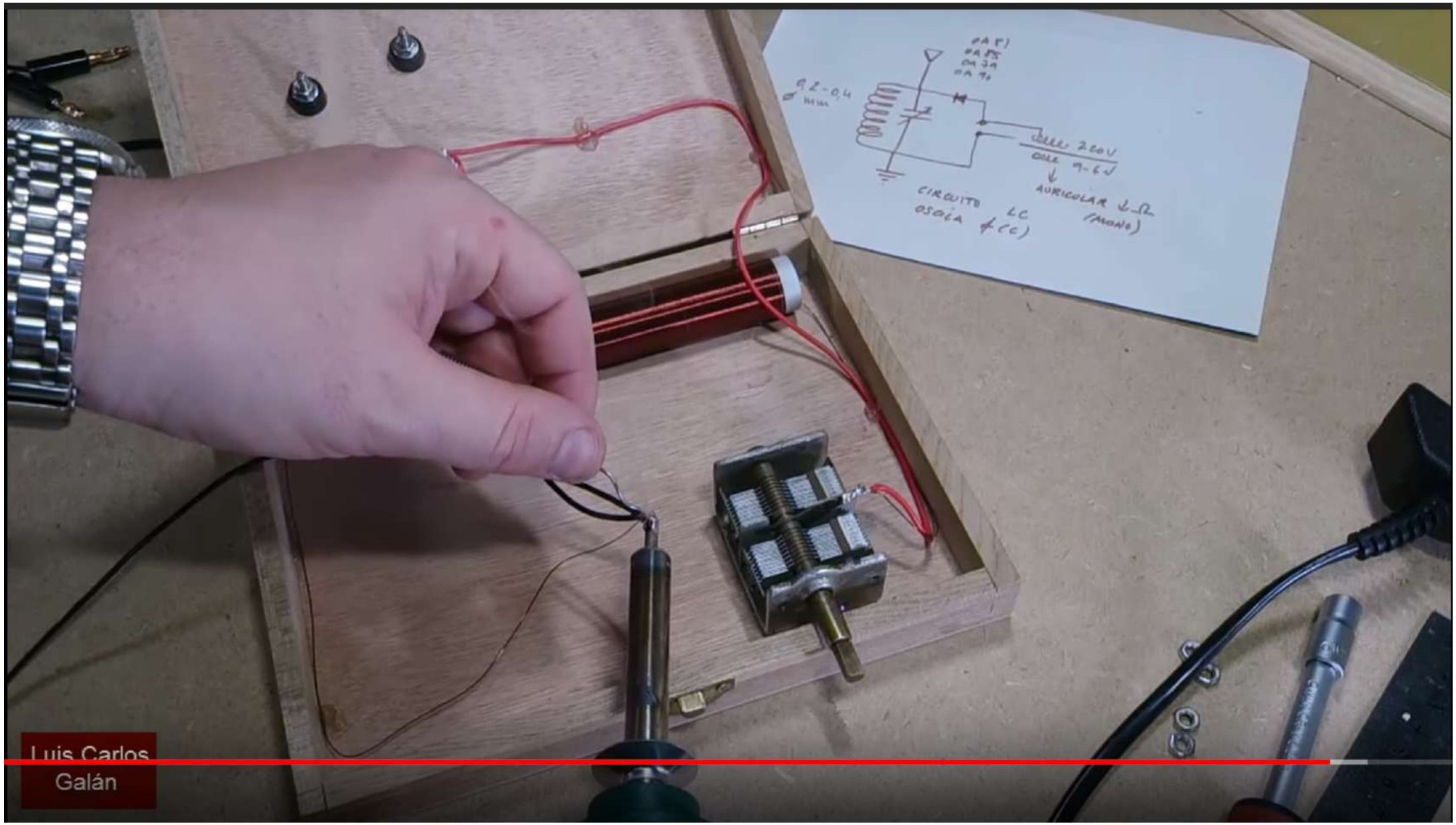

Luis Carlos
Galán



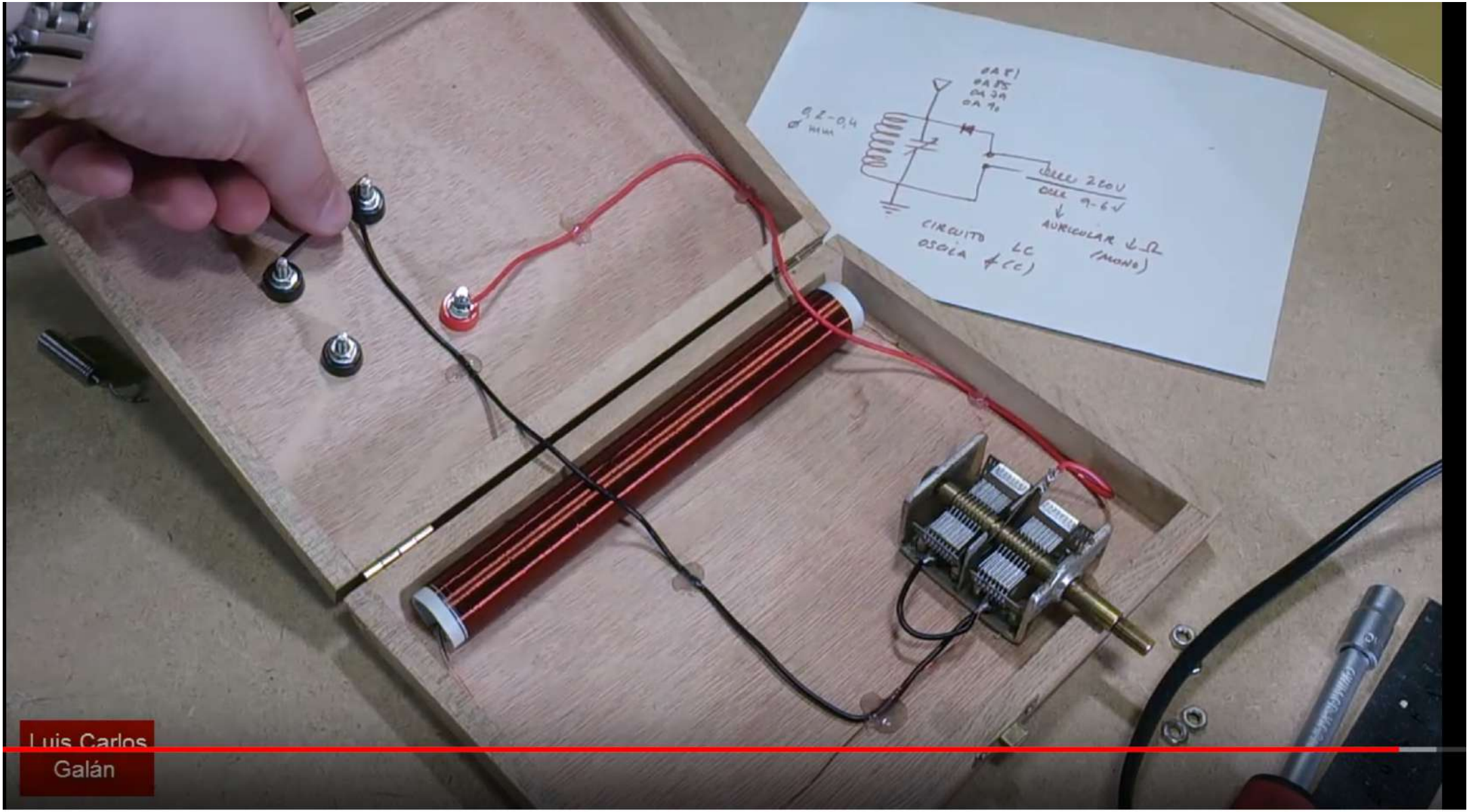
Luis Carlos
Galán


TIERRA
Luis Carlos
Galán

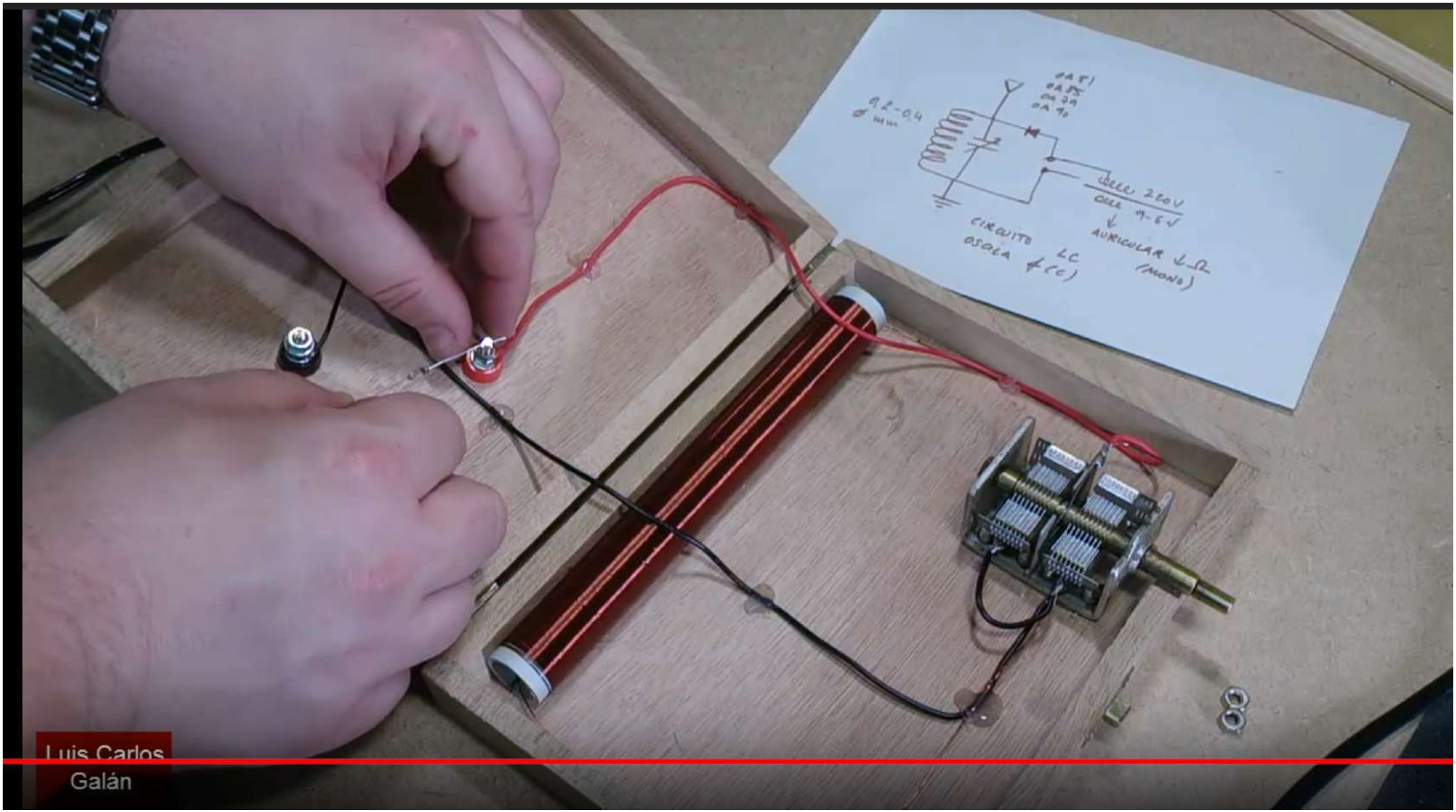

Luis Carlos
Galán



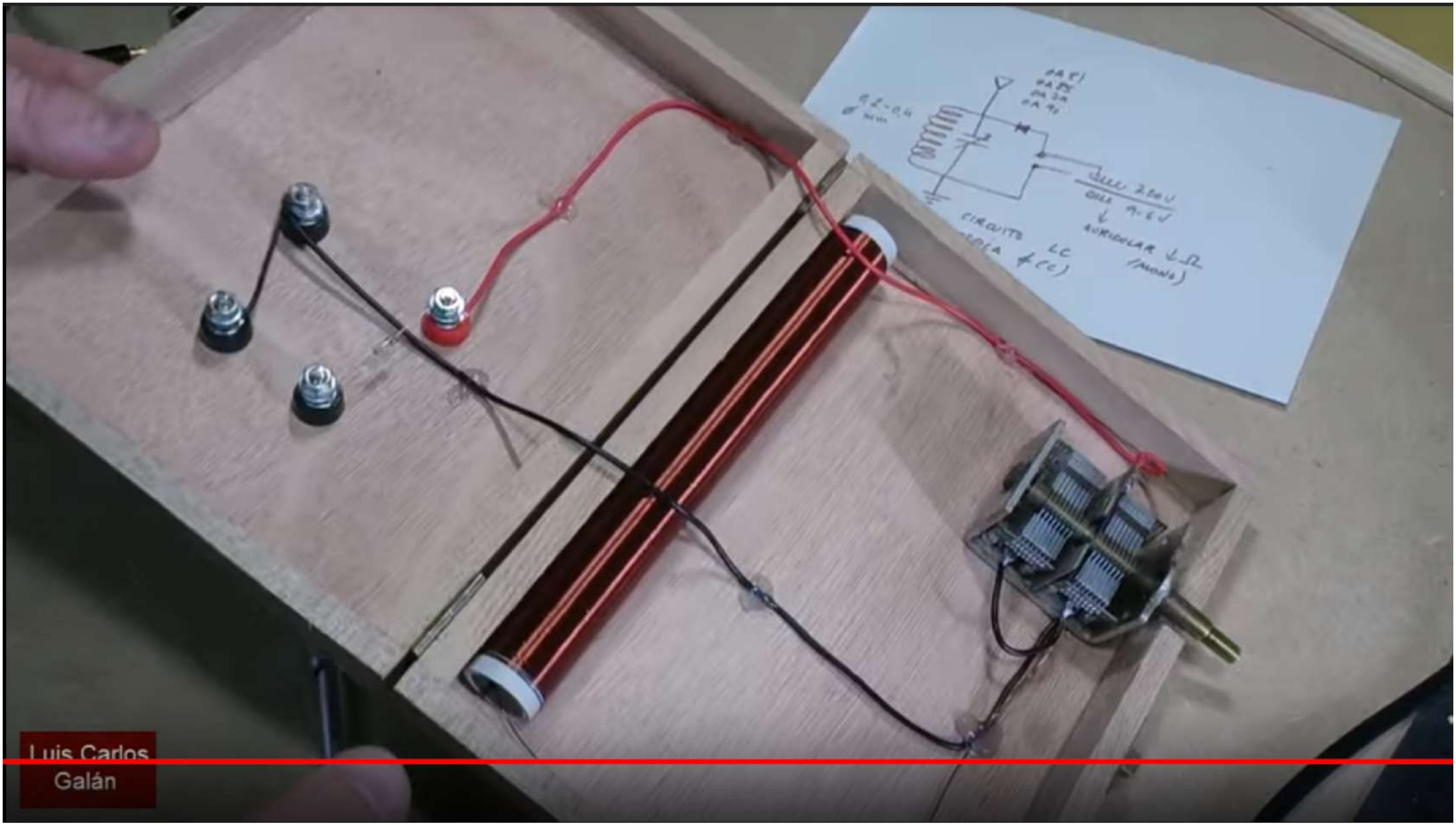
Luis Carlos Galán

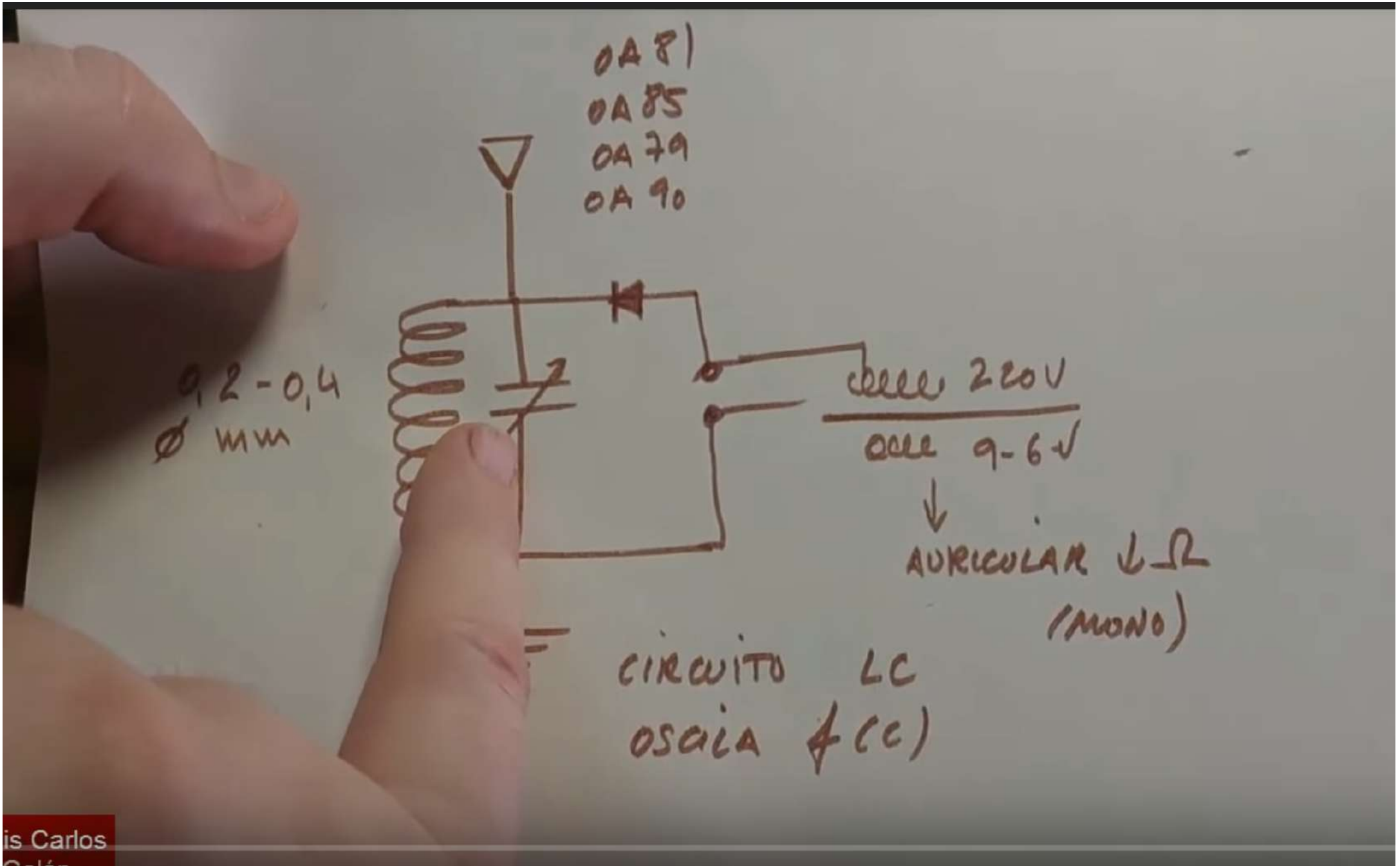


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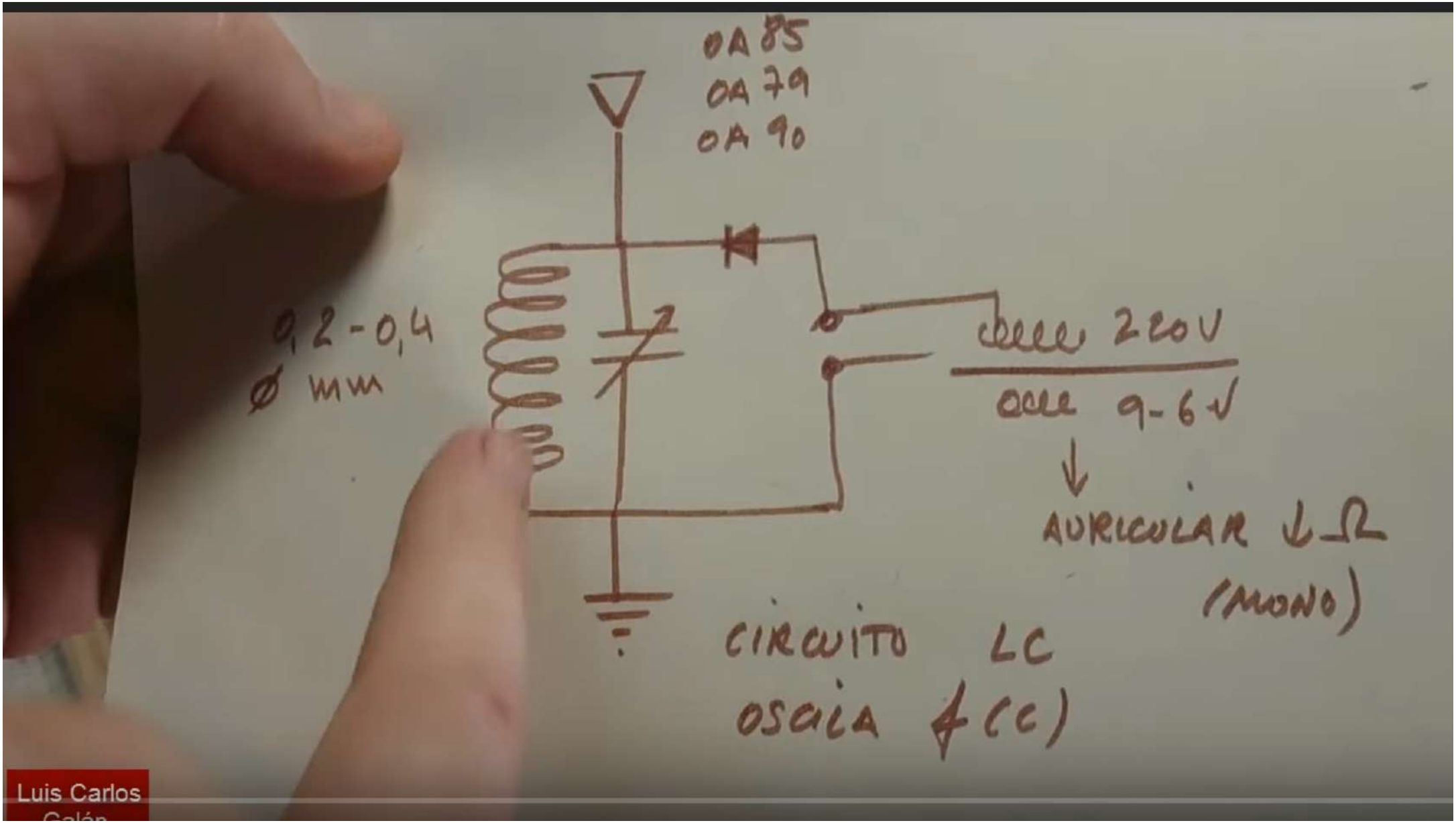


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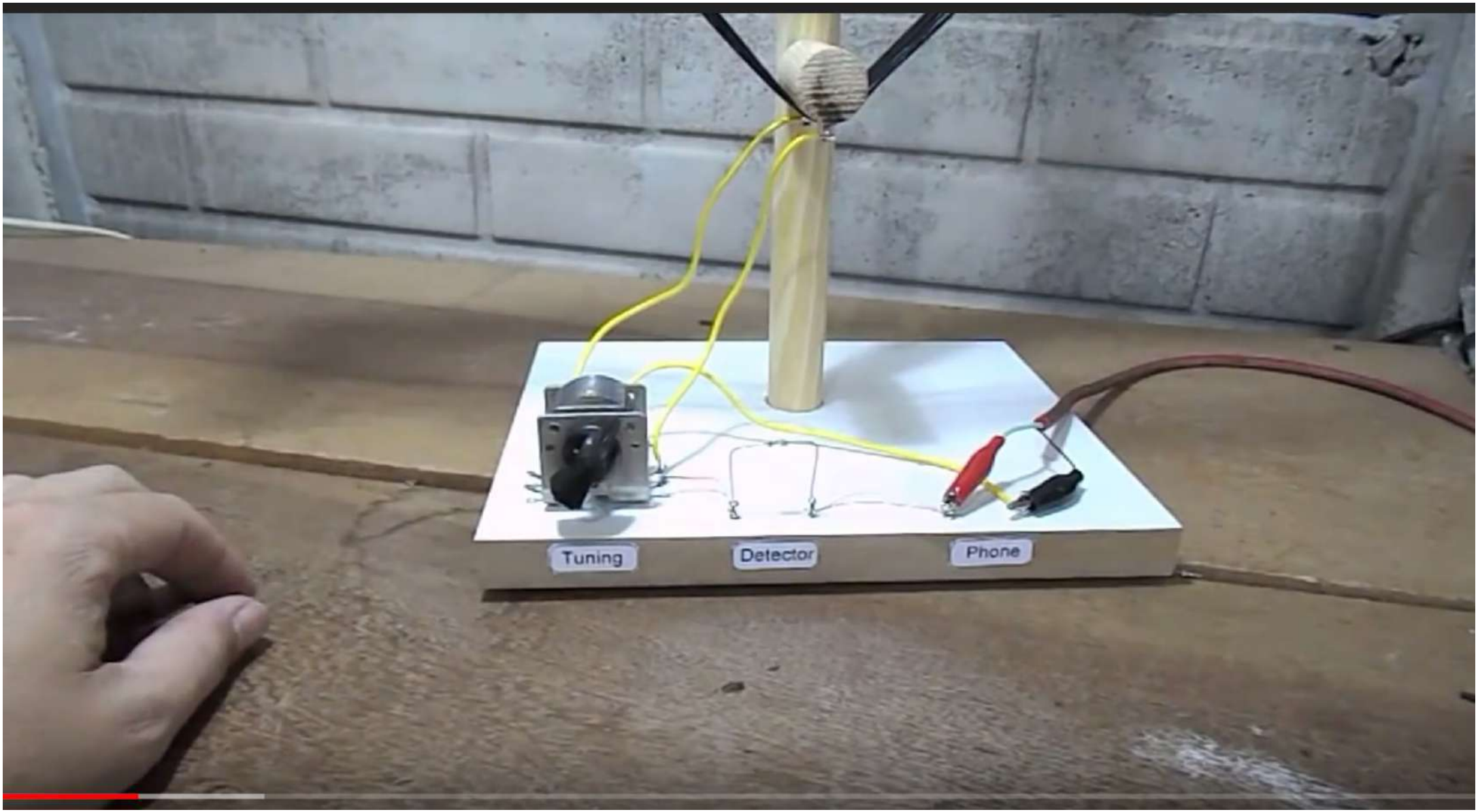

OA 81
OA 85
OA 79
OA 90
0,2 - 0,4
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cable 220V
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AURICULAR 4Ω
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CIRCUITO LC
OSCILA (CC)

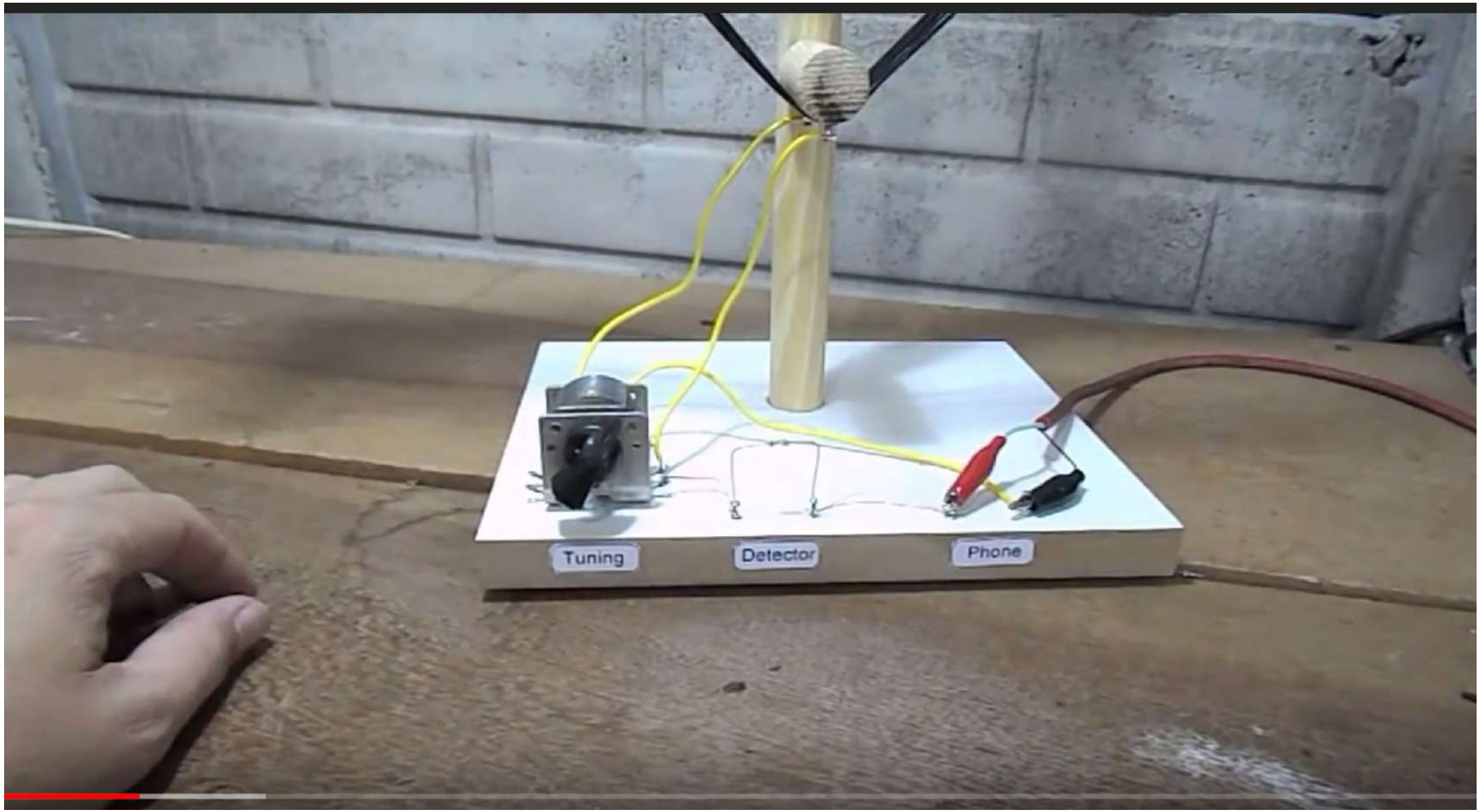

Luis Carlos
Galán

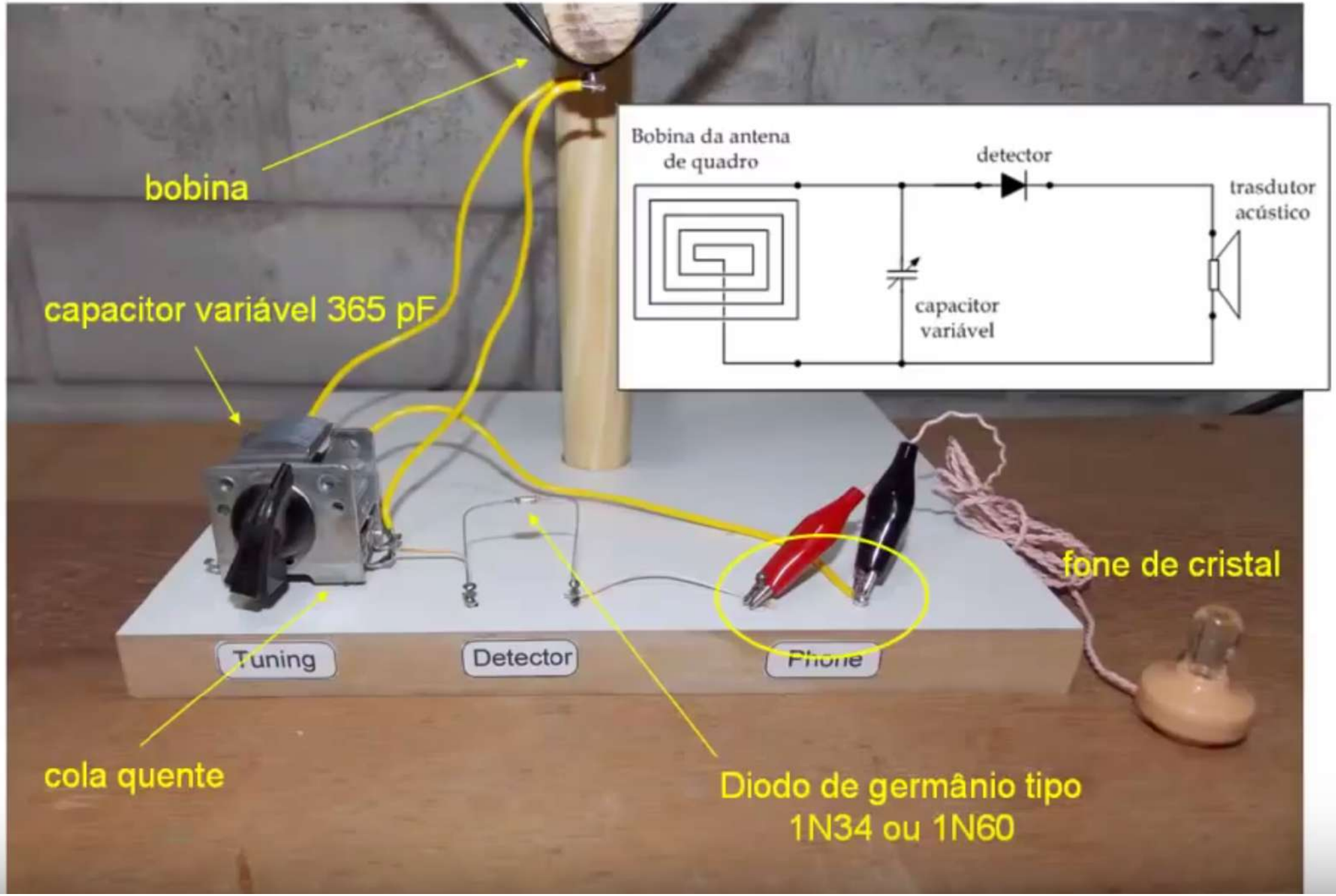

OA 85
OA 79
OA 90
0,2 - 0,4
Ø mm
AURICULAR
(MONO)
CIRCUITO LC
OSCILA

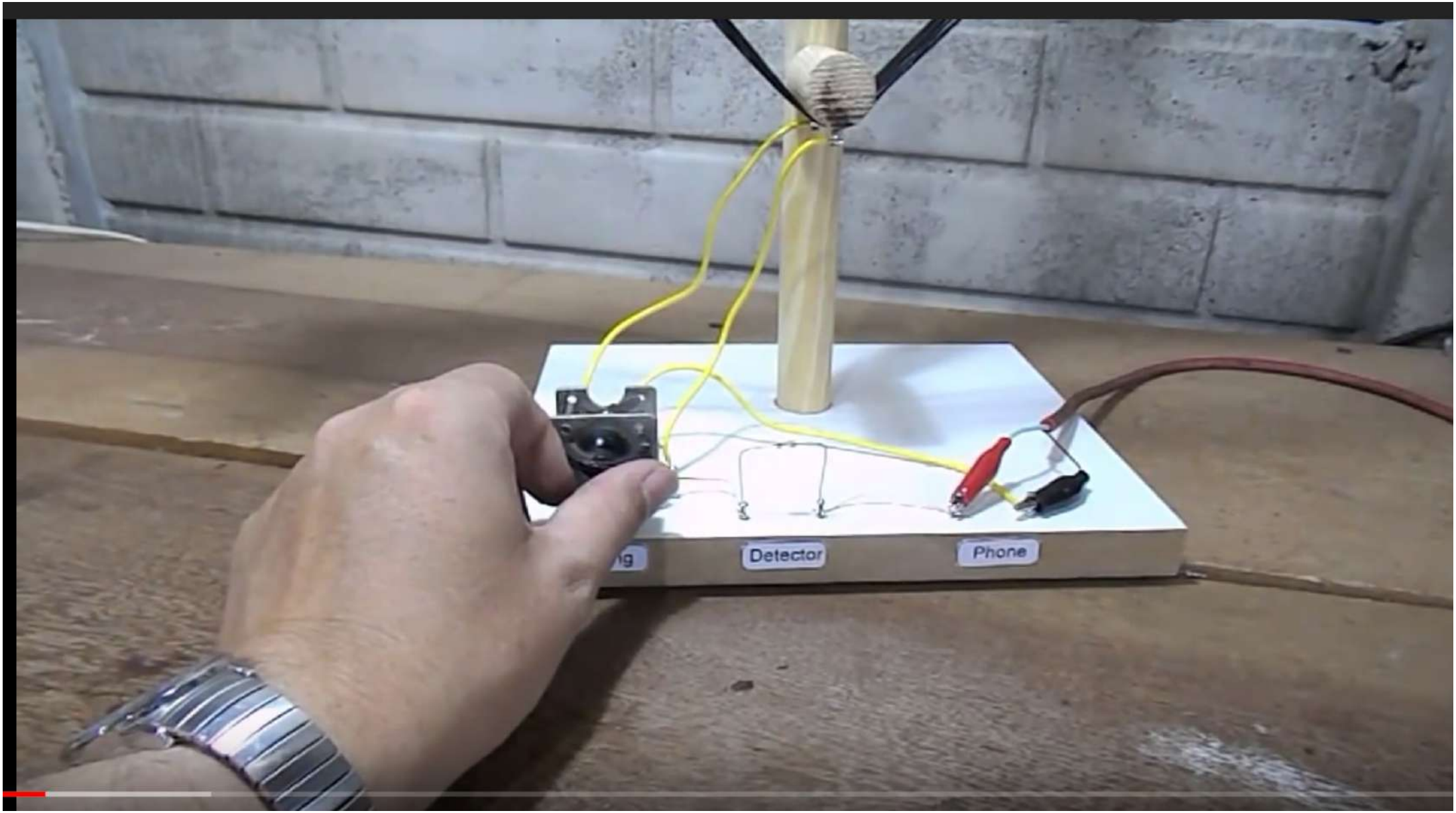

Luis Carlos
Galán

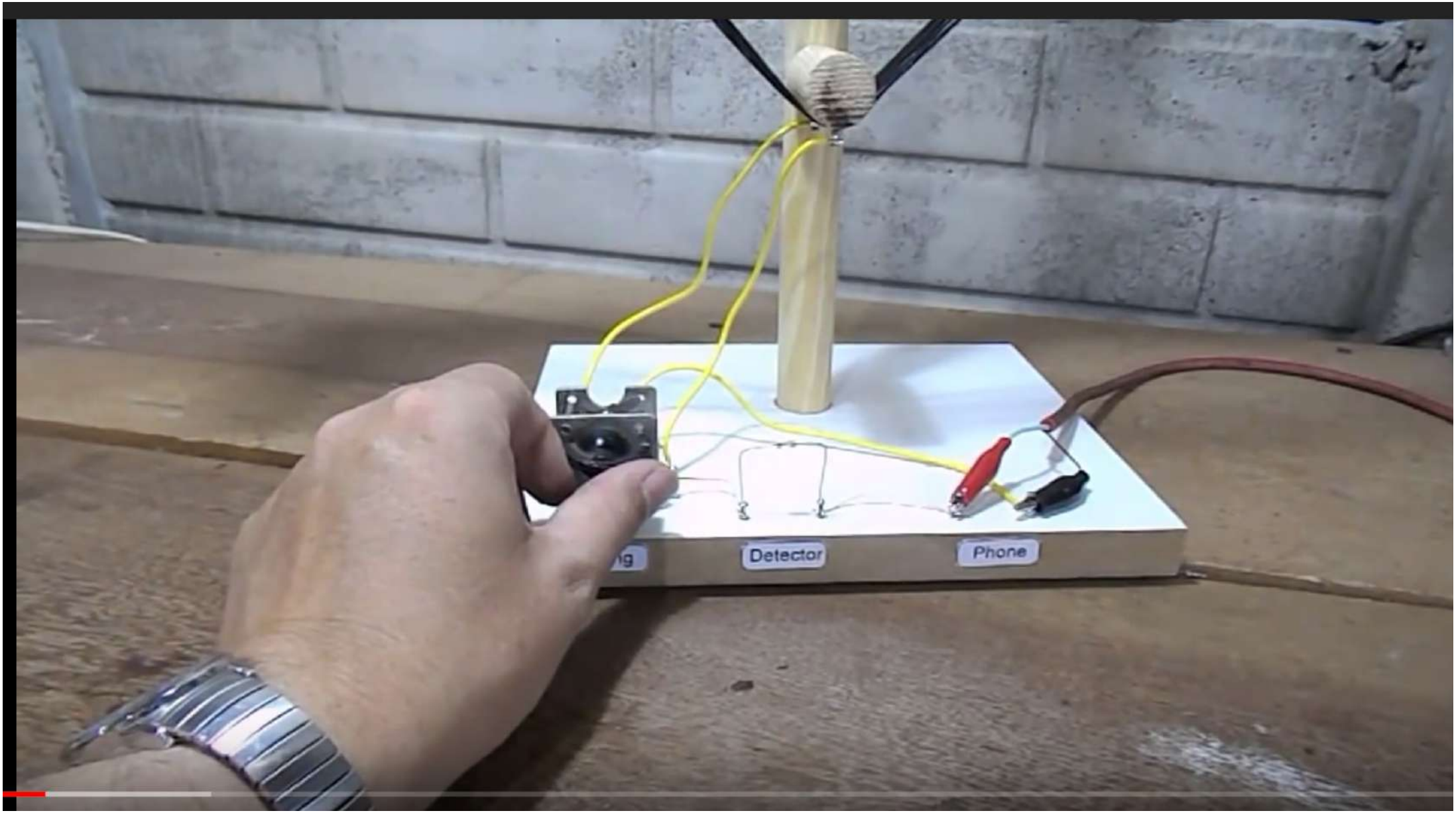

Luis Carlos
Galán

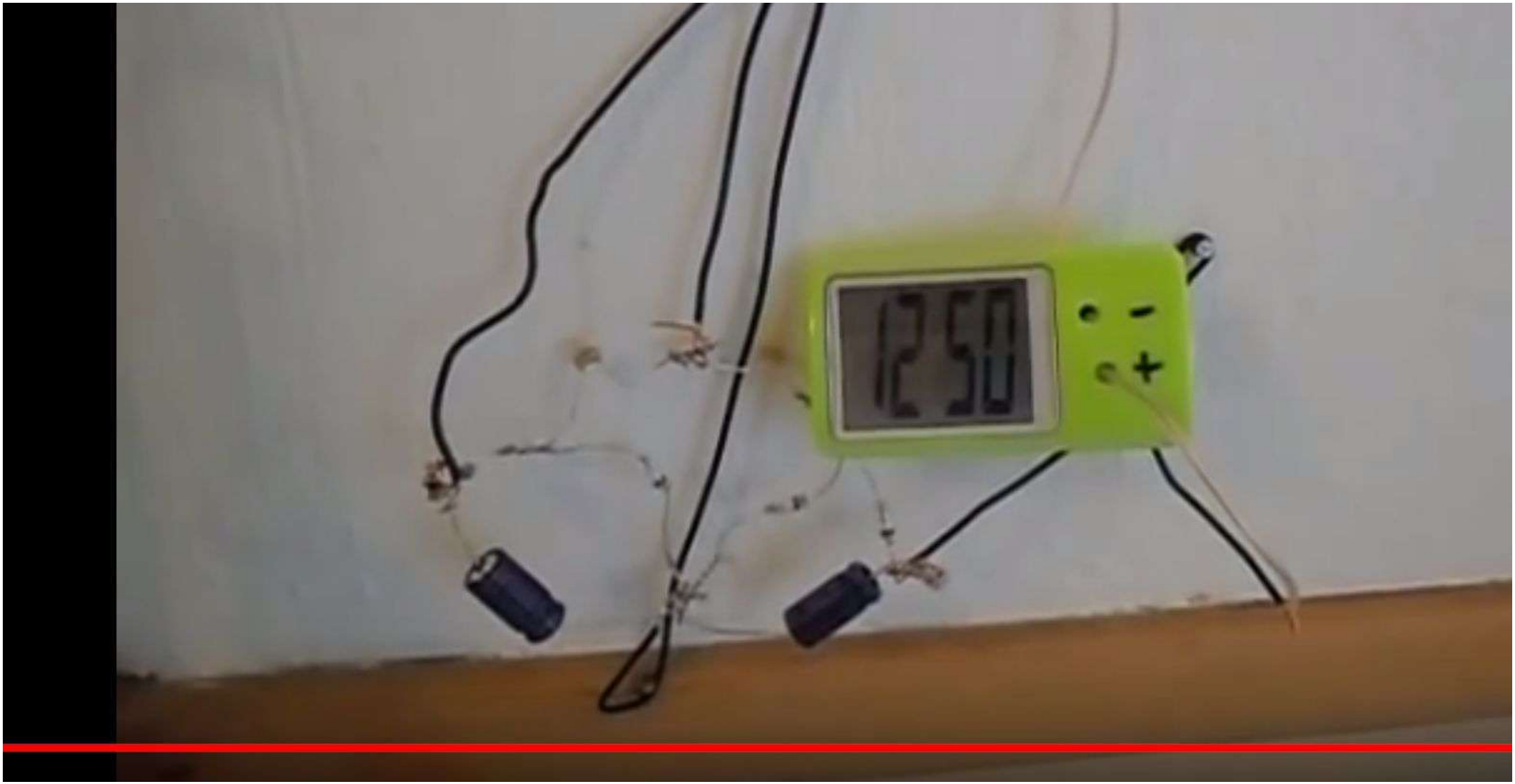

Tuning
Detector
Phone


Tuning
Detector
Phone


bobina
capacitor variável 365 pF
cola quente
Diodo de germânio tipo
1N34 ou 1N60
fone de cristal
Tuning
Detector
Phone
Bobina da antena
de quadro
detector
trasdutor
acústico
capacitor
variável


Detector
Phone


Detector
Phone

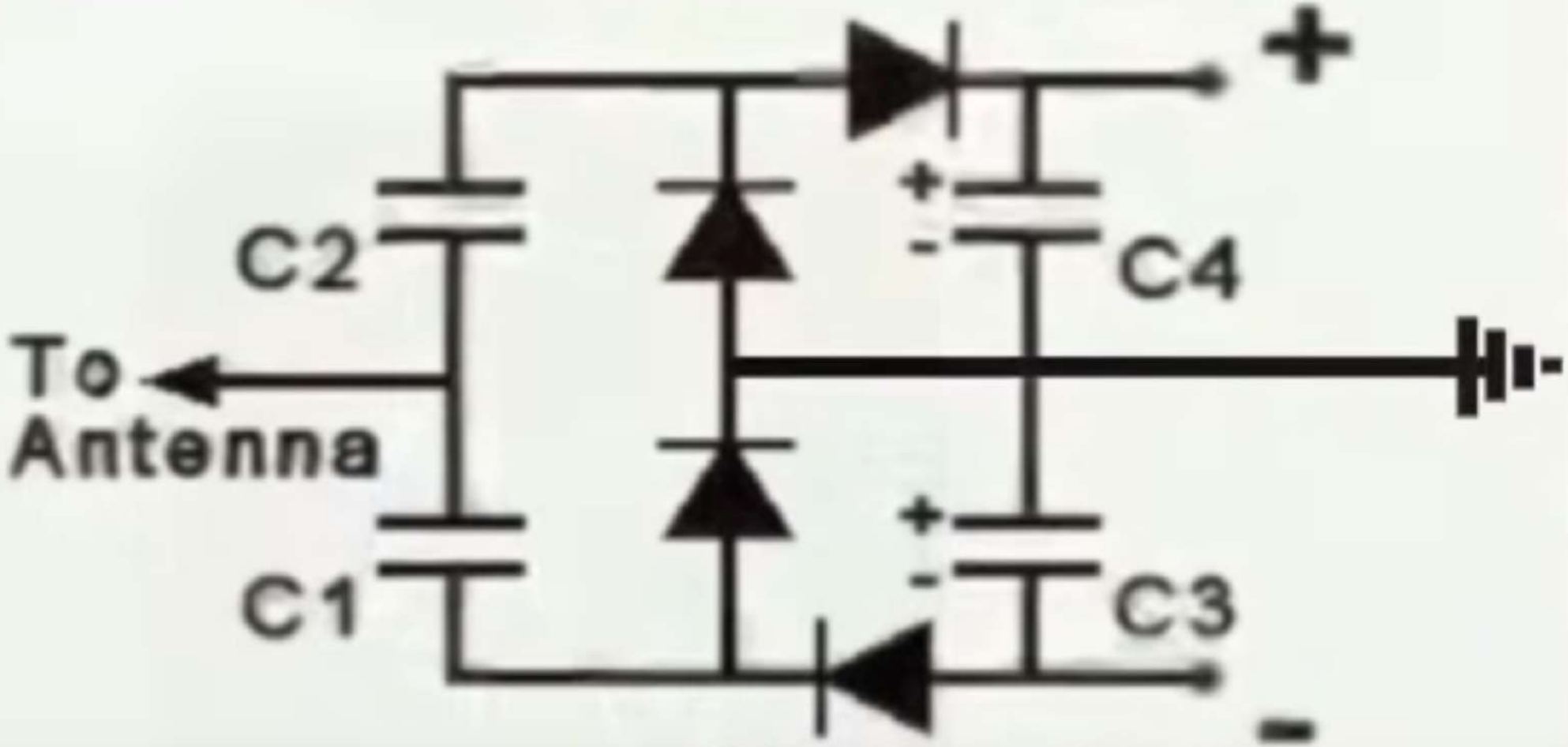

12:50
-
+


This is not a zener - its a 1N4148.
Also I have discovered this circuit gathers energy from circuits running in the garage - not RF
see Lidmotor's video
http://www.youtube.com/watch?v=Gj_7x9c31Qc
0:32 / 6:02

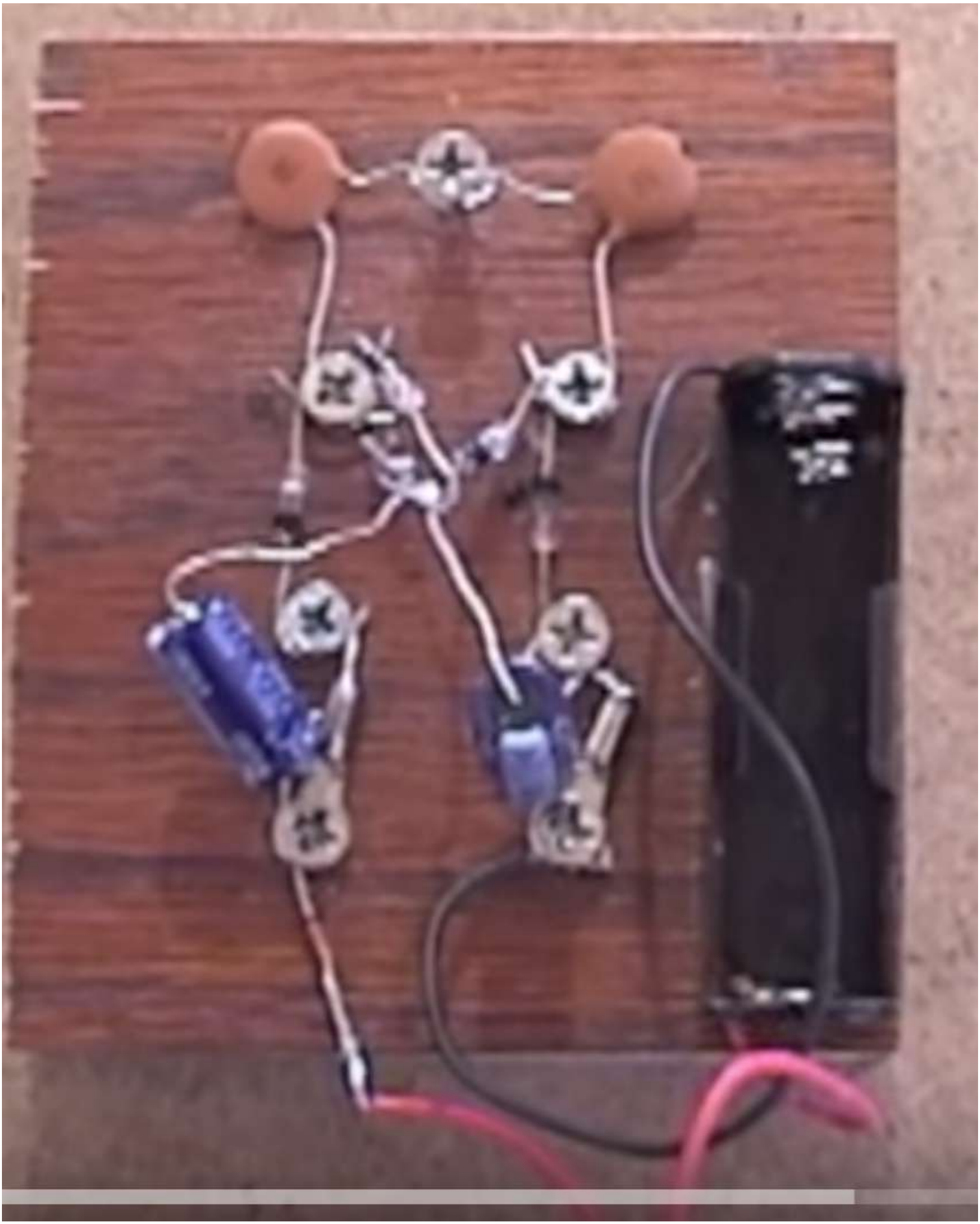

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0:48 / 6:02

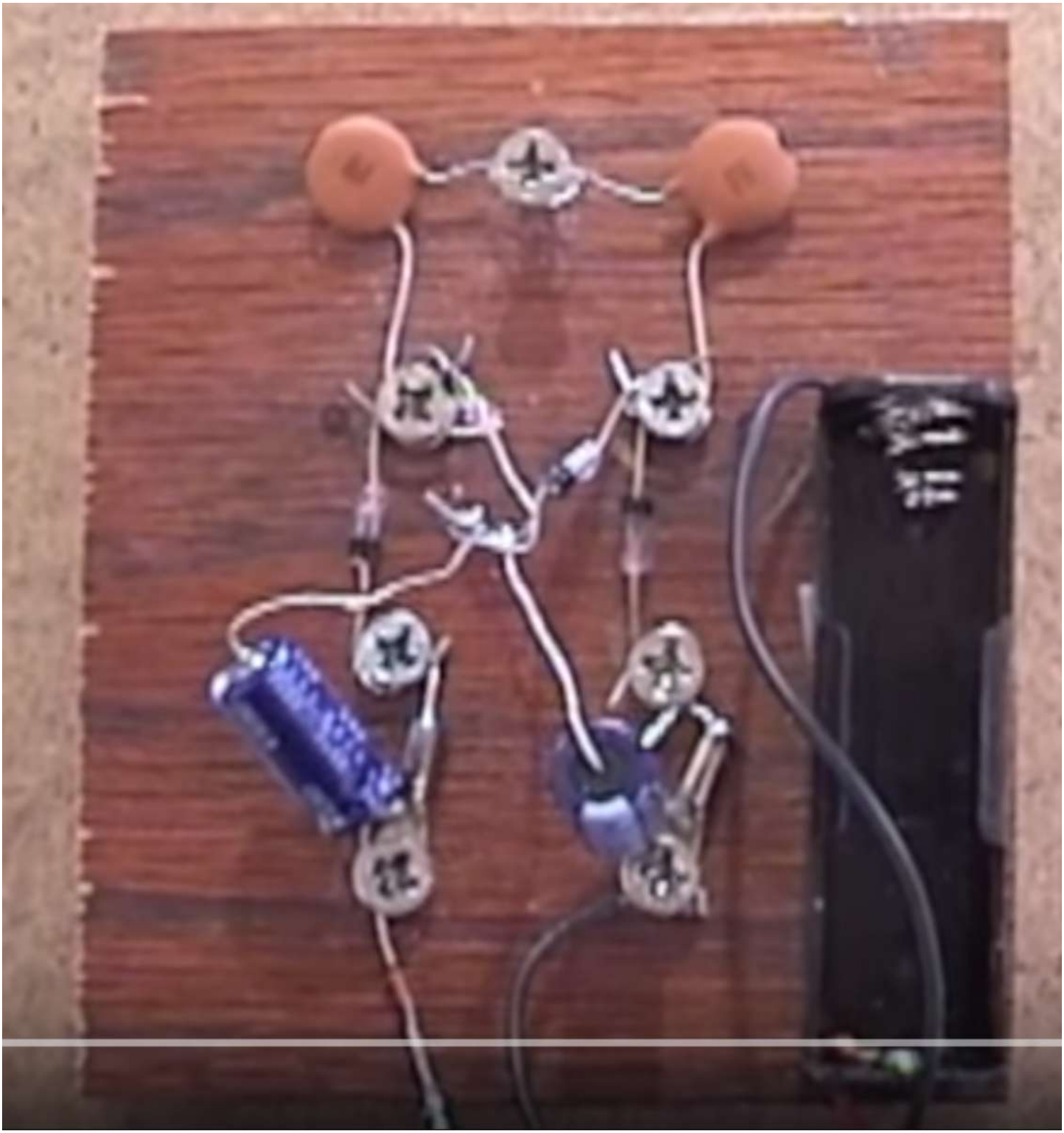

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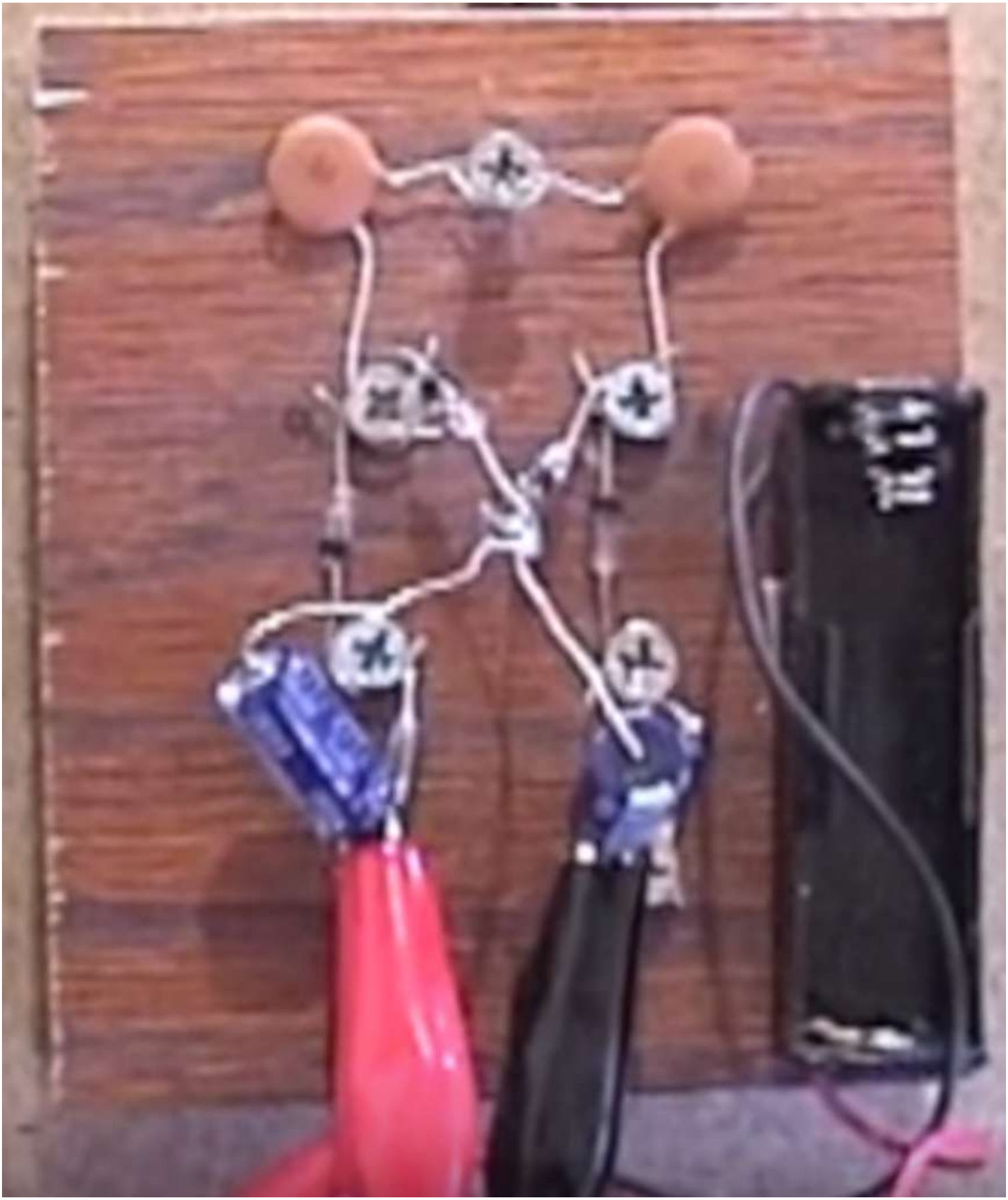
Energy from RF signals



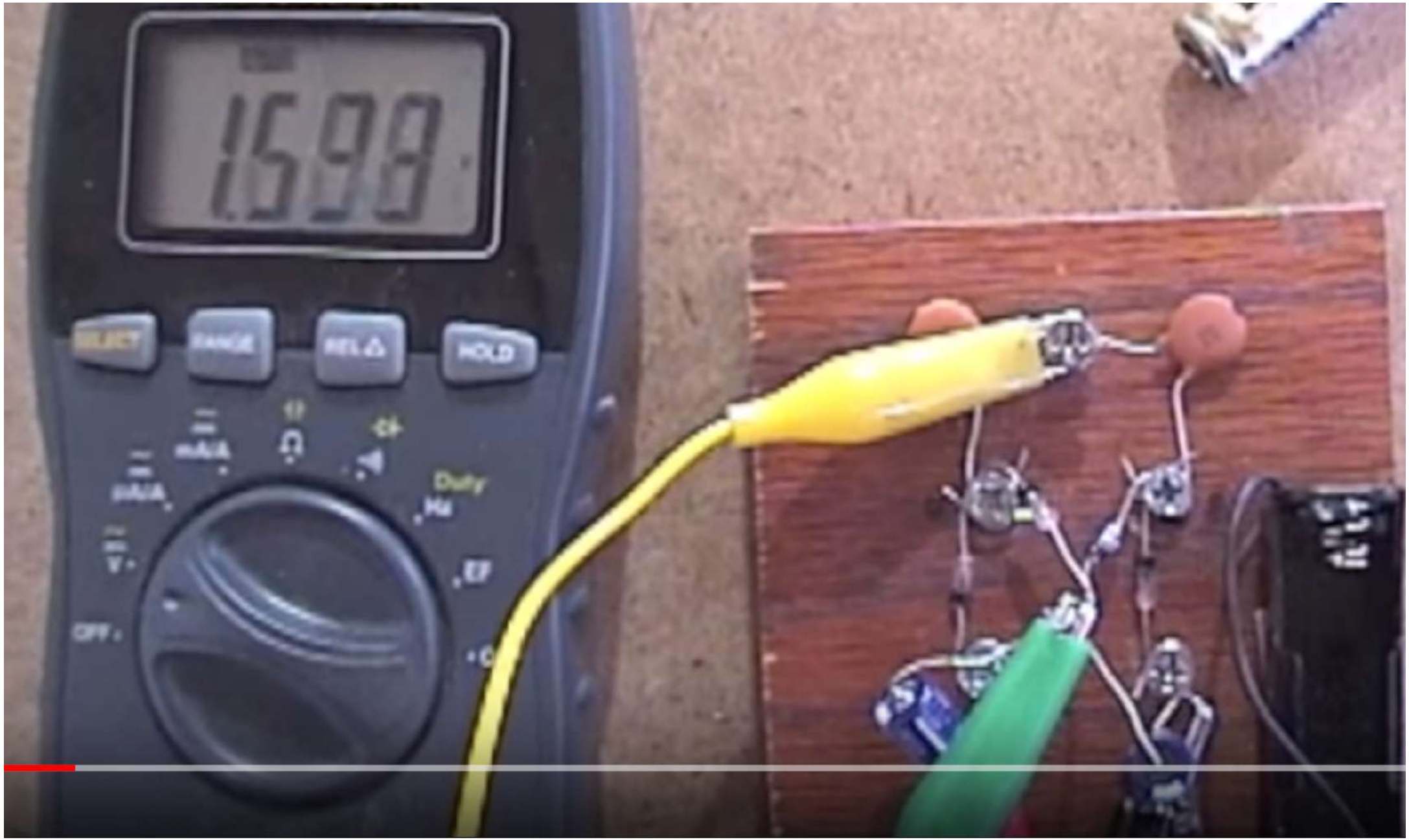
1N34 Germanium Diodes,
100uf 50 v Electrolytic Caps
0.2 uf Ceramic Caps, 1- 3 volts

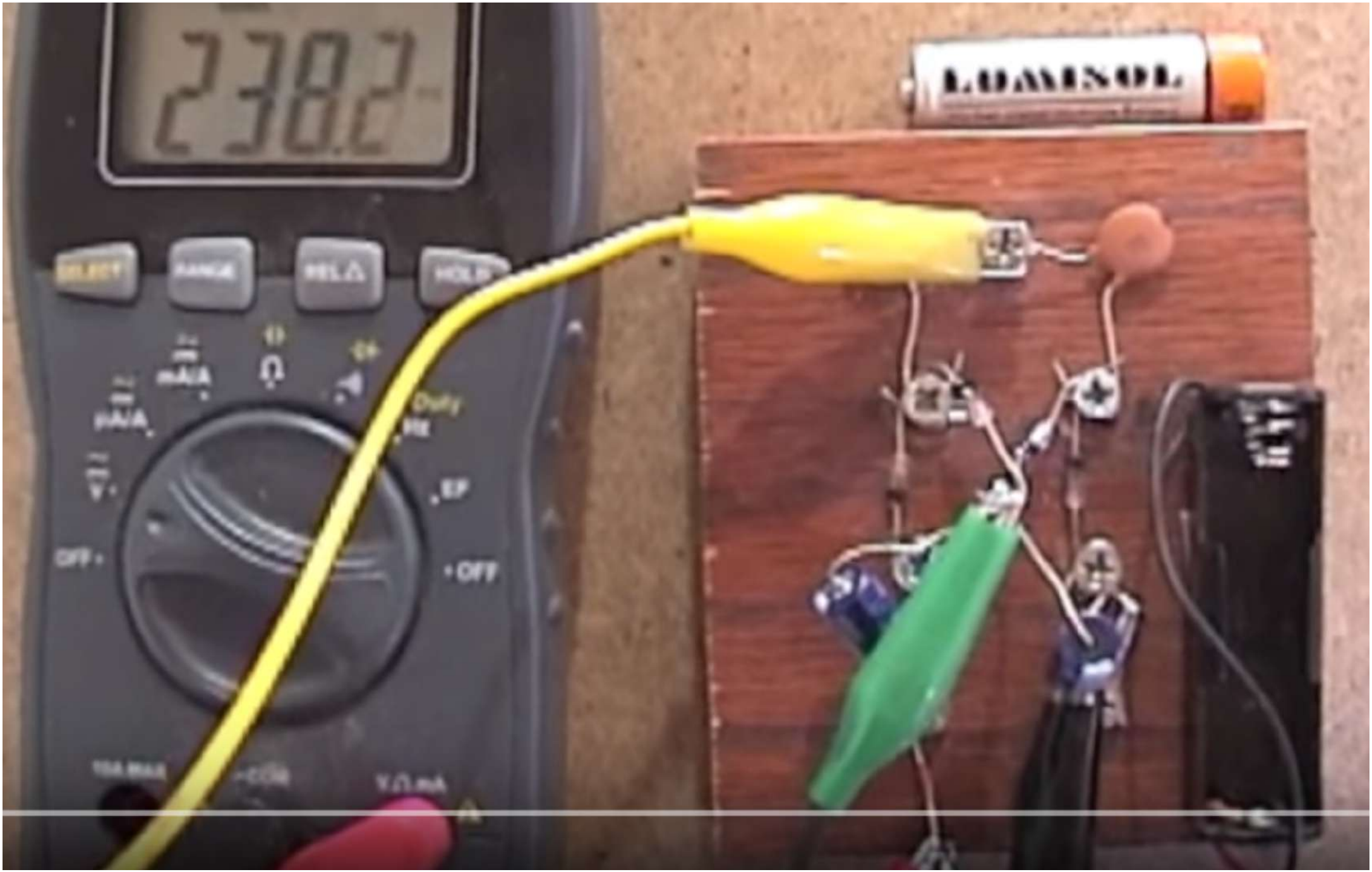


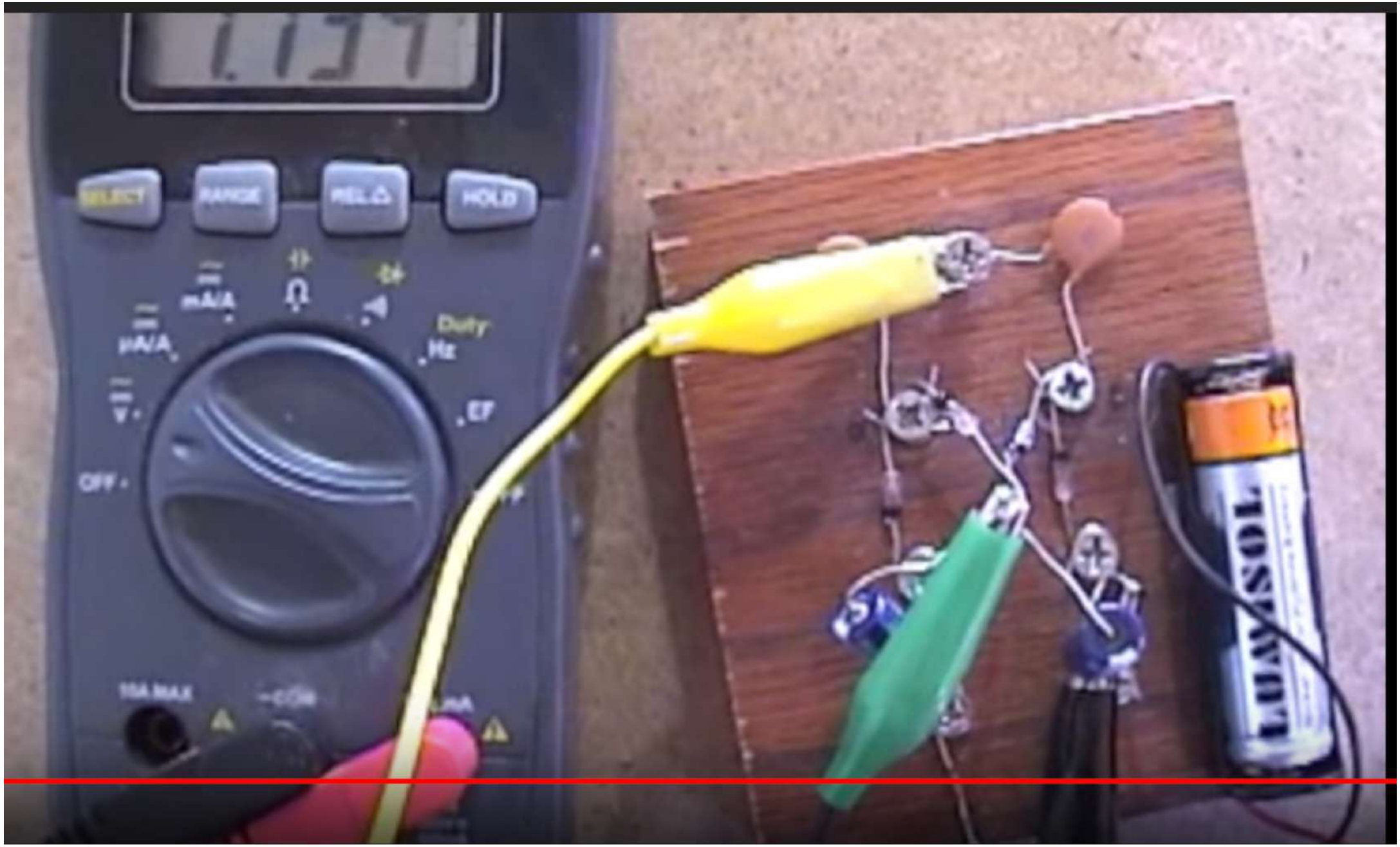





This is not a zener - its a 1N4148.
Also I have discovered this circuit gathers energy from circuits running in the garage - not RF
see Lidmotor's video
http://www.youtube.com/watch?v=Gj_7x9c31Qc
0:32 / 6:02

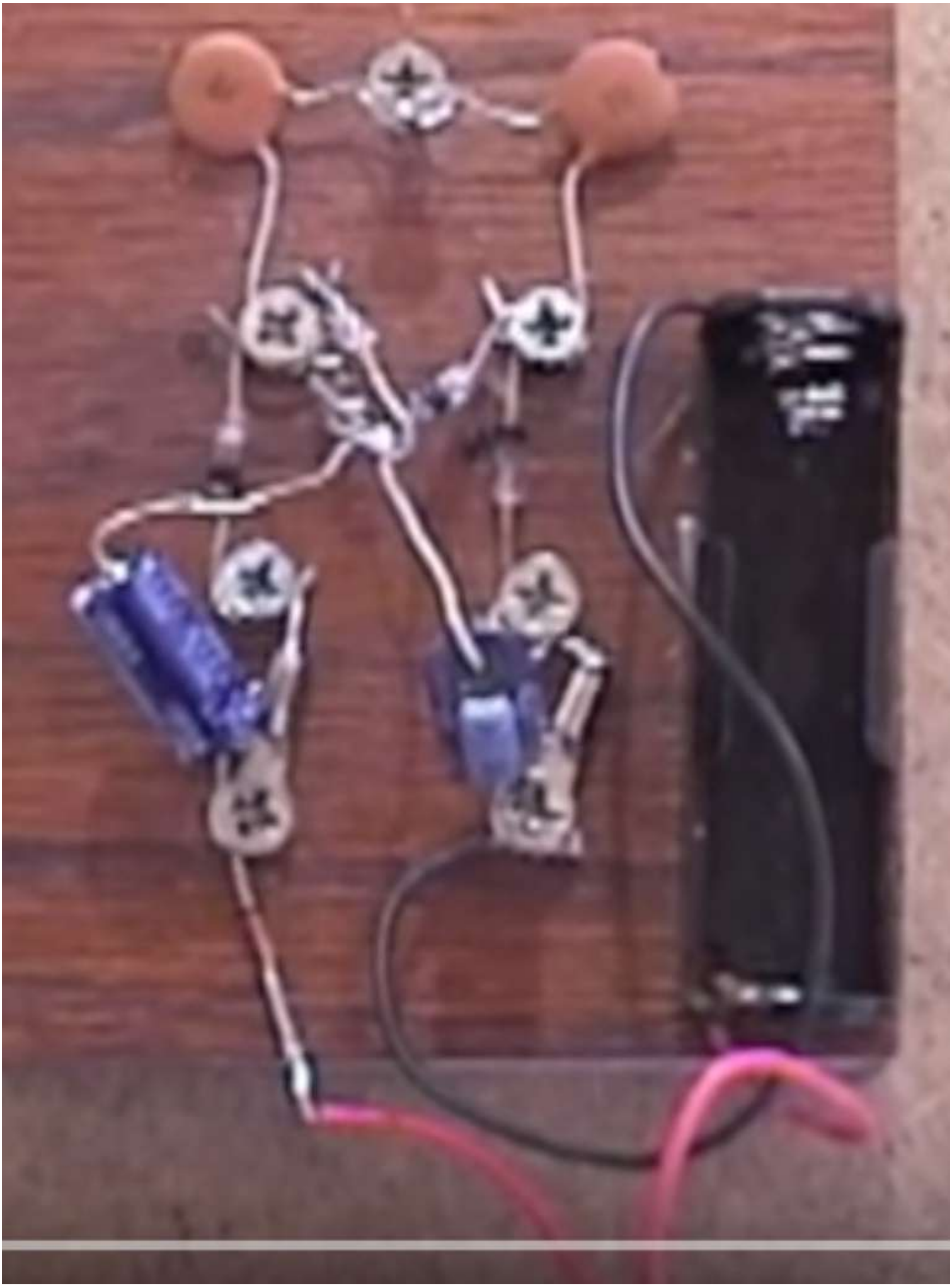

1598
SELECT
RANGE
REL Δ
HOLD
Duty
Hz
OFF

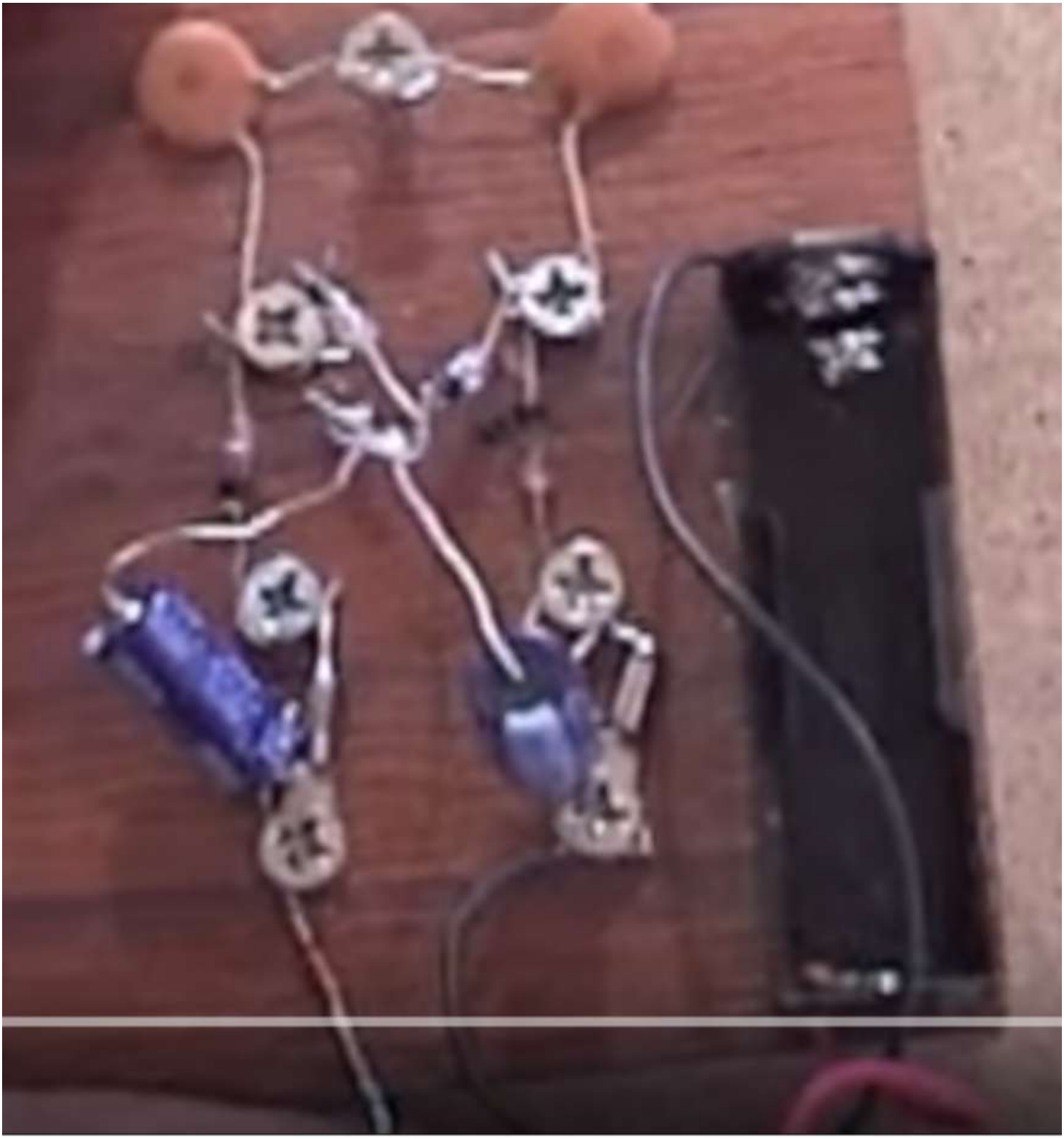

238.2
SELECT
RANGE
REL Δ
HOLD
mA/A
Duty
Hz
OFF
OFF
LUMINOL


SELECT
RANGE
REL Δ
HOLD
Duty
Hz
OFF
10A MAX
COM




Radio Shack
DIGITAL MULTIMETER
000.3
SELECT
RANGE
REL Δ
HOLD
mA/A
µA/A
Duty
HZ
EF
OFF
OFF





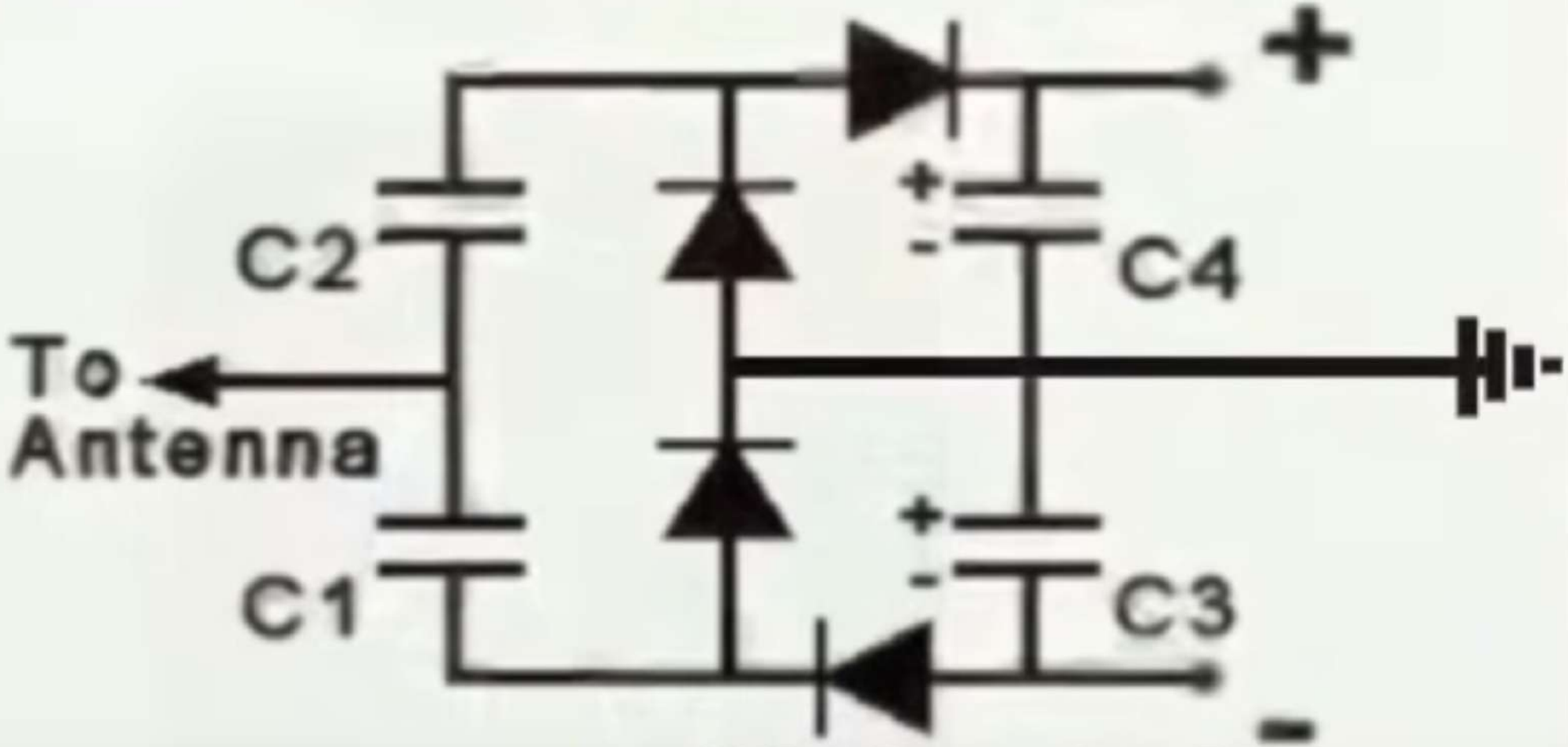






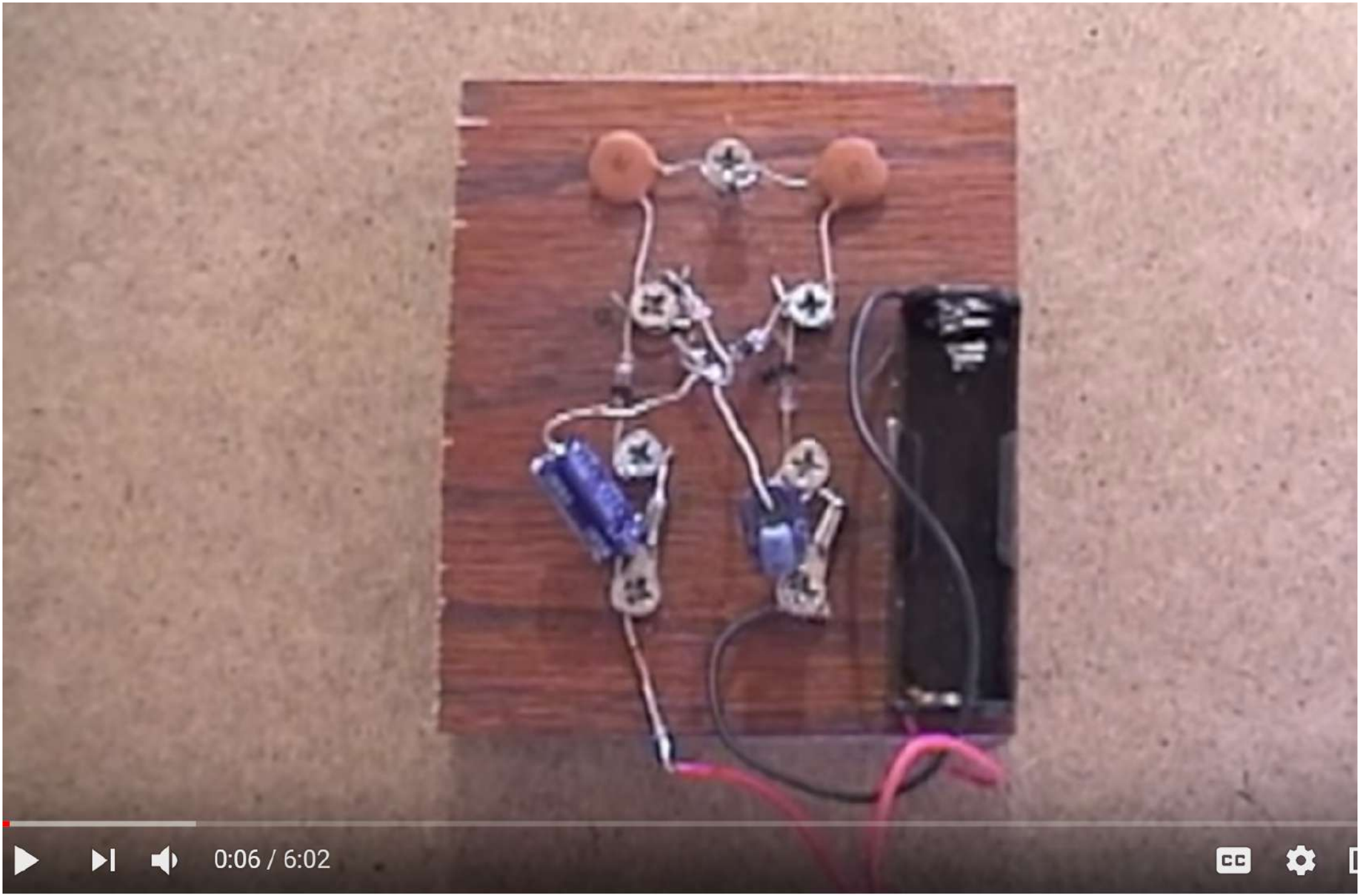


Energy from RF signals



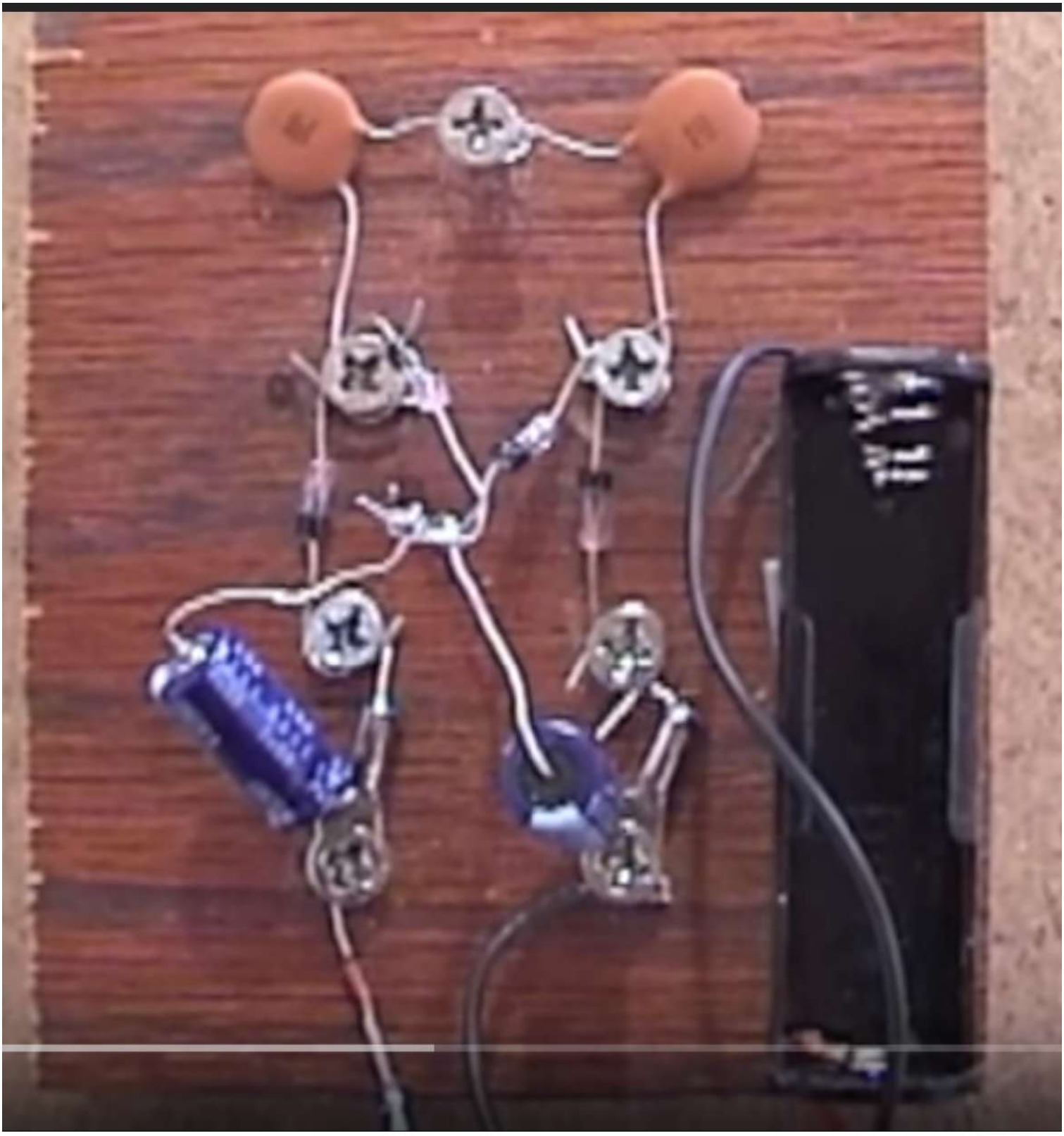
1N34 Germanium Diodes,
100uf 50 v Electrolytic Caps
0.2 uf Ceramic Caps, 1- 3 volts

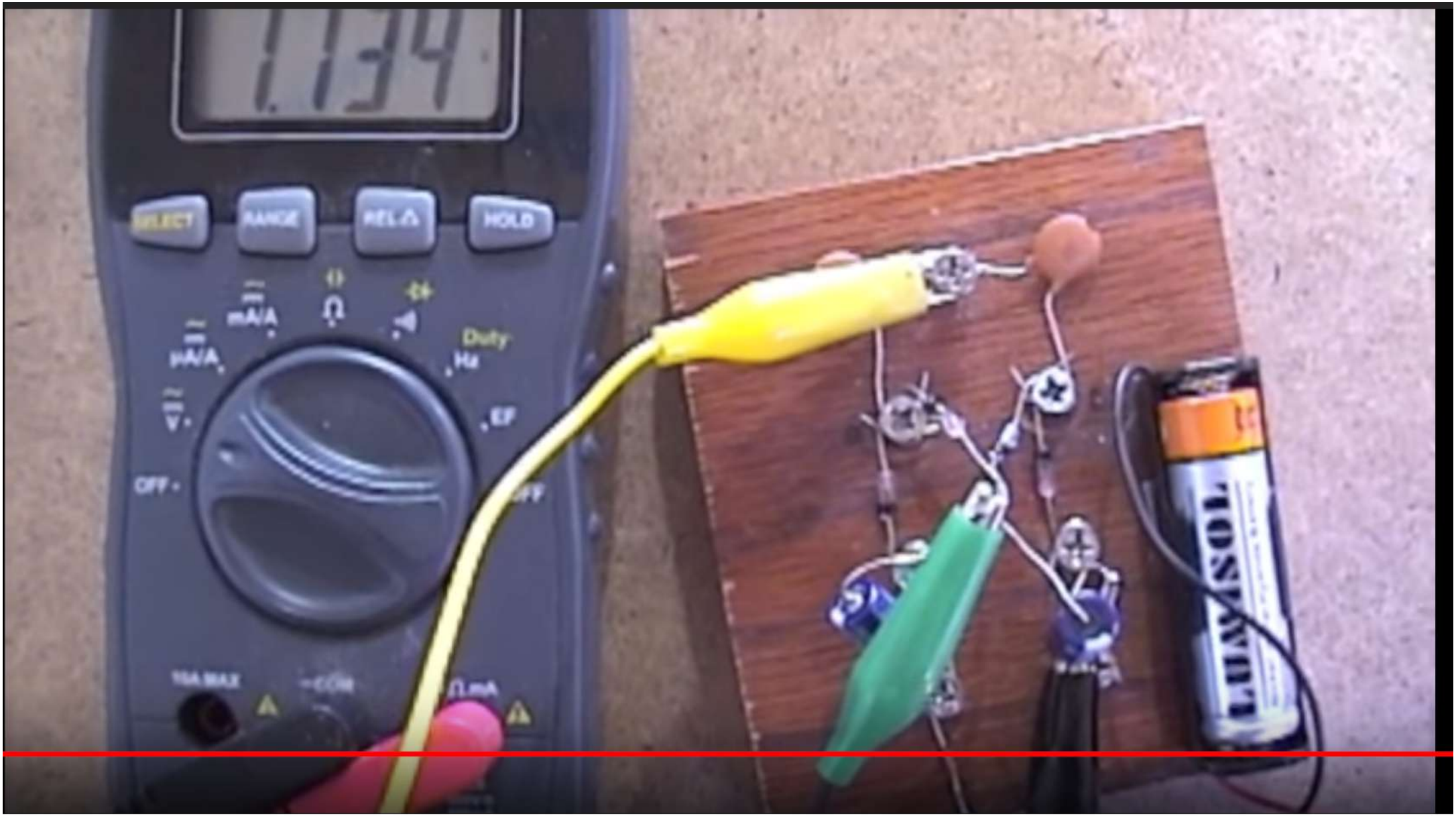



0:06 / 6:02

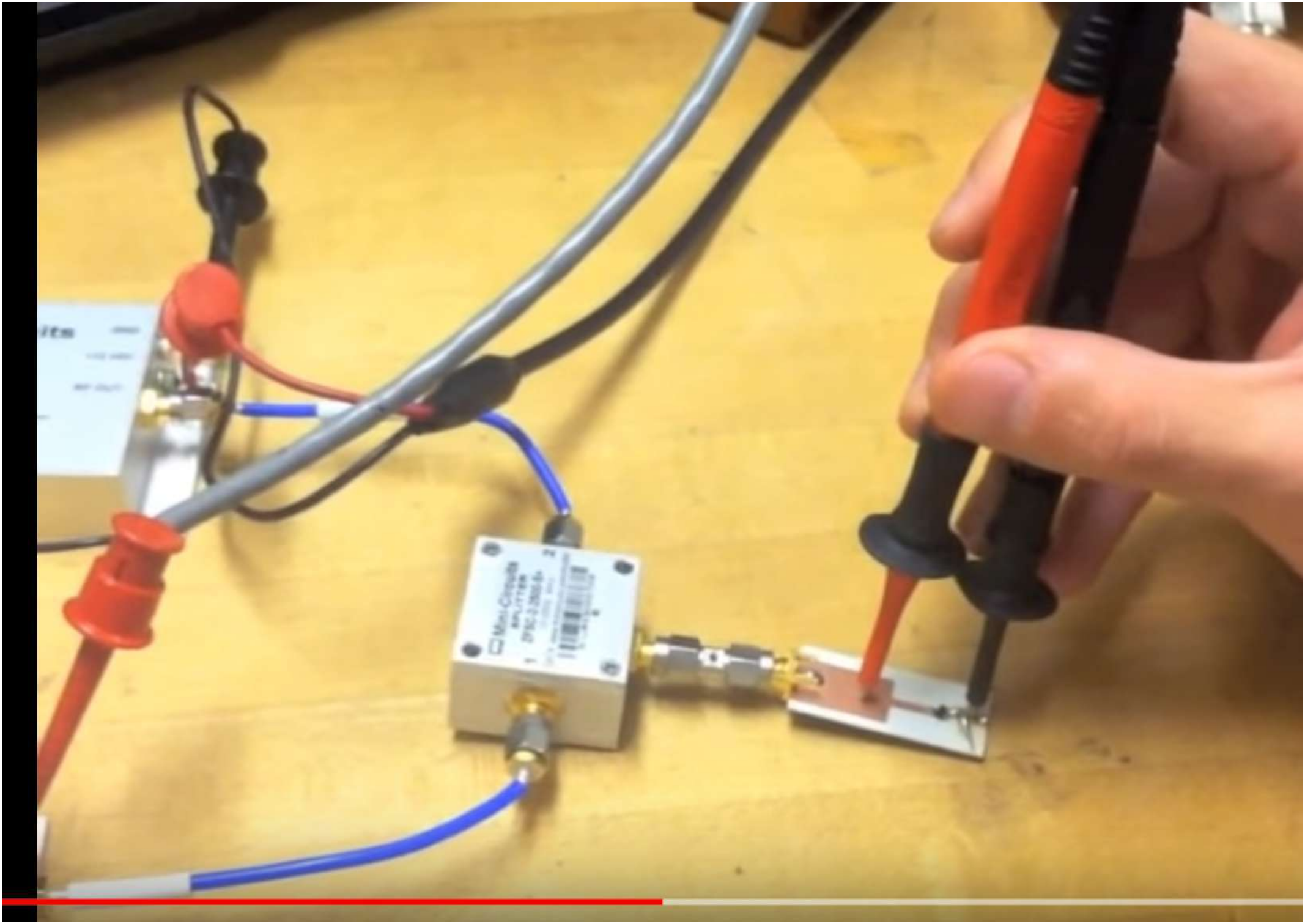

RANGE
REL Δ
HOLD
Duty
Hz
OFF
V Ω mA
LOWELL

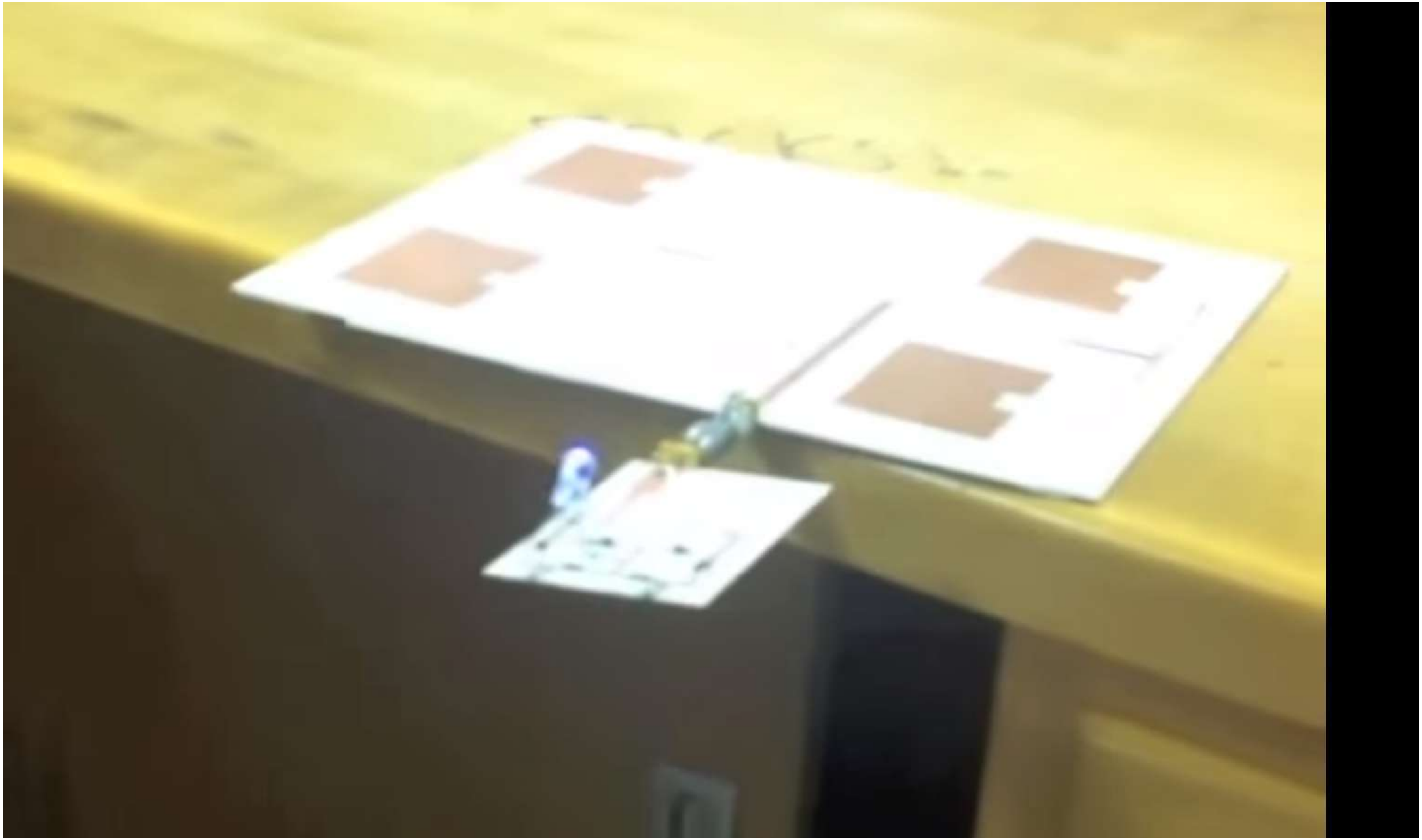


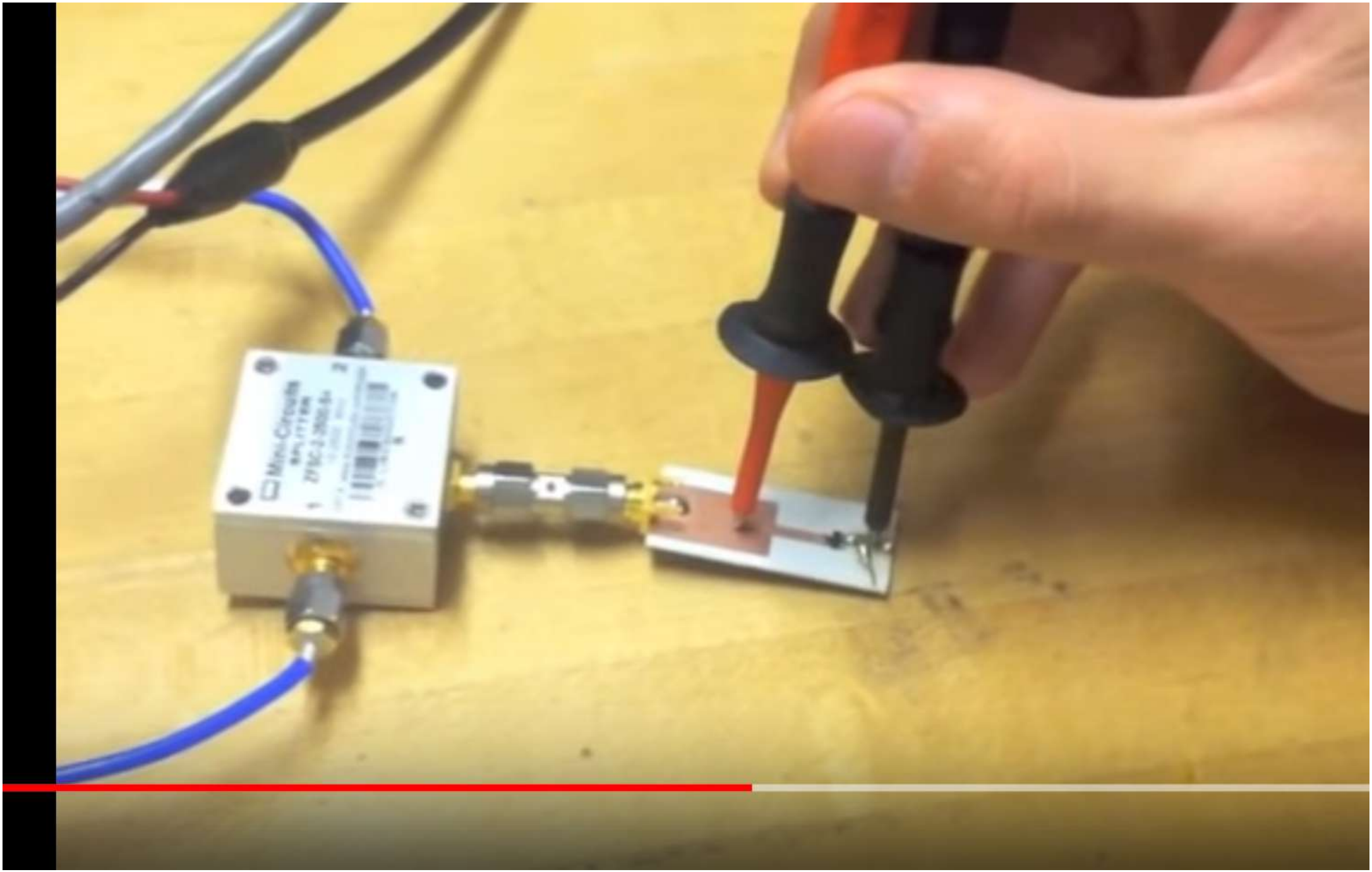


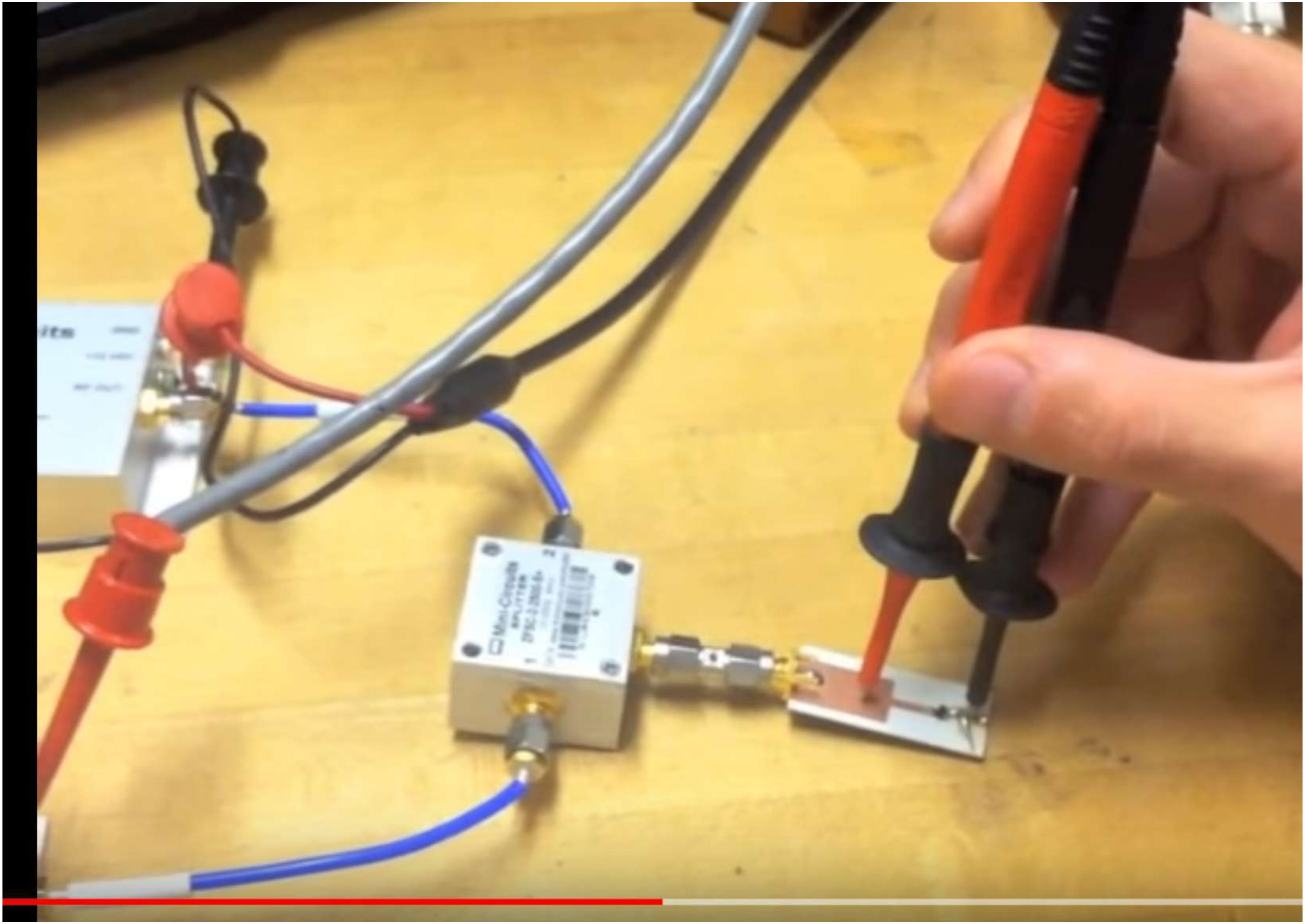

1.134
SELECT
RANGE
REL Δ
HOLD
Duty
Hz
%
OFF
10A MAX
TOSHIBA

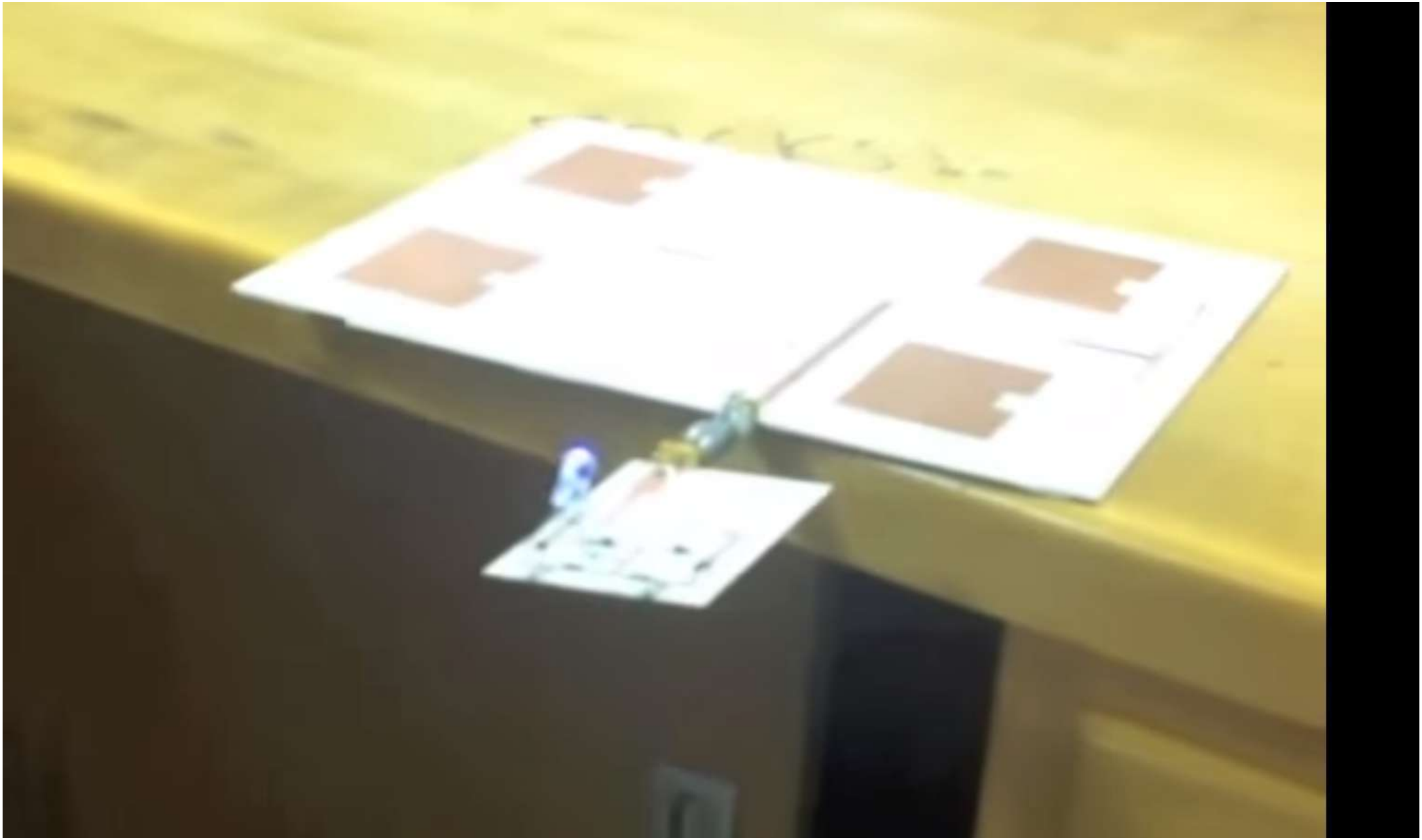


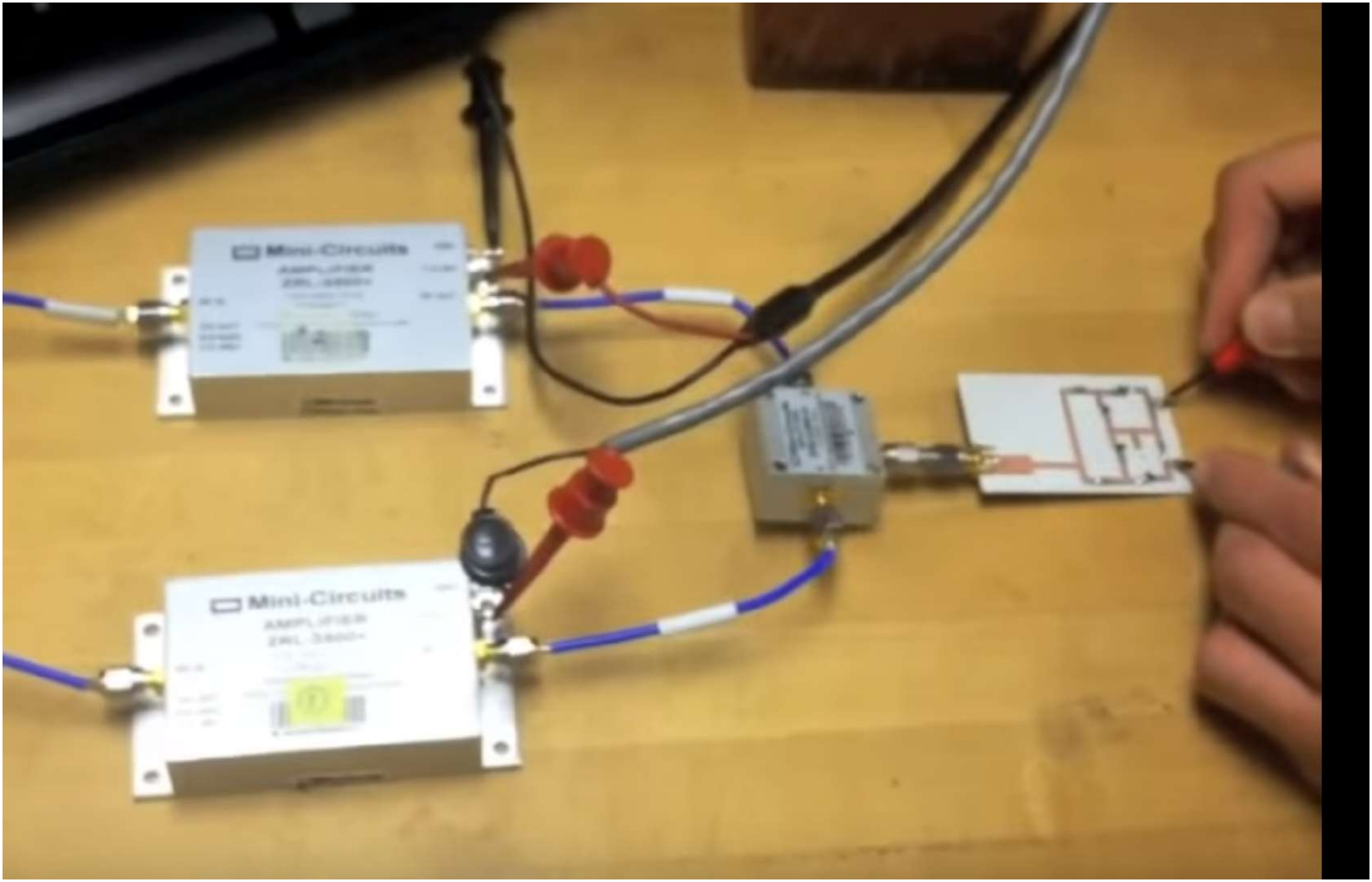


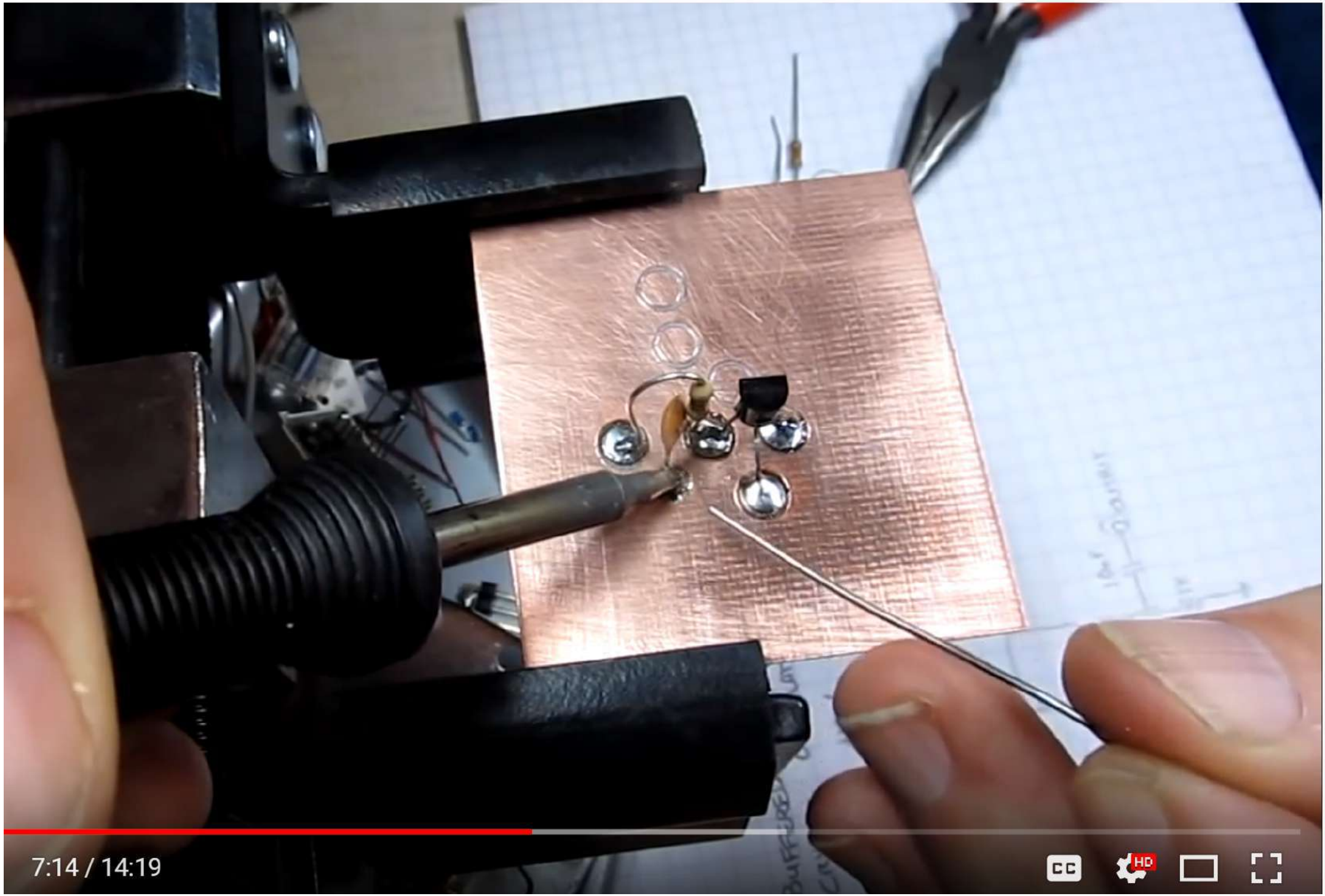


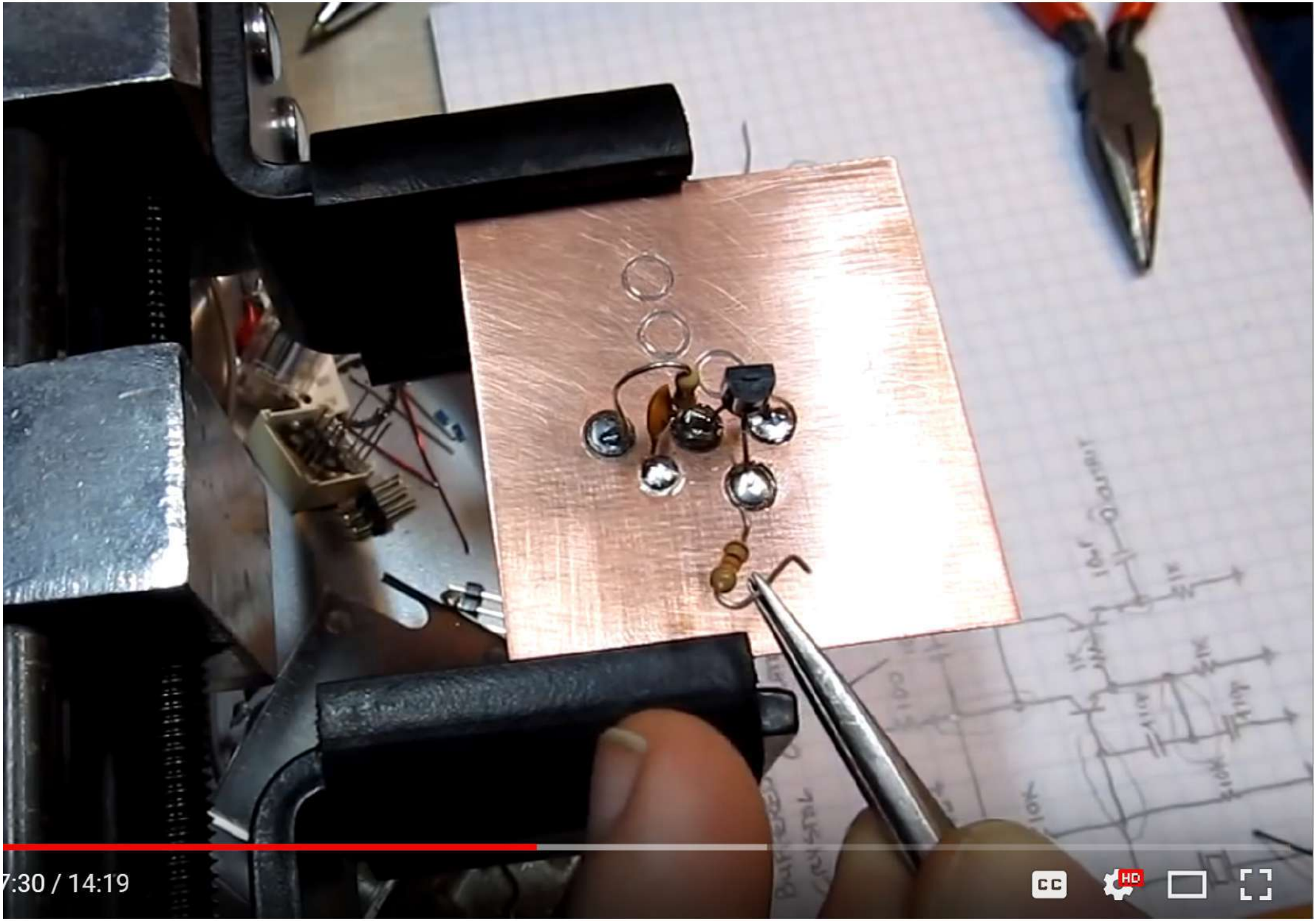


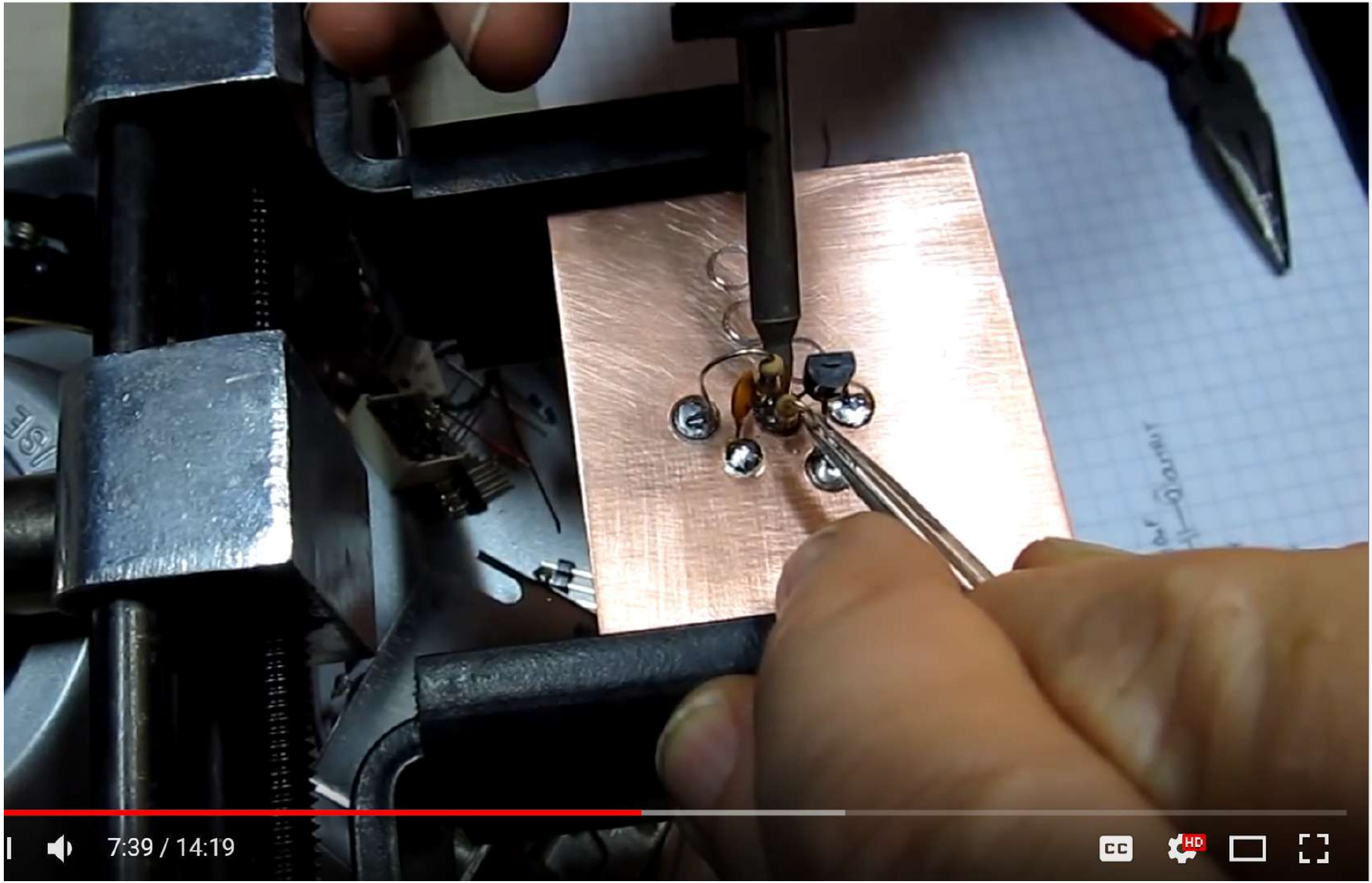


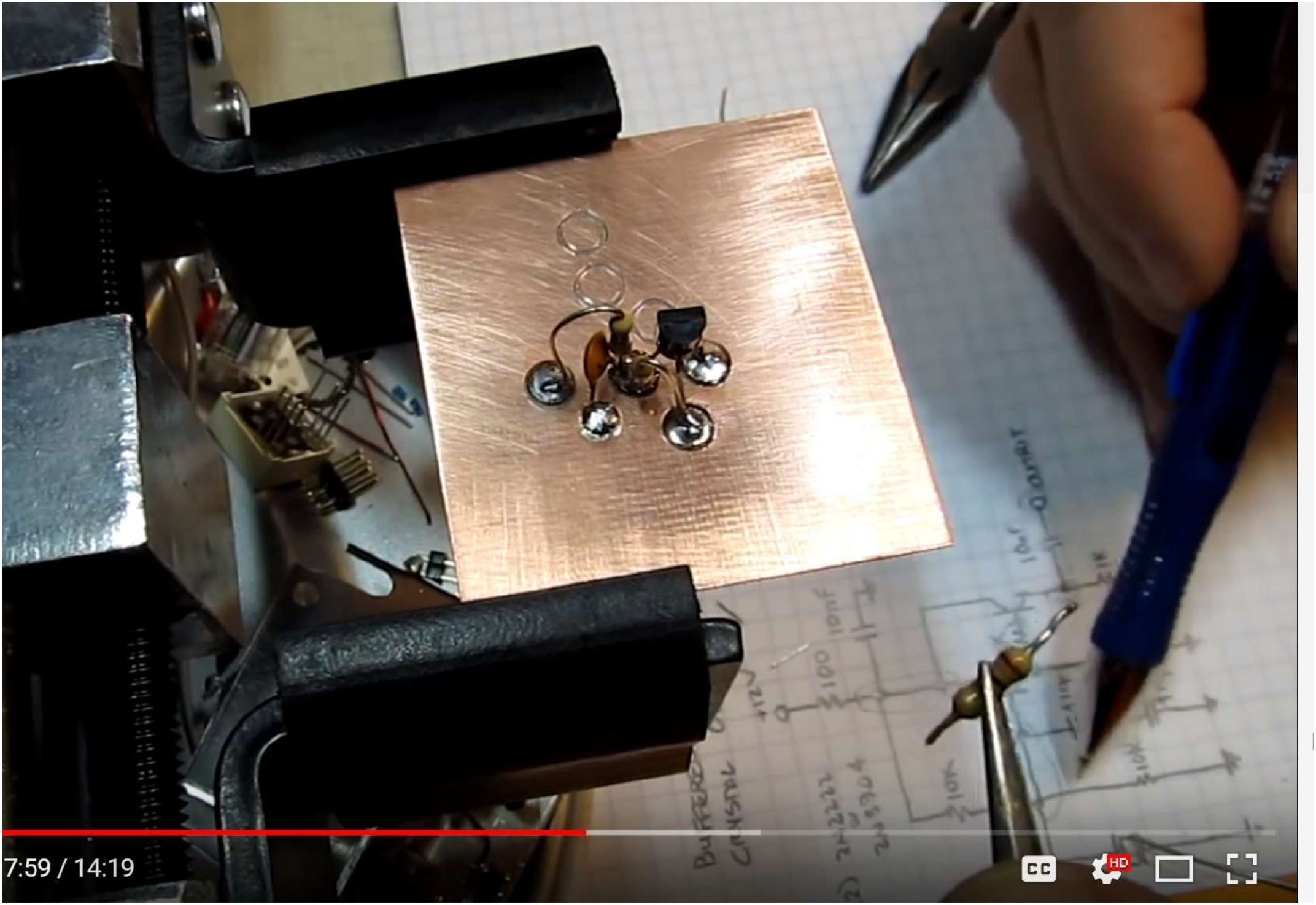


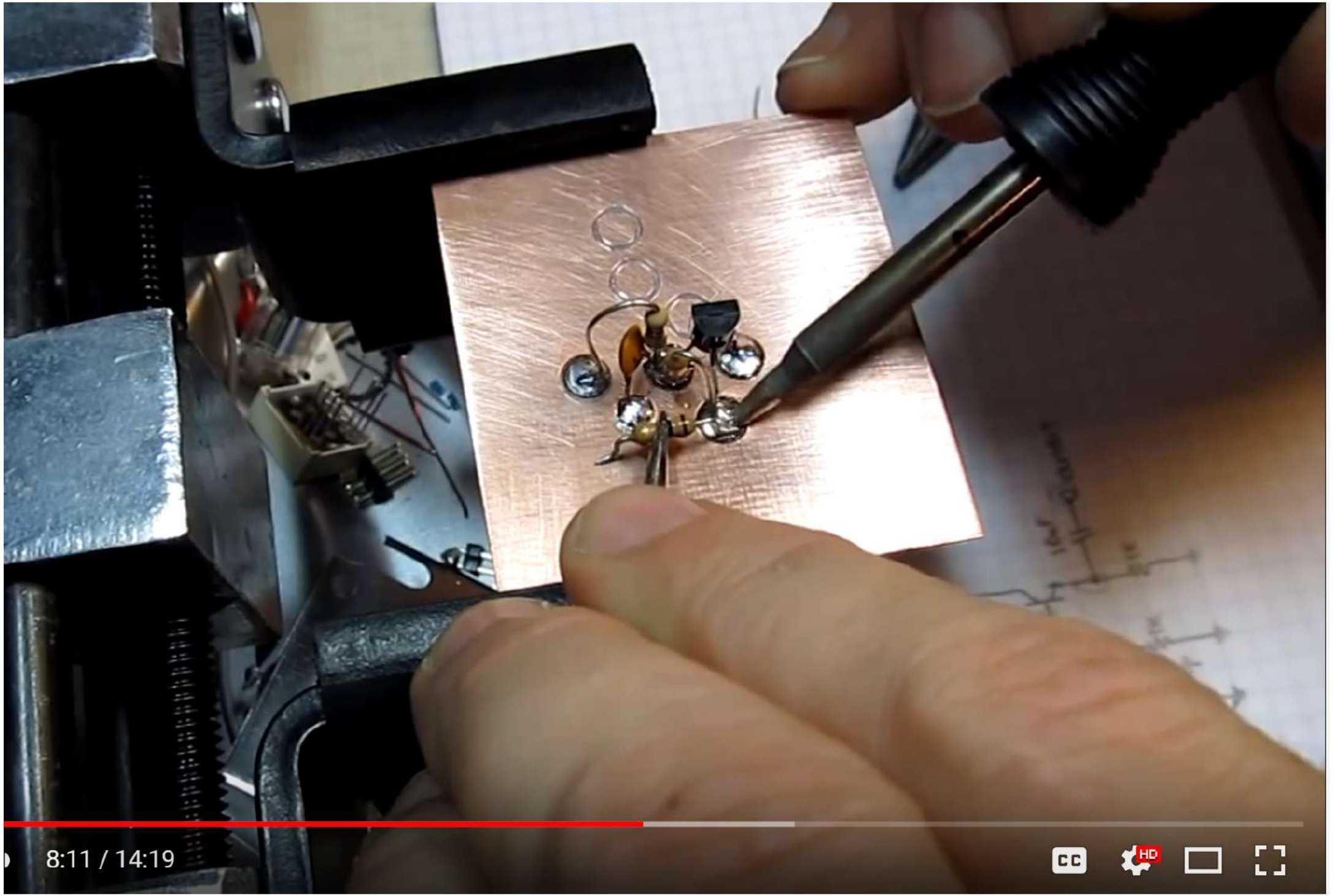

Mini-Circuits
Mini-Circuits


7:14 / 14:19

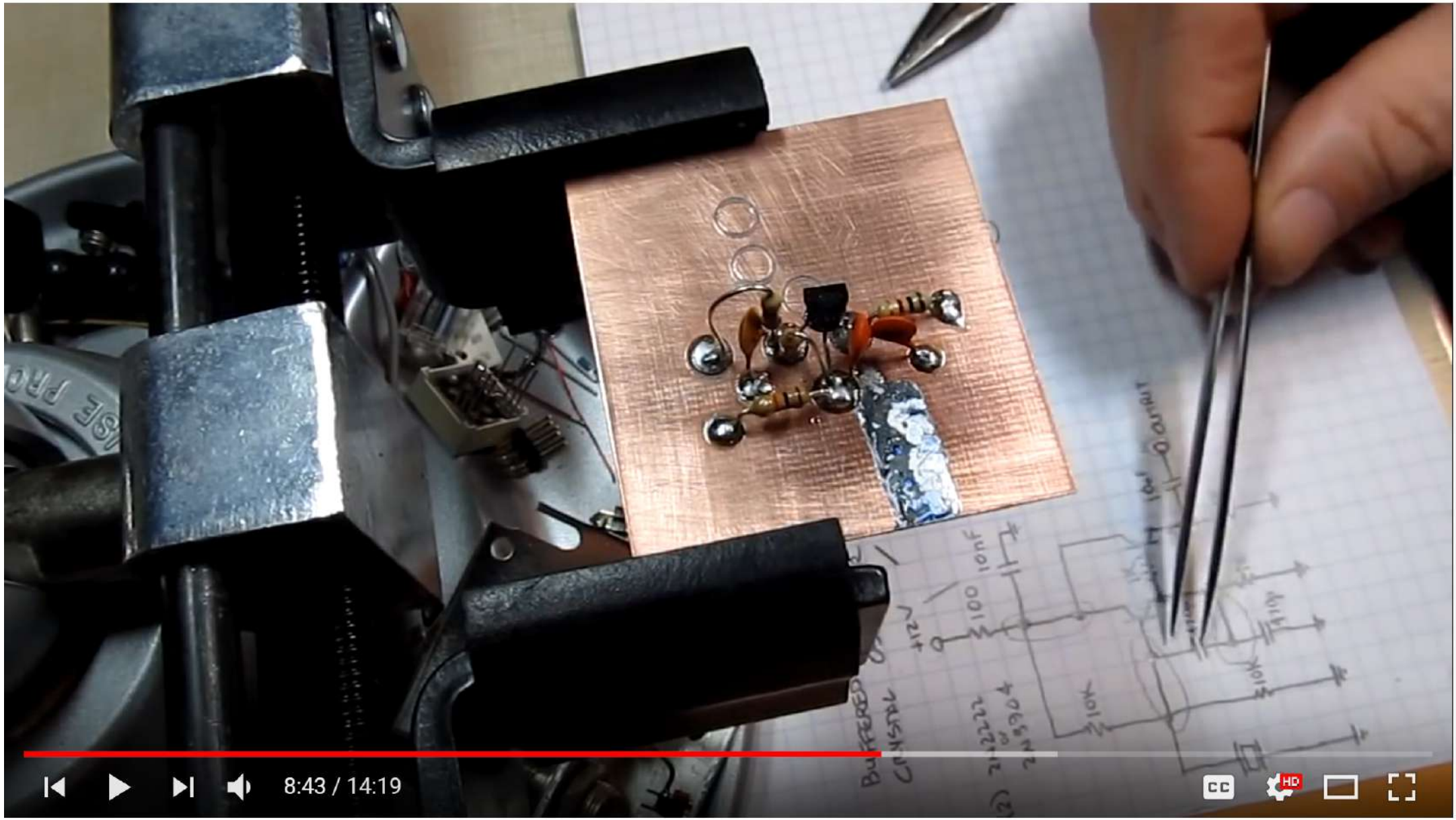

7:30 / 14:19


7:39 / 14:19
CC
HD

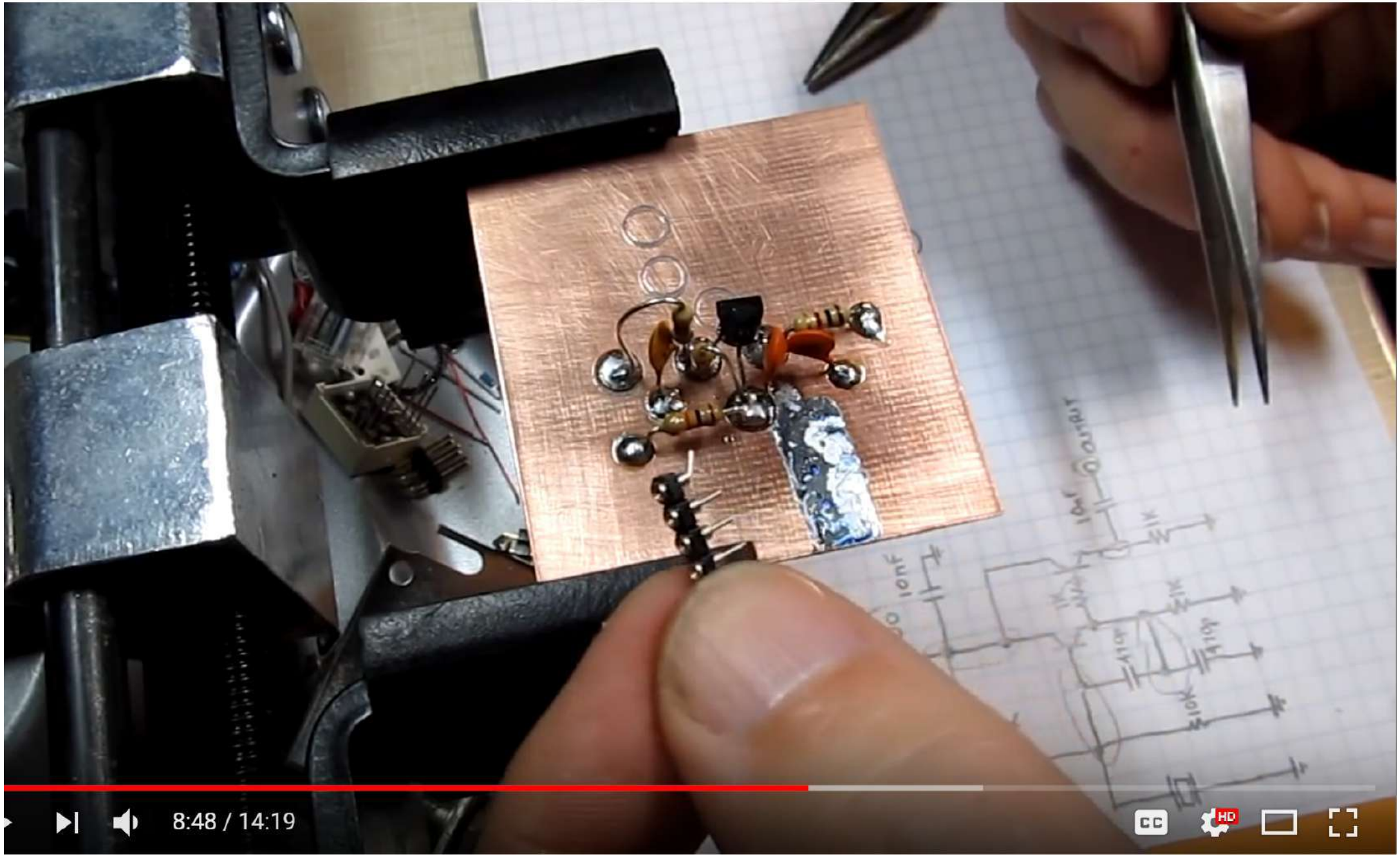

7:59 / 14:19

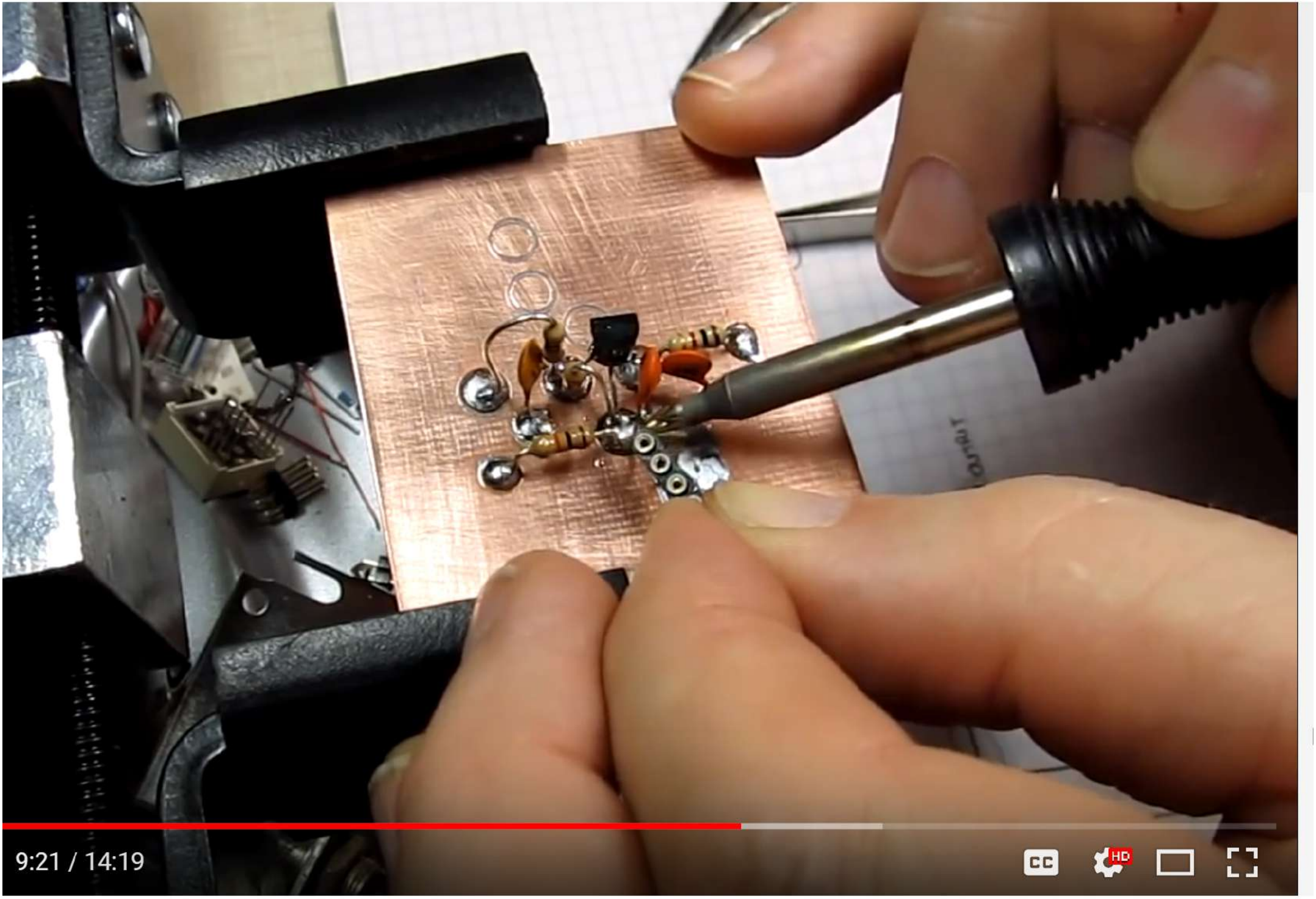

8:11 / 14:19
CC
HD

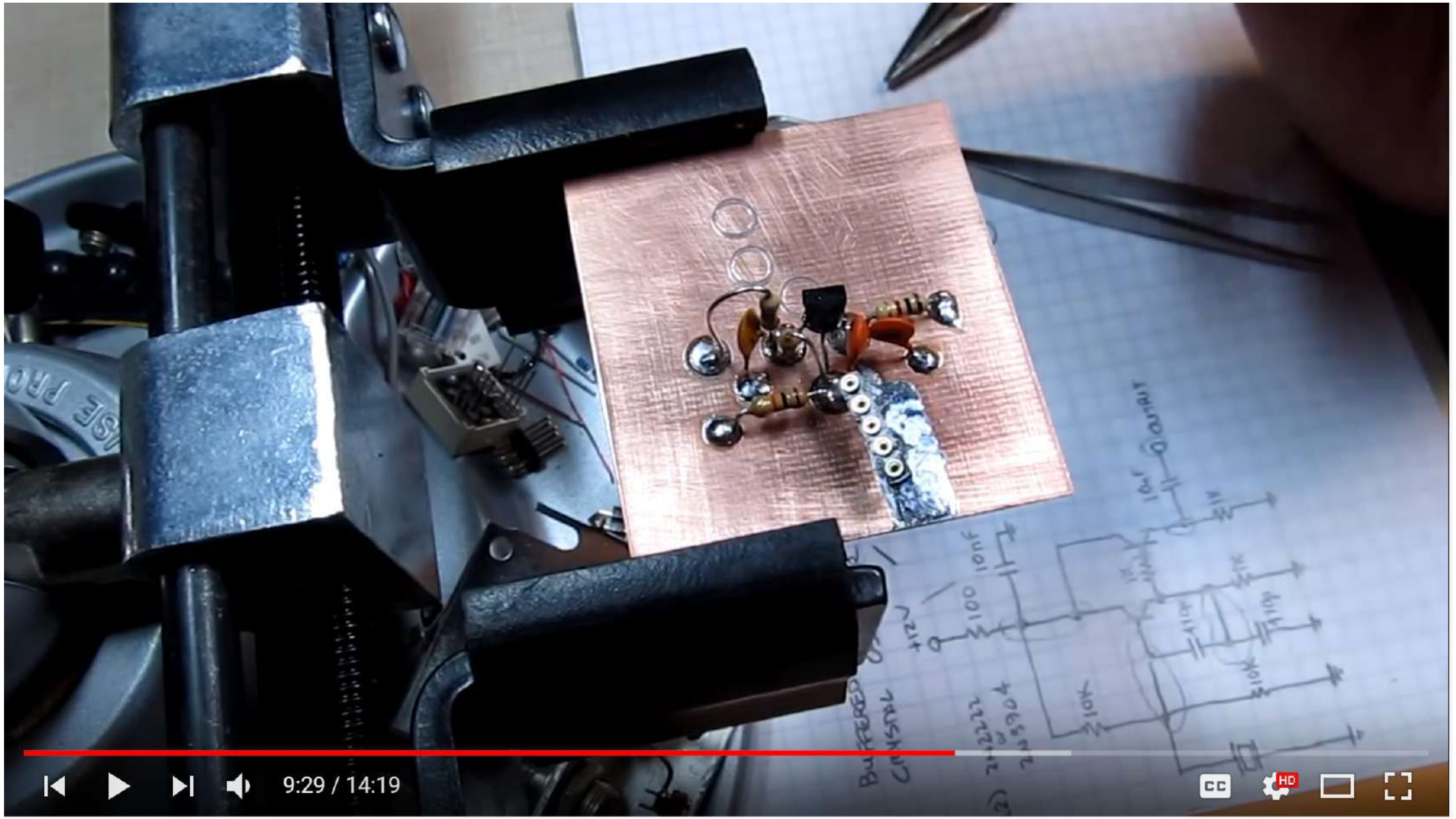

:19
CC
HD

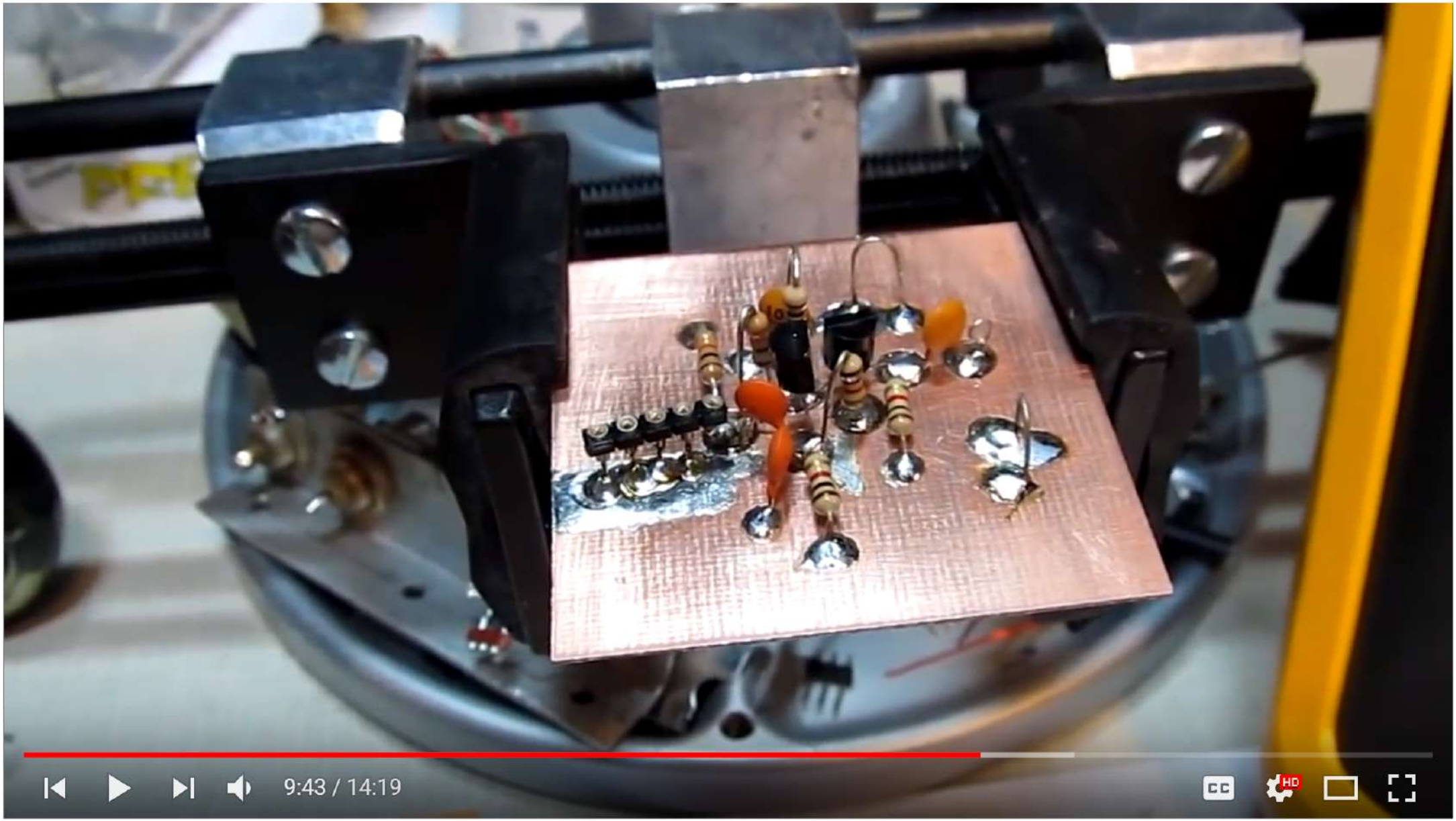


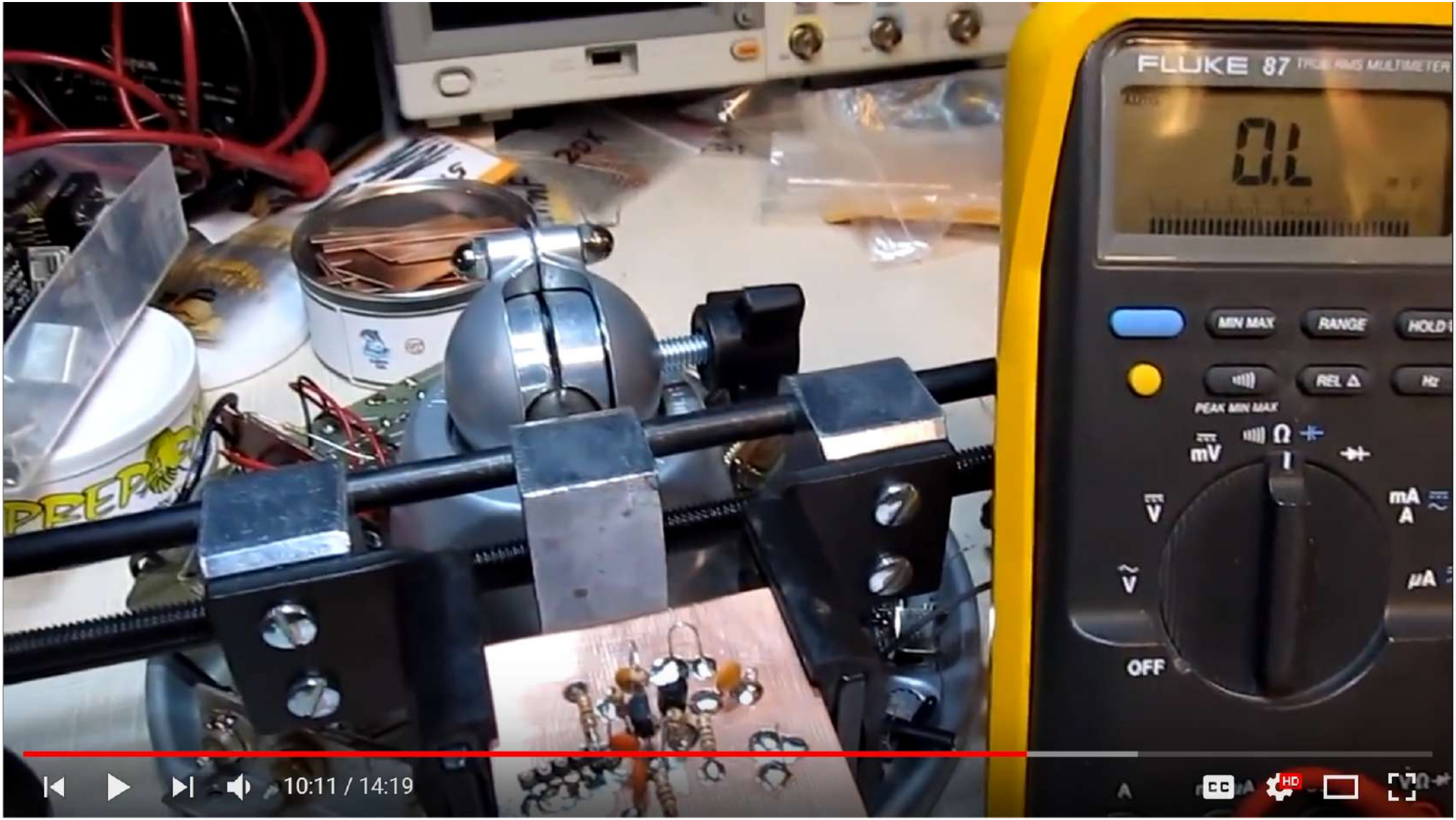
#123: Build a crystal oscillator from schematic thru prototype construction and testing - DIY

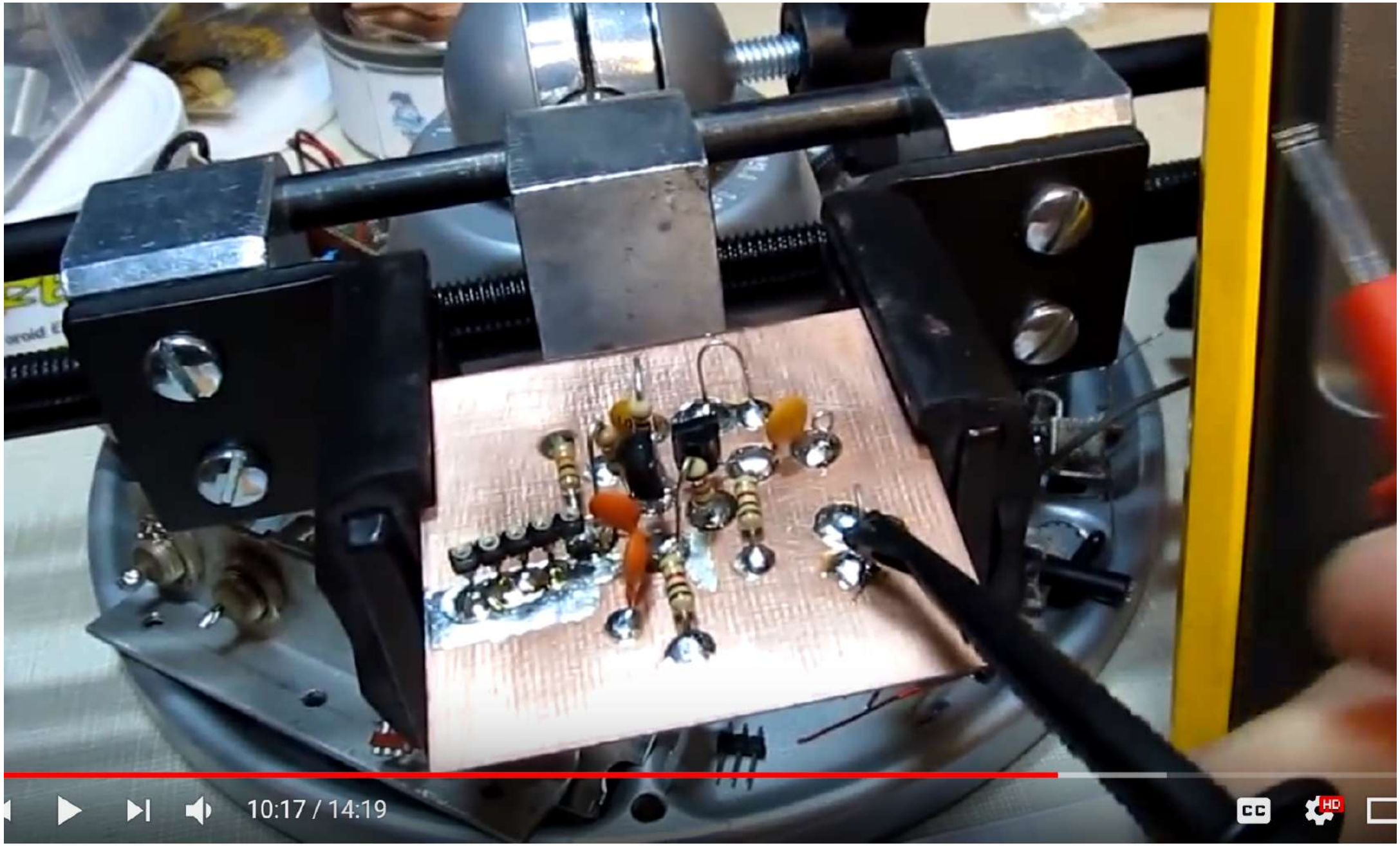

8:48 / 14:19

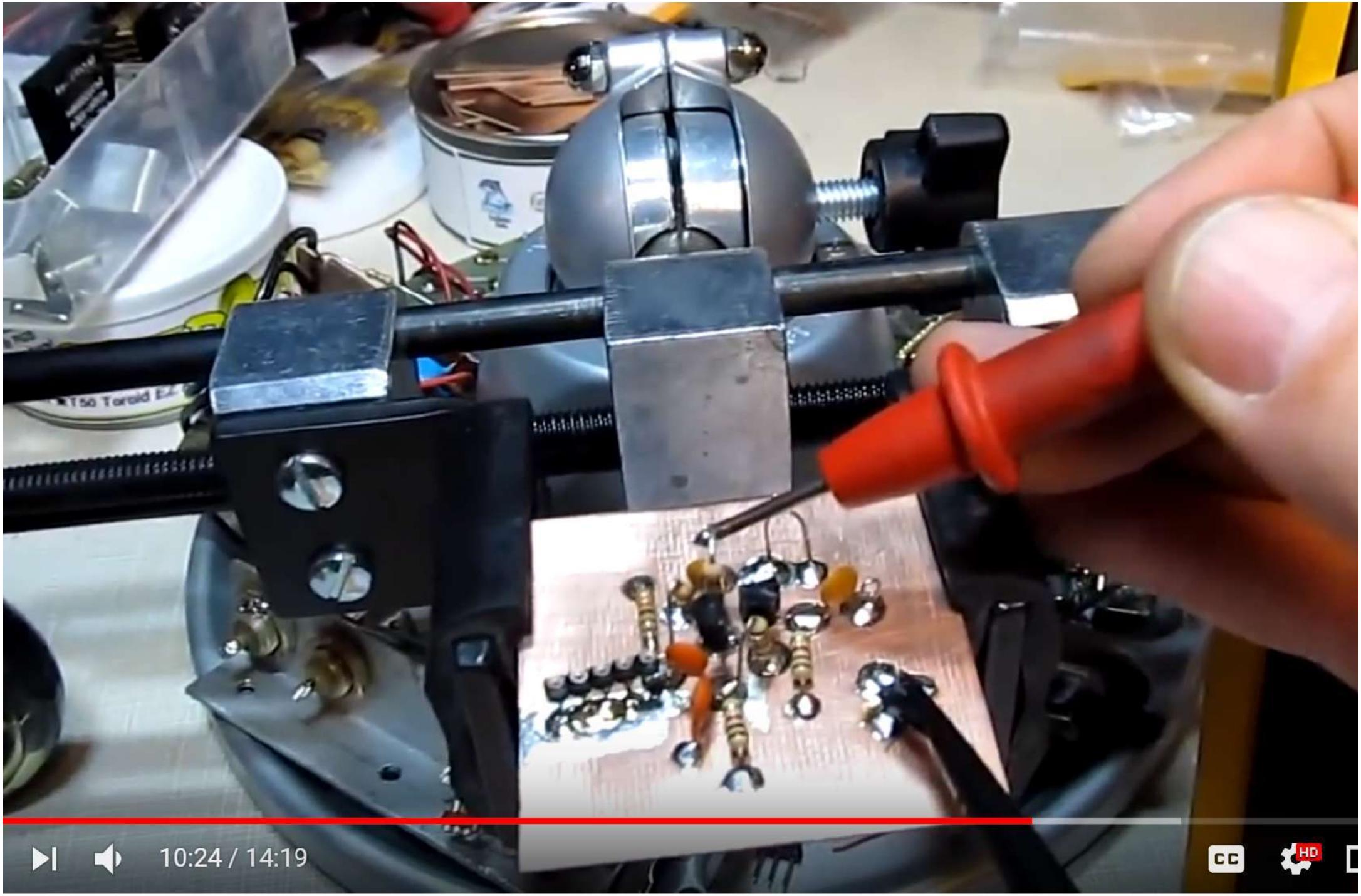

9:21 / 14:19
CC
HD

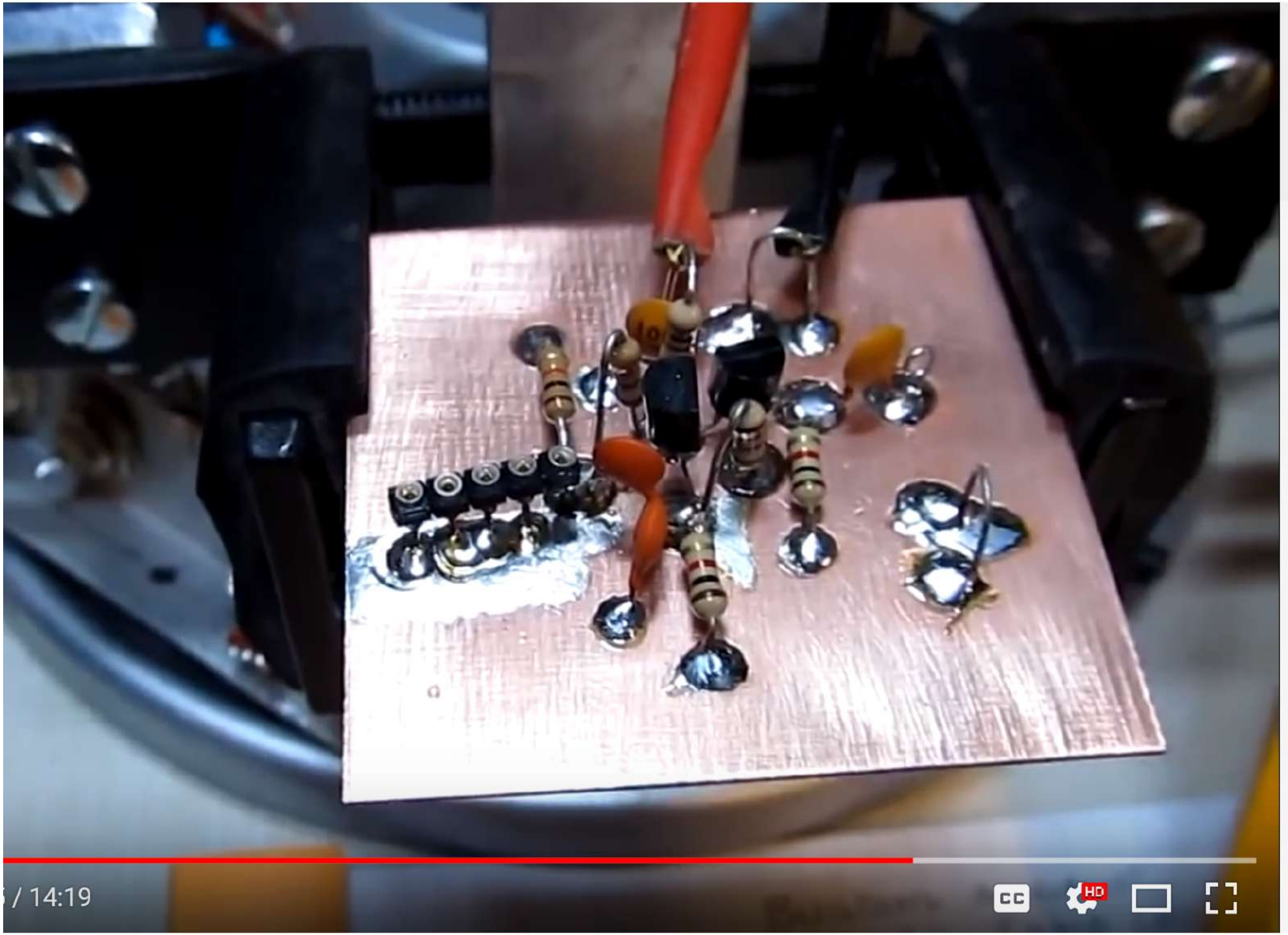

9:29 / 14:19

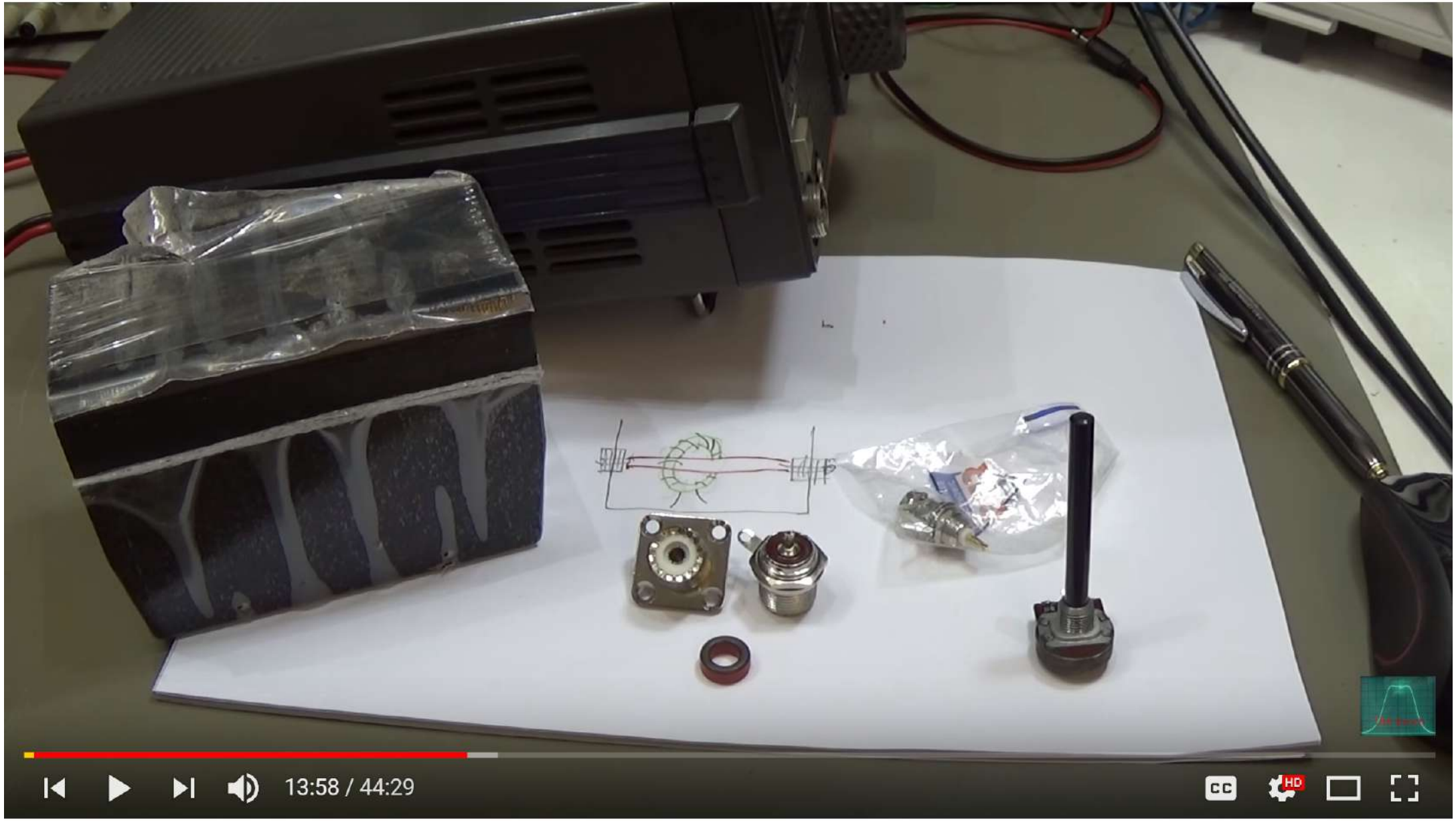

9:43 / 14:19


FLUKE 87
0.L
MIN MAX
RANGE
REL Δ
PEAK MIN MAX
mV
Ω
mA
A
V
μA
OFF
10:11 / 14:19

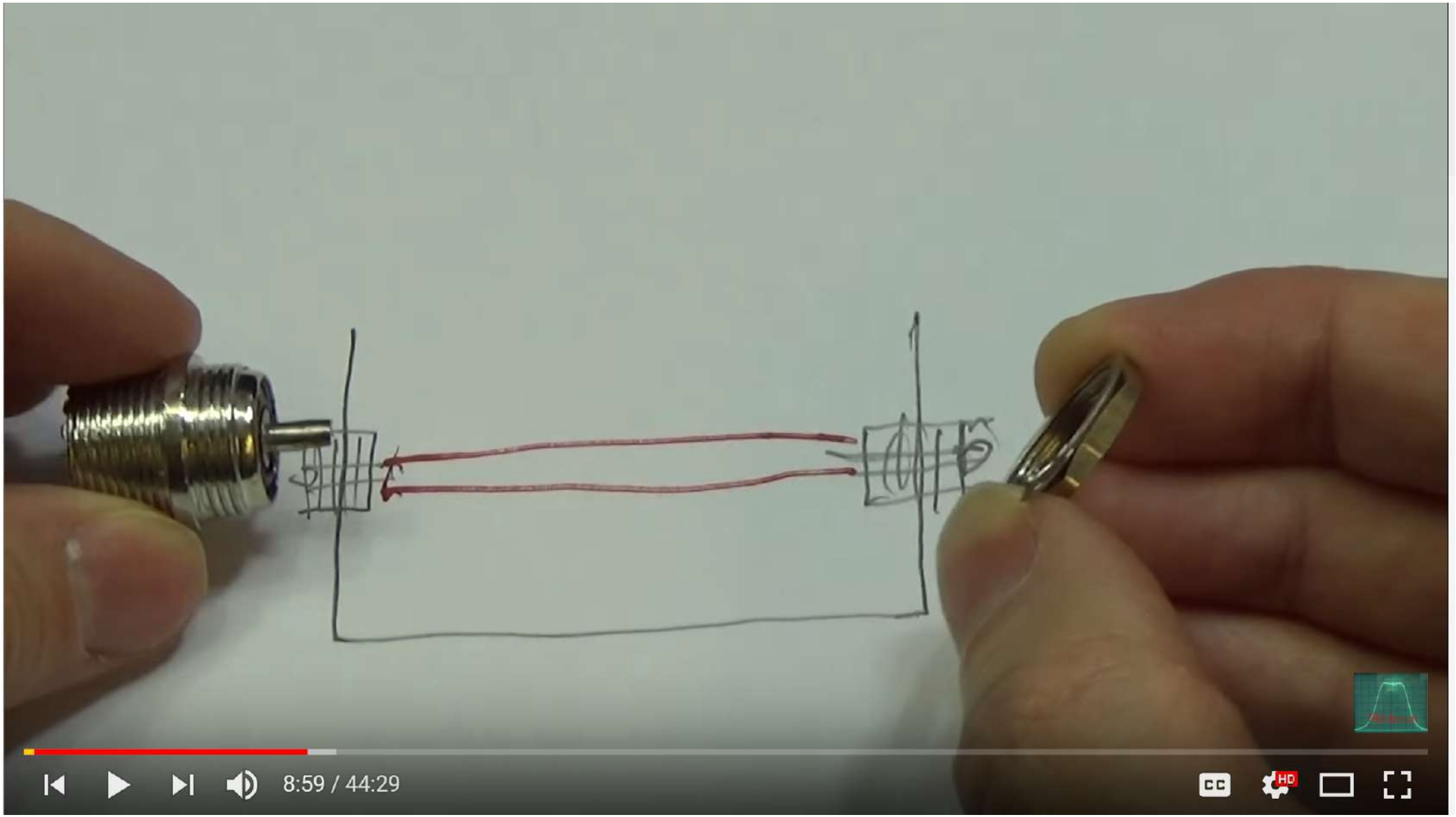

10:17 / 14:19
CC
HD

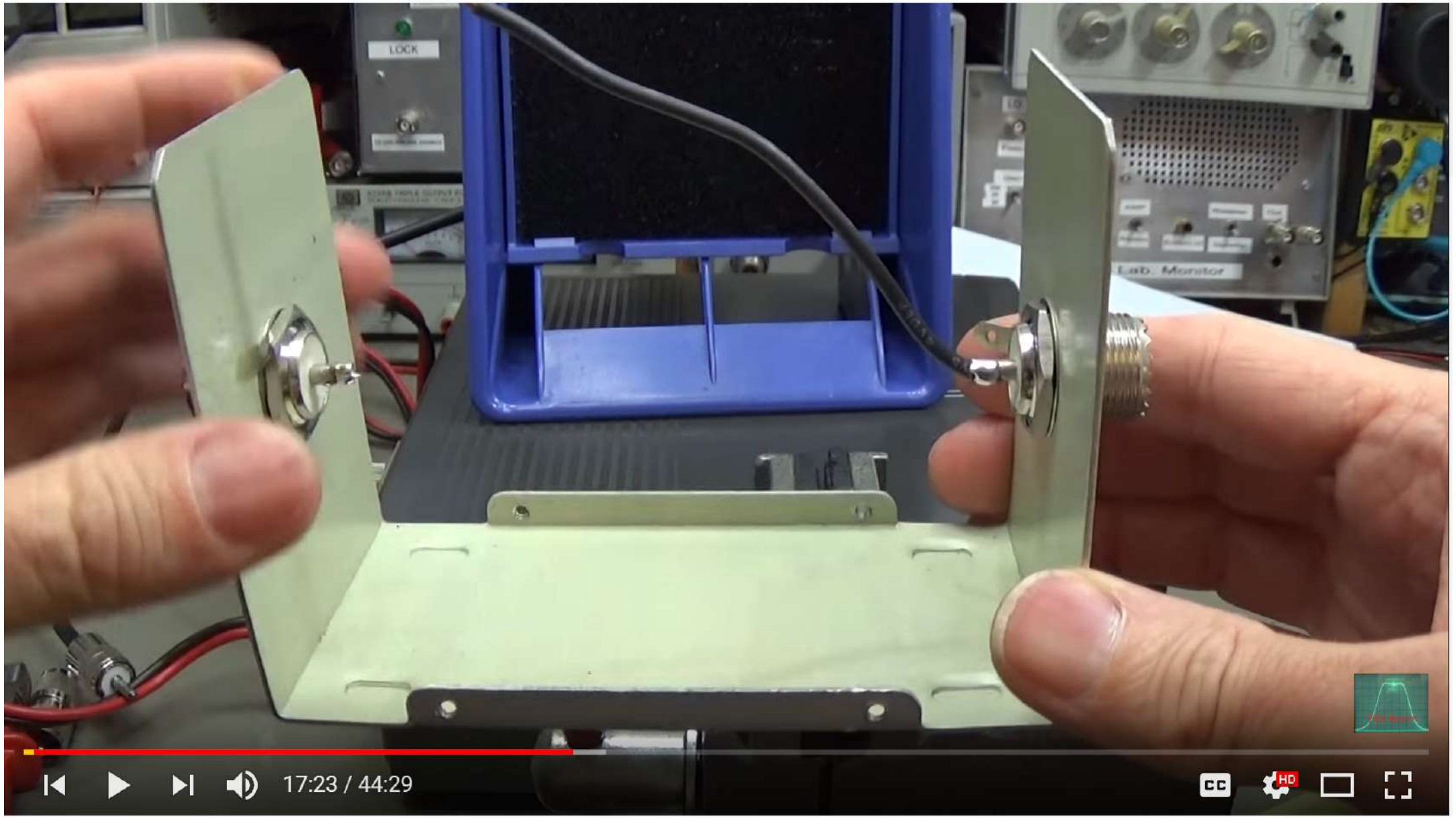

T50 Toroid
10:24 / 14:19
CC
HD


/ 14:19



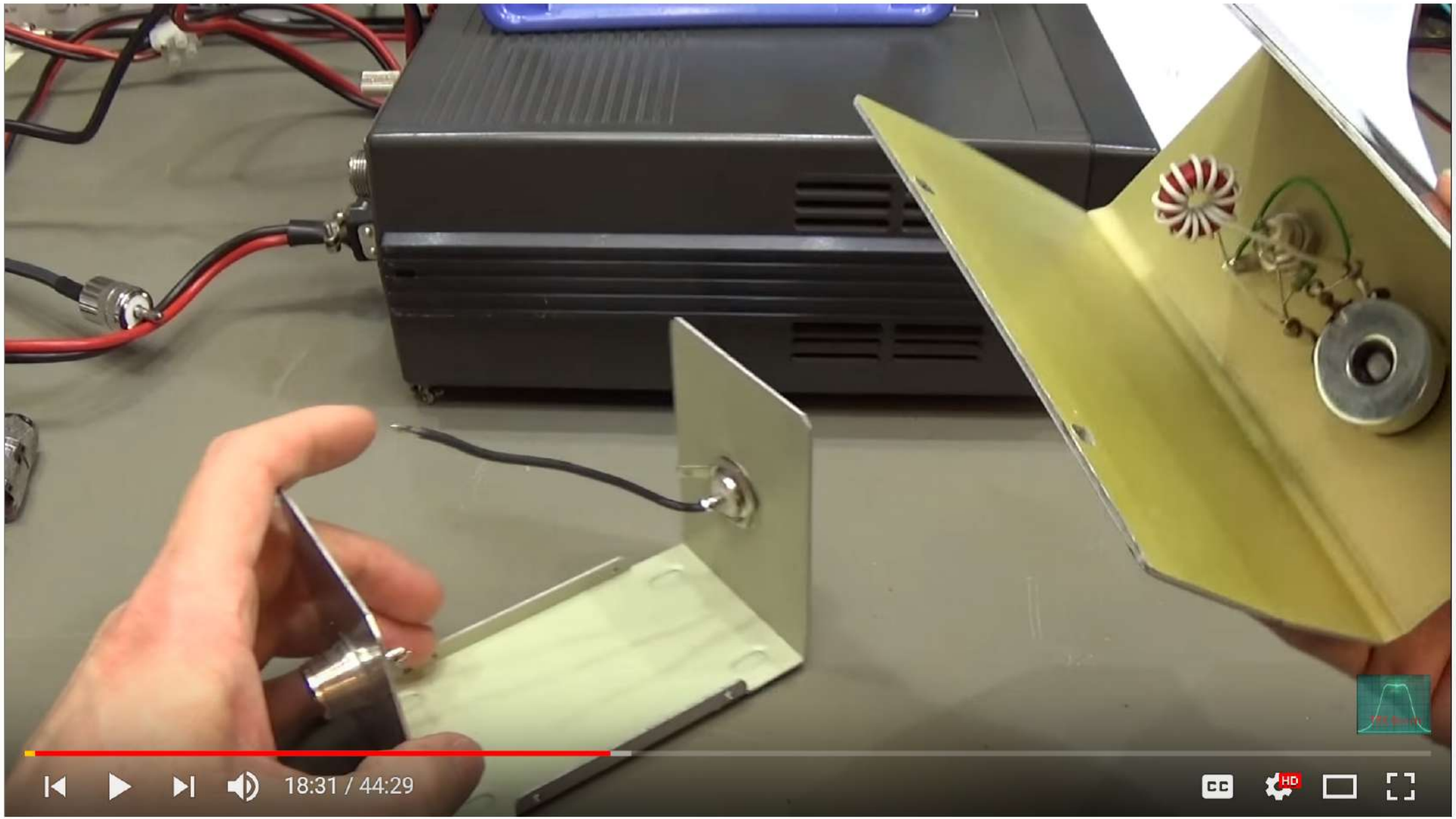
#74 Quick Tip: Build a Variable RF Tap for your shack or lab


8:59 / 44:29

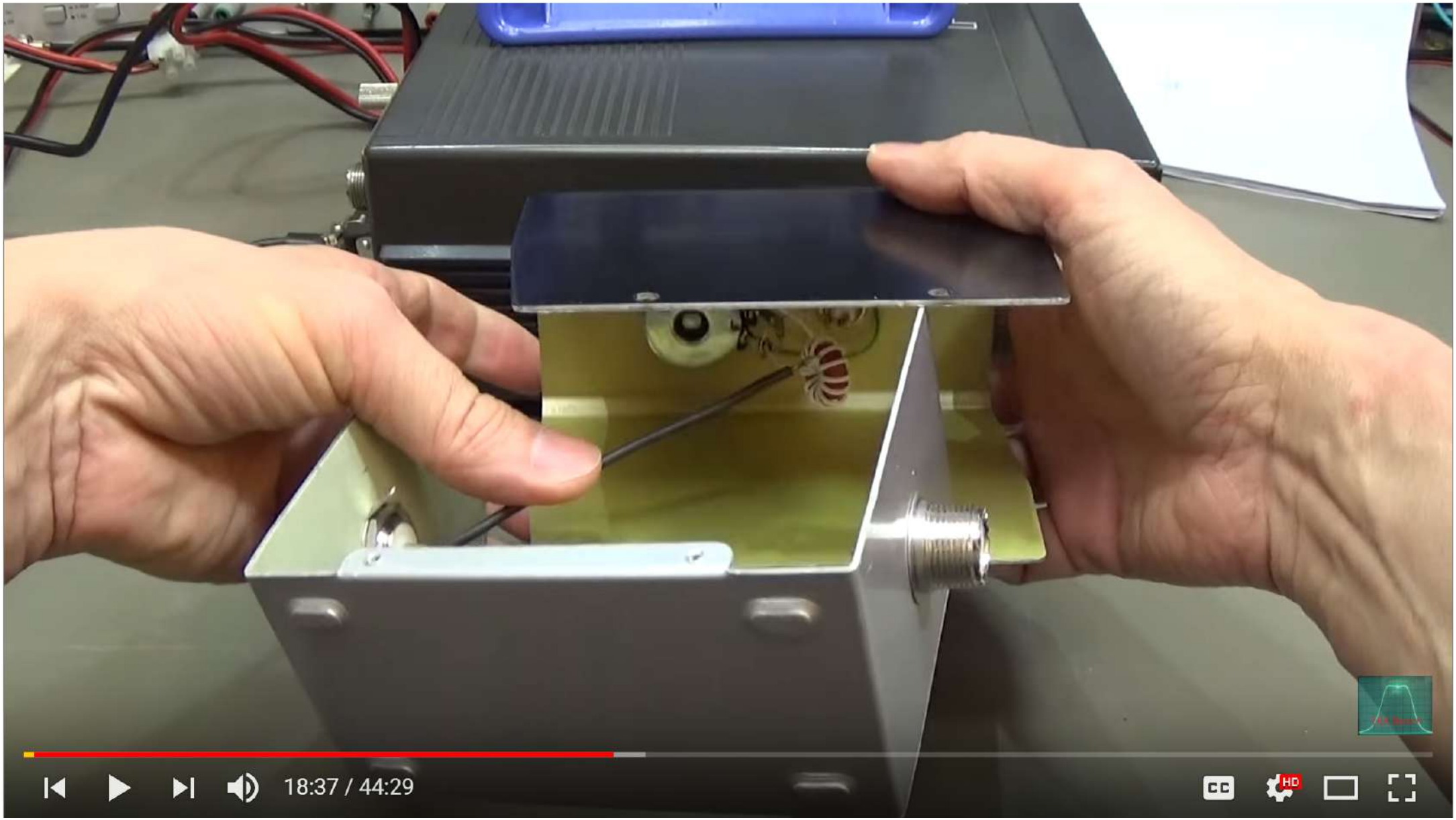

LOCK
Lab. Monitor
17:23 / 44:29




17:57 / 44:29



#74 Quick Tip: Build a Variable RF Tap for your shack or lab


18:37 / 44:29
HD

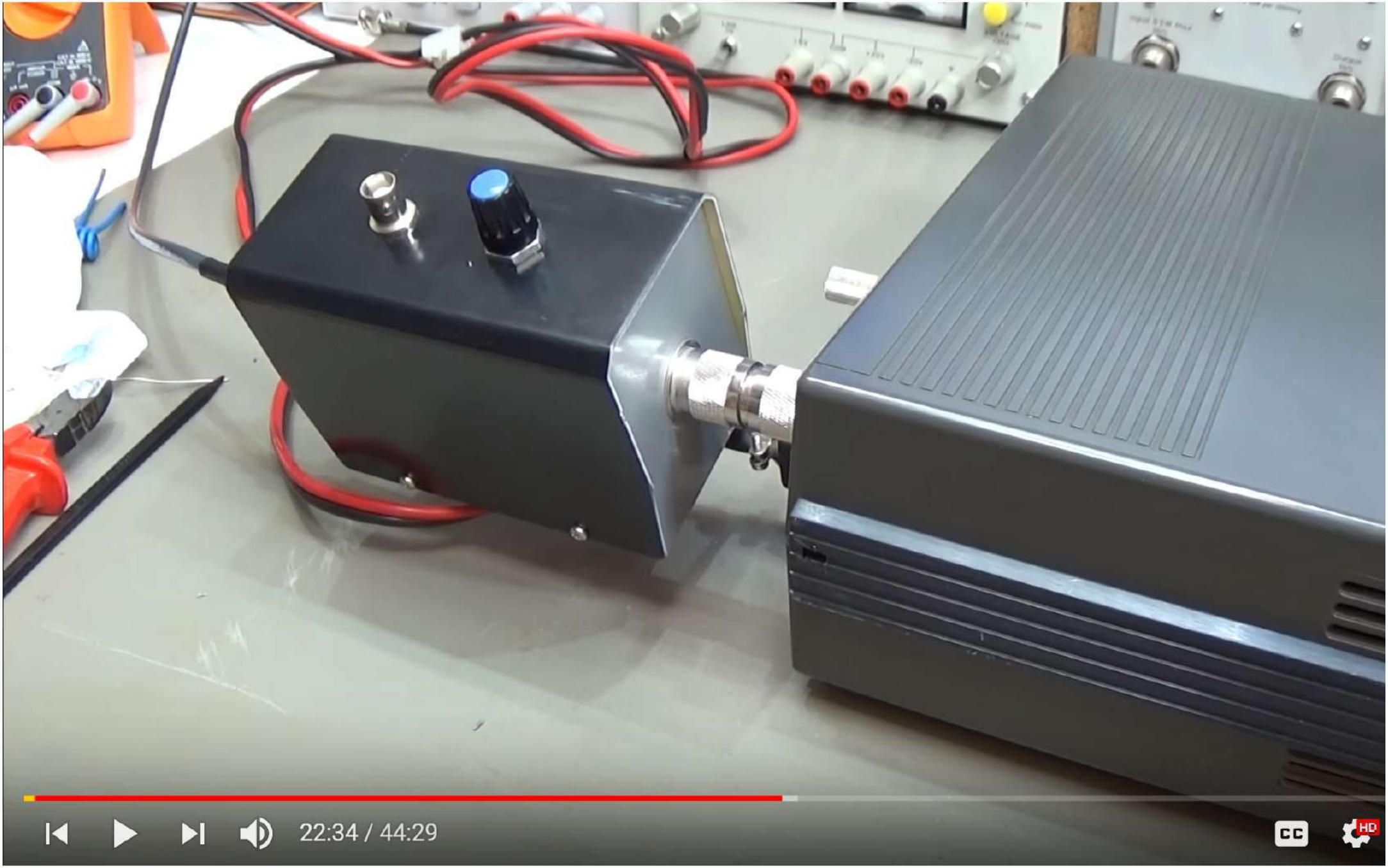

18:42 / 44:29
CC
HD

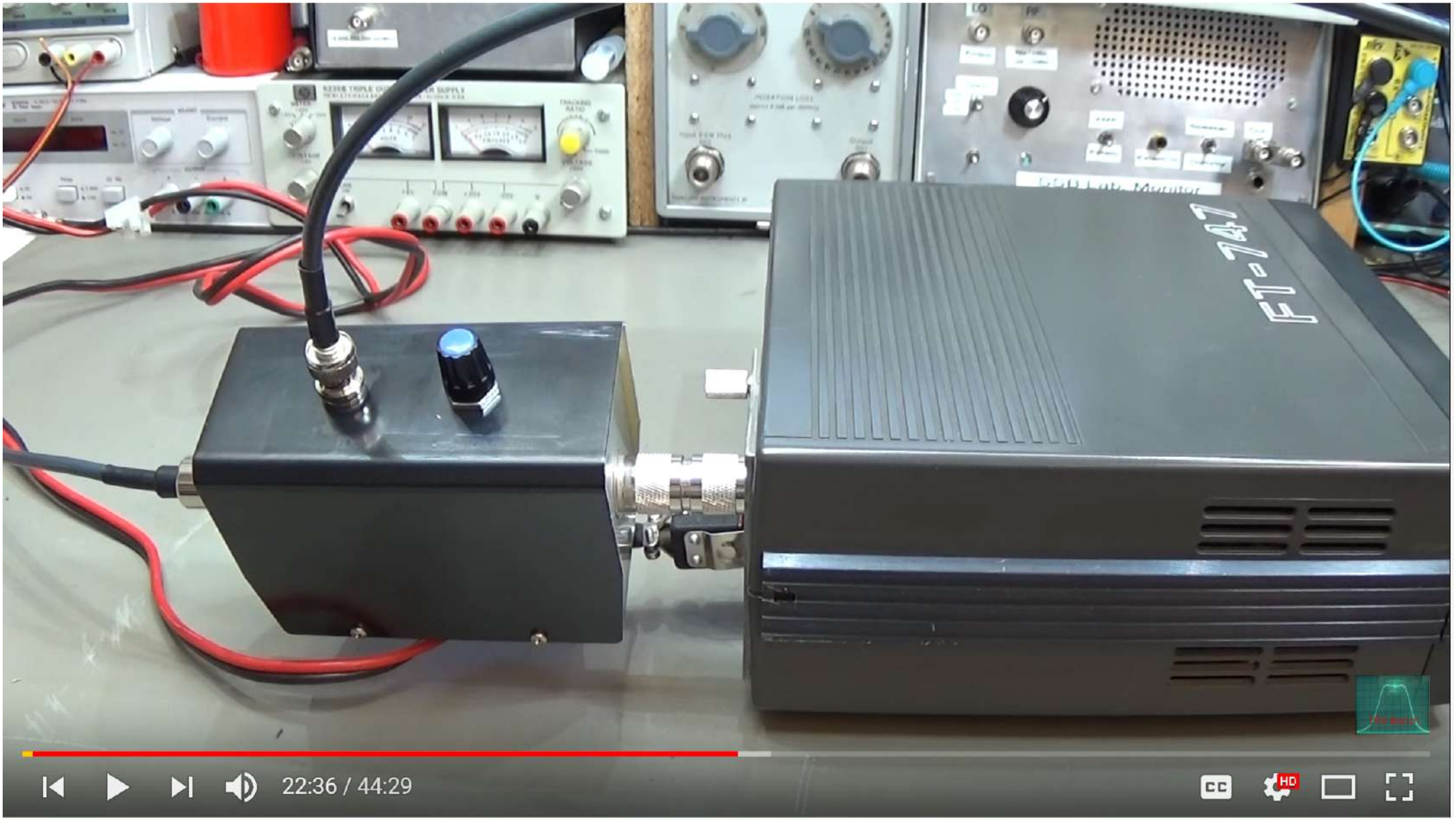

18:47 / 44:29
CC
HD

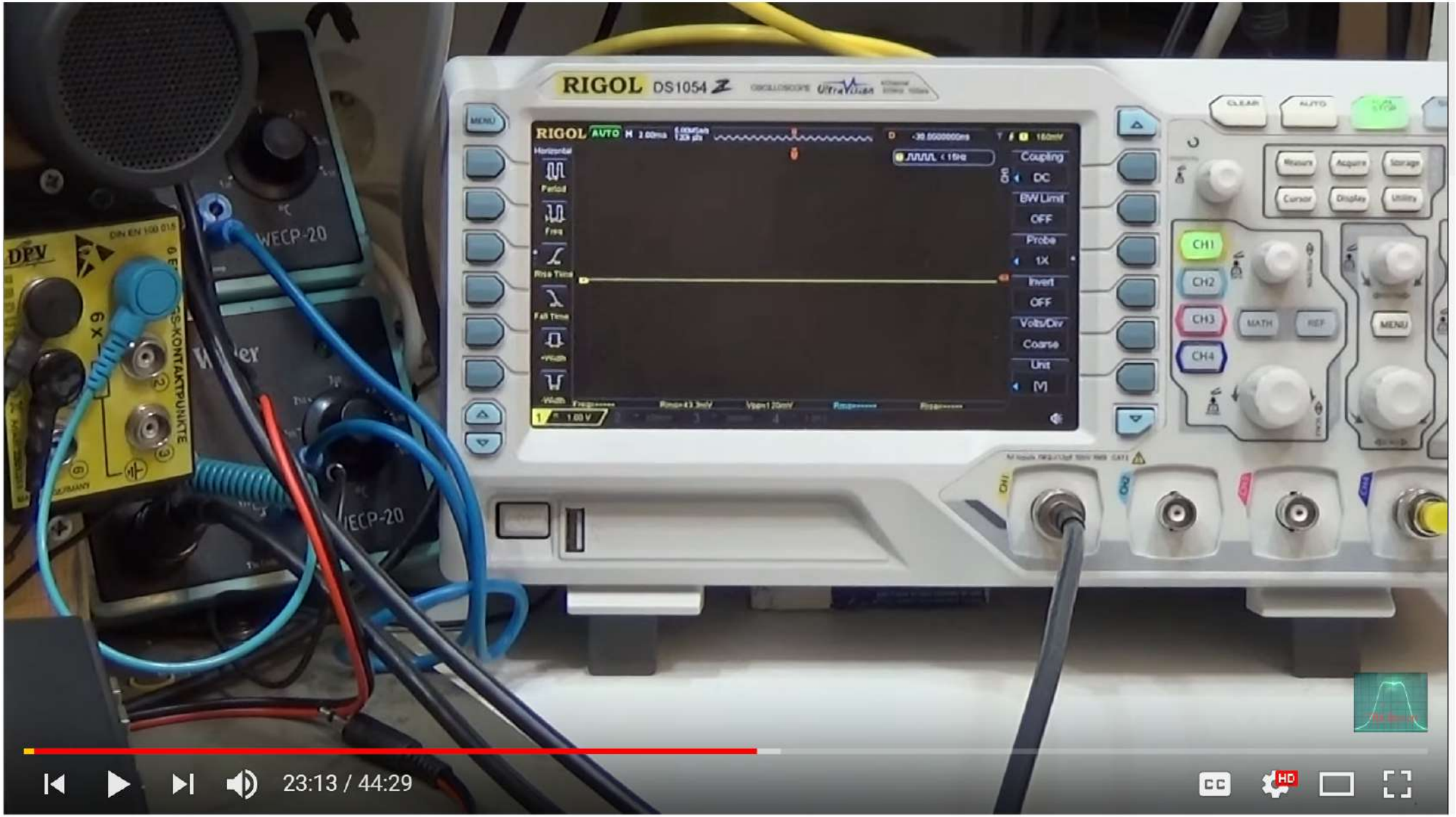

19:27 / 44:29
HD


21:27 / 44:29

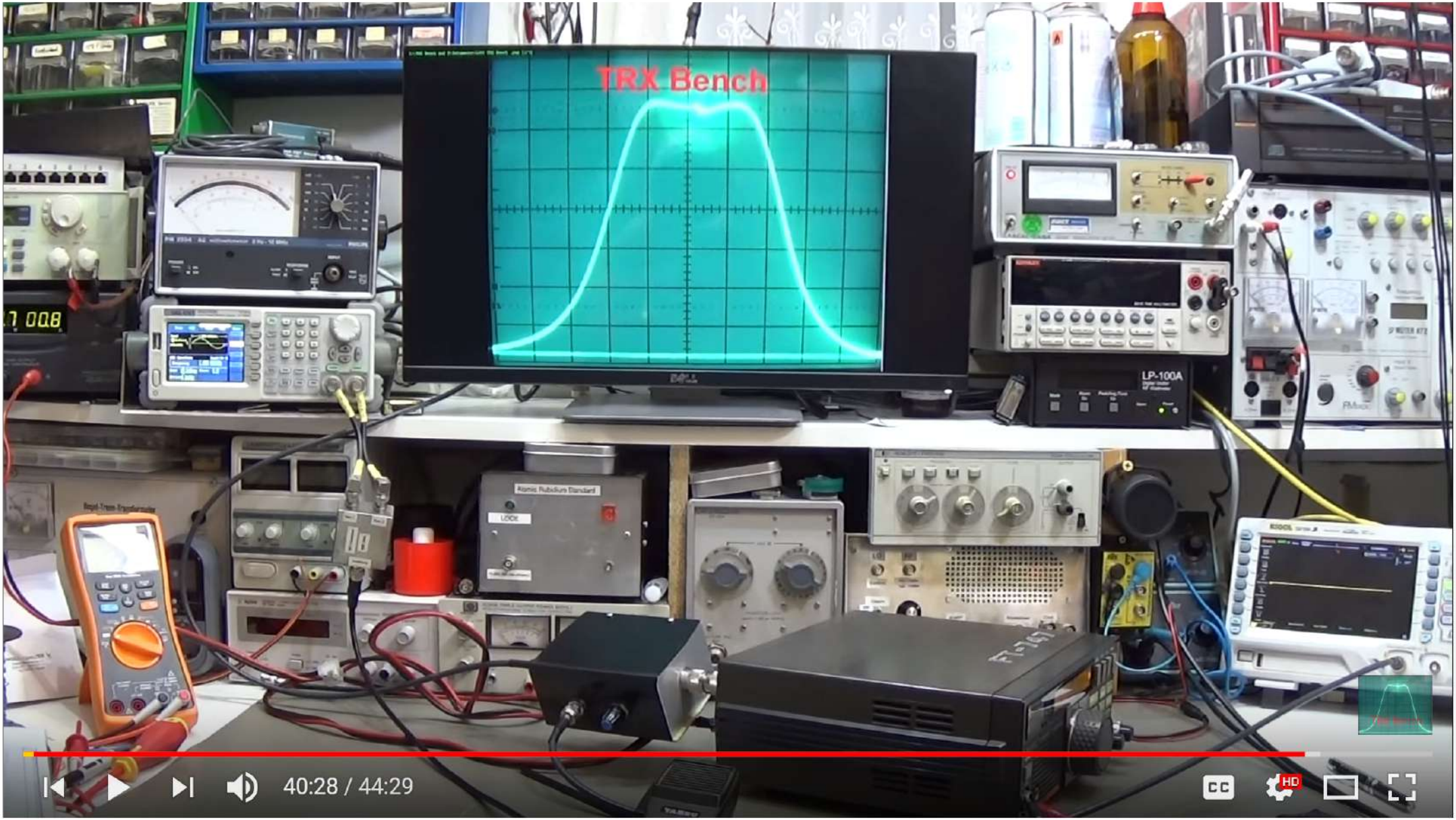

21:35 / 44:29
CC


22:34 / 44:29
CC
HD

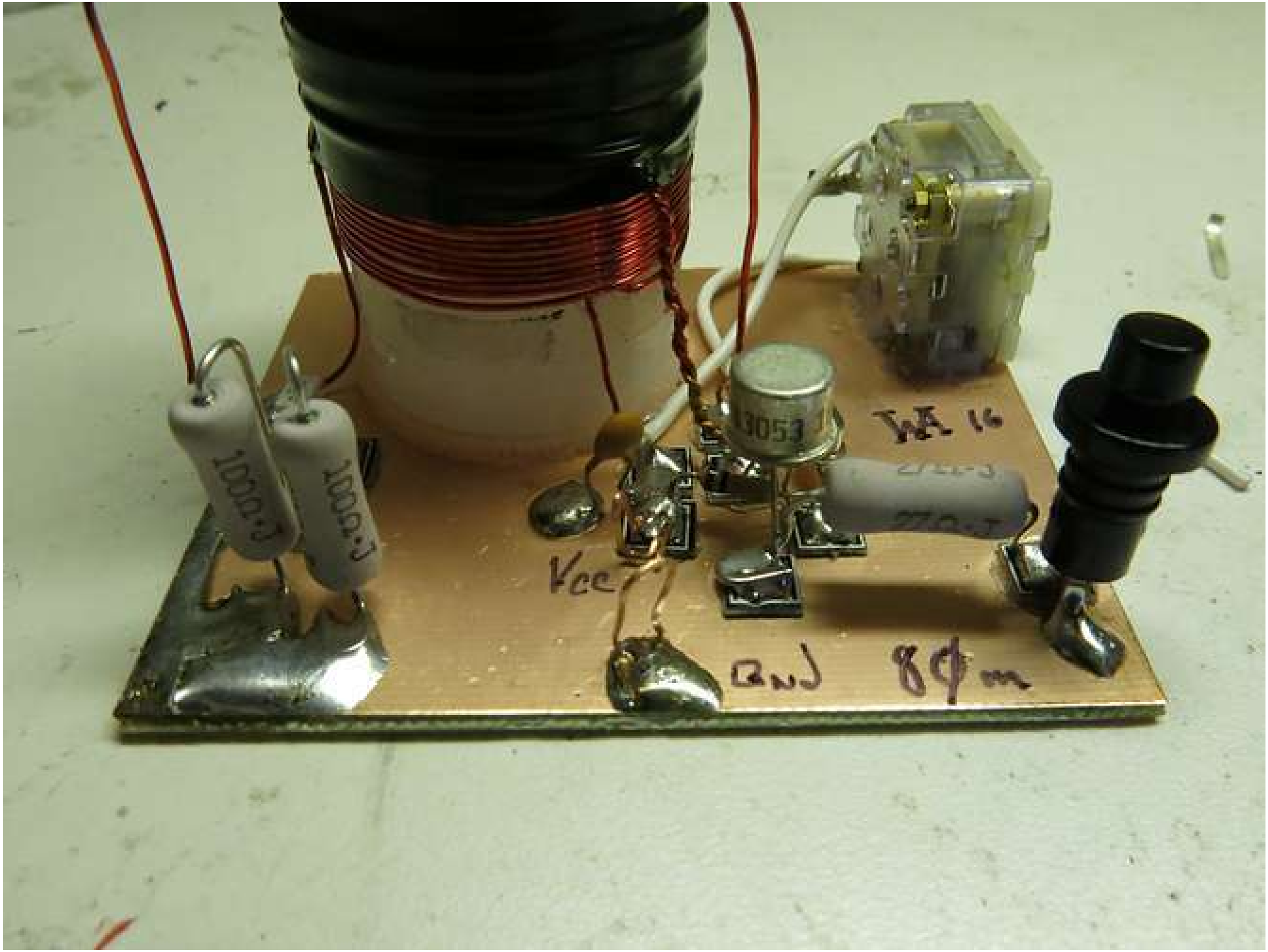

FT-747
22:36 / 44:29

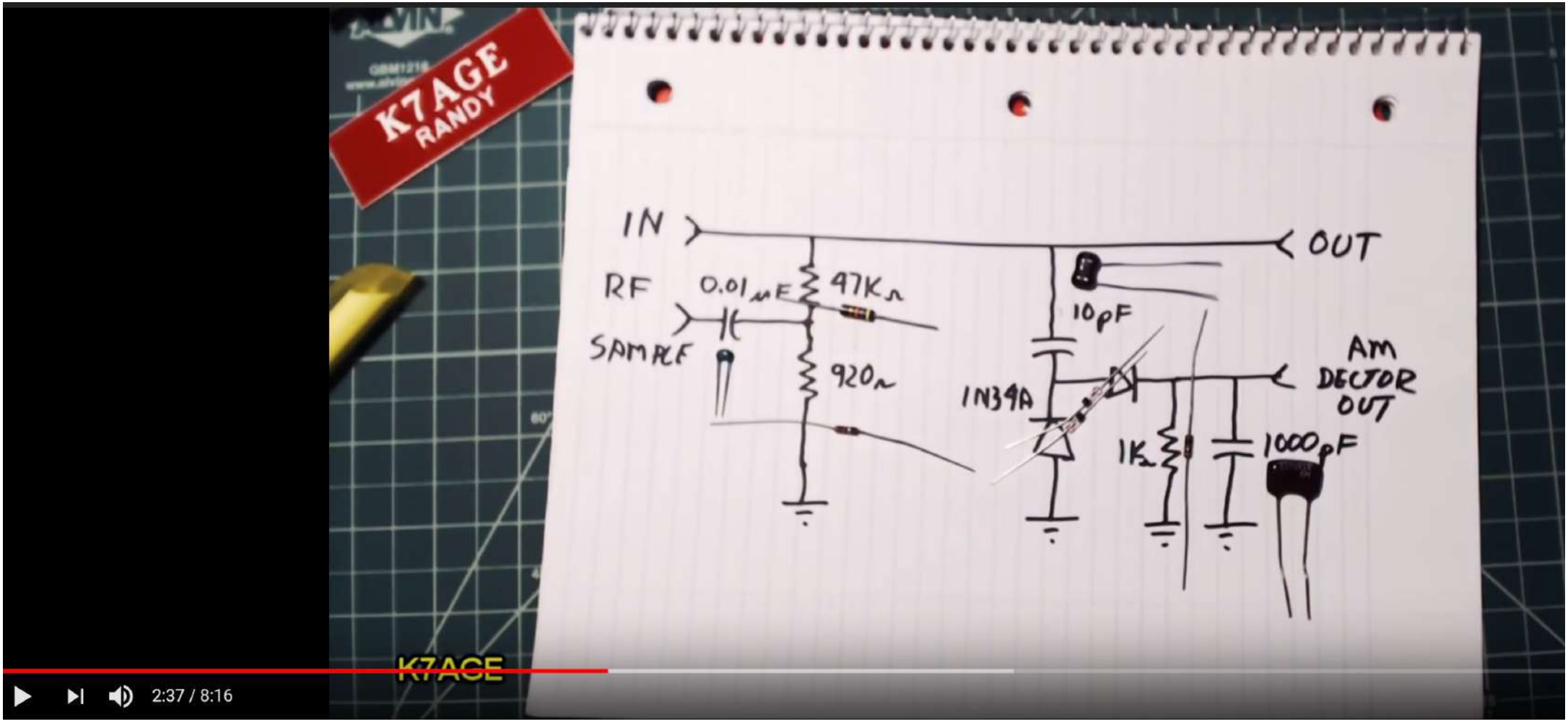

RIGOL DS1054 Z
RIGOL AUTO
Coupling
DC
BW Limit
OFF
Probe
1X
Invert
OFF
Volts/Div
Coarse
Unit
V
CH1
CH2
CH3
CH4
MATH
REF
MENU
CLEAR
AUTO
Measure
Acquire
Storage
Cursor
Display
Utility
WECP-20
23:13 / 44:29


FT-747
SSB Lab. Moni
ON AIR
3.679.600
NAR
ATT
NB
MOX
YAESU
HF TRANSCEIVER FT-747GX
POWER
MIC
PHONES
◄ MODE ►
VFO
MR
SPLIT
FAST
AF SQL
MIC DRIVE
24:39 / 44:29



#74 Quick Tip: Build a Variable RF Tap for your shack or lab

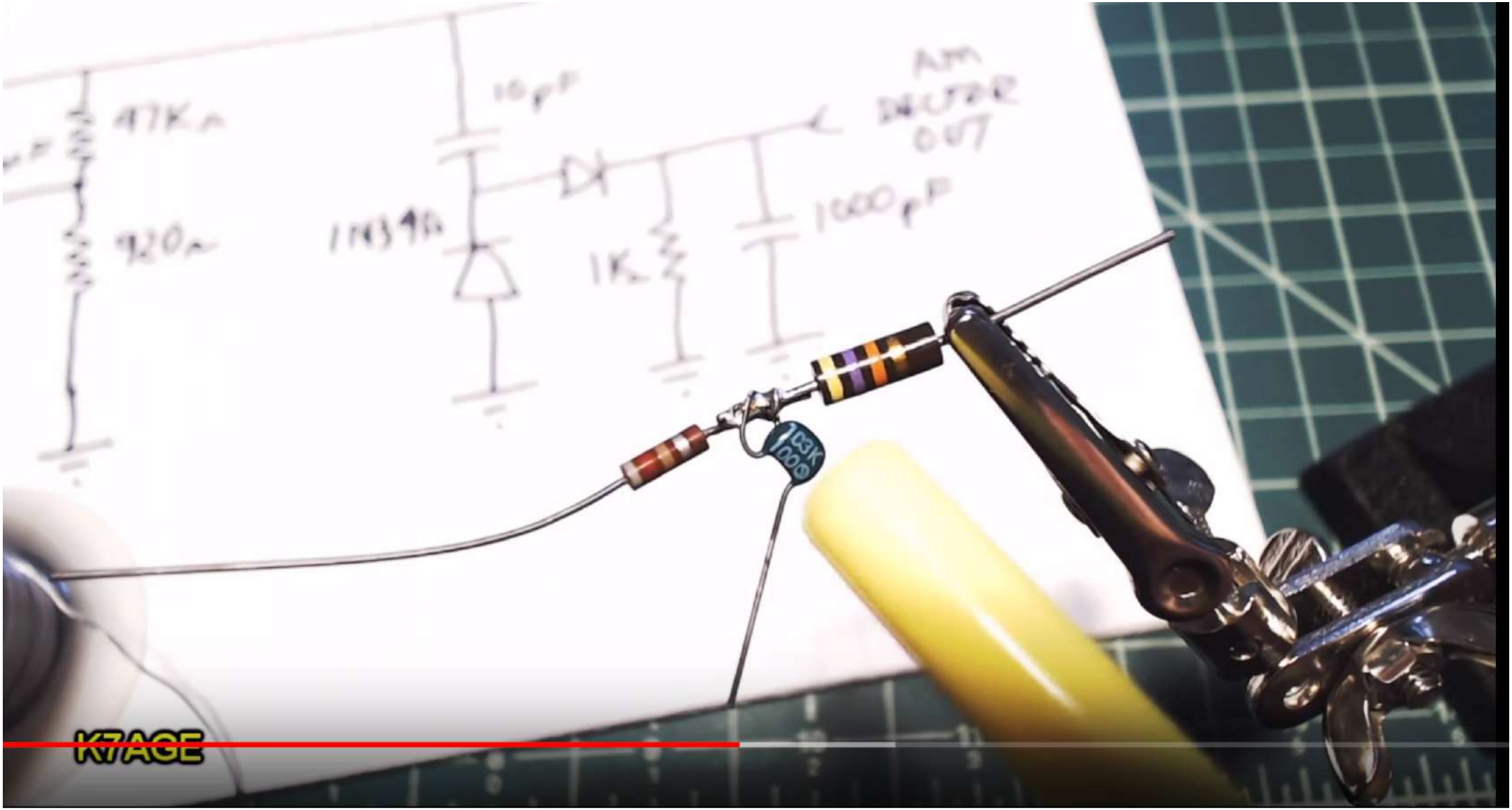

1000Ω 1/4W
1000Ω 1/4W
3053
Vcc

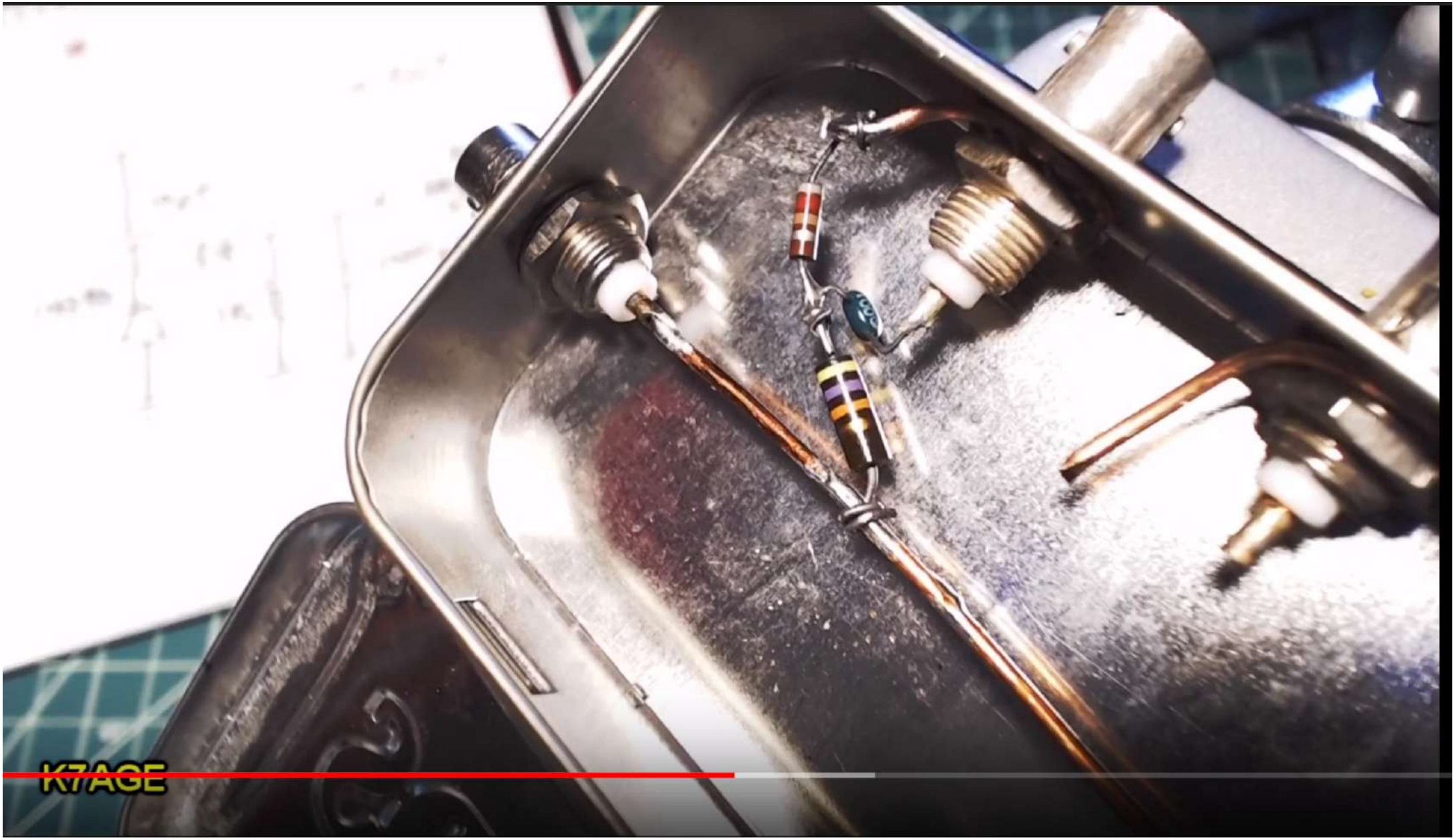


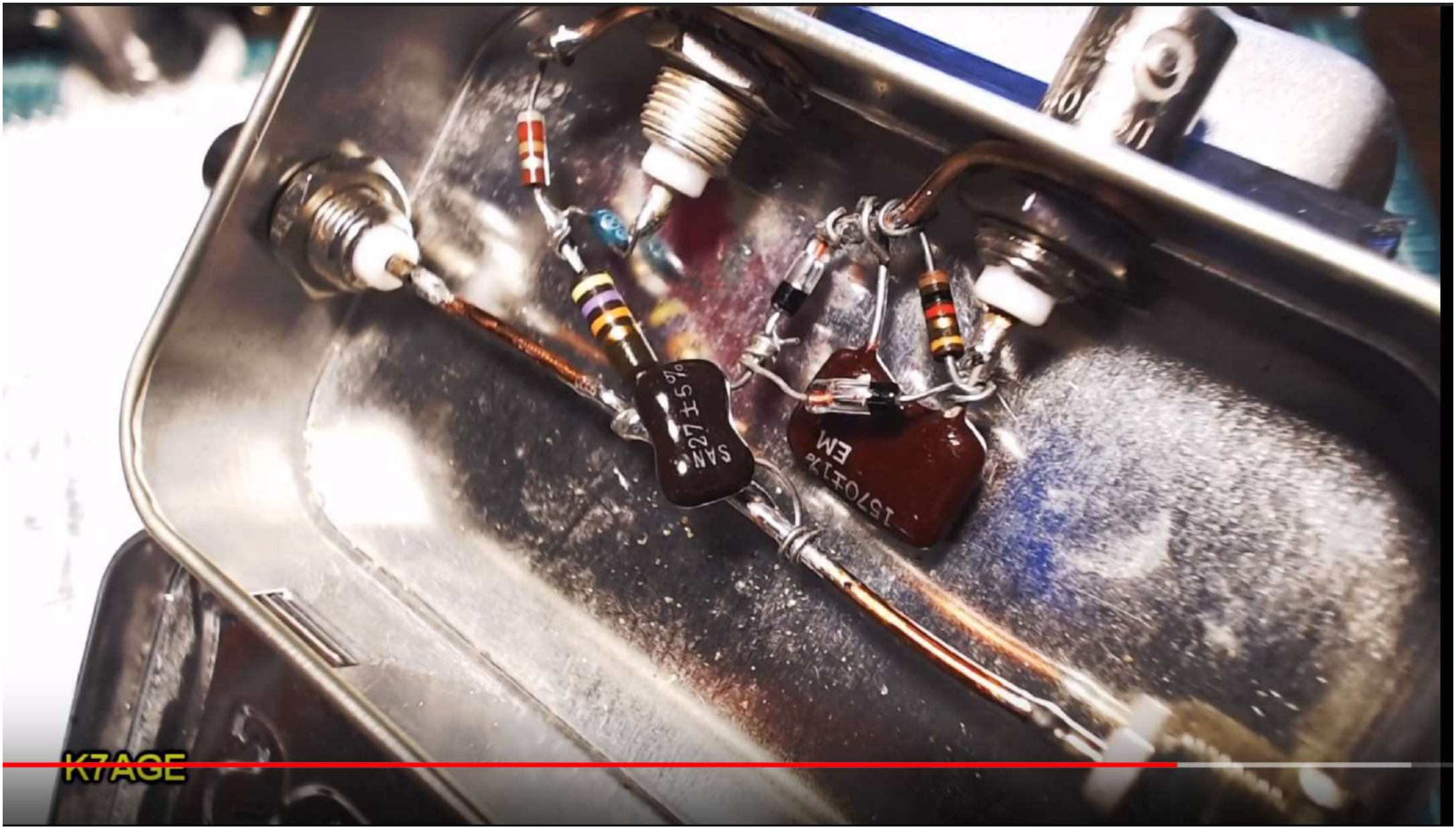
How To Build An RF Sampler Box

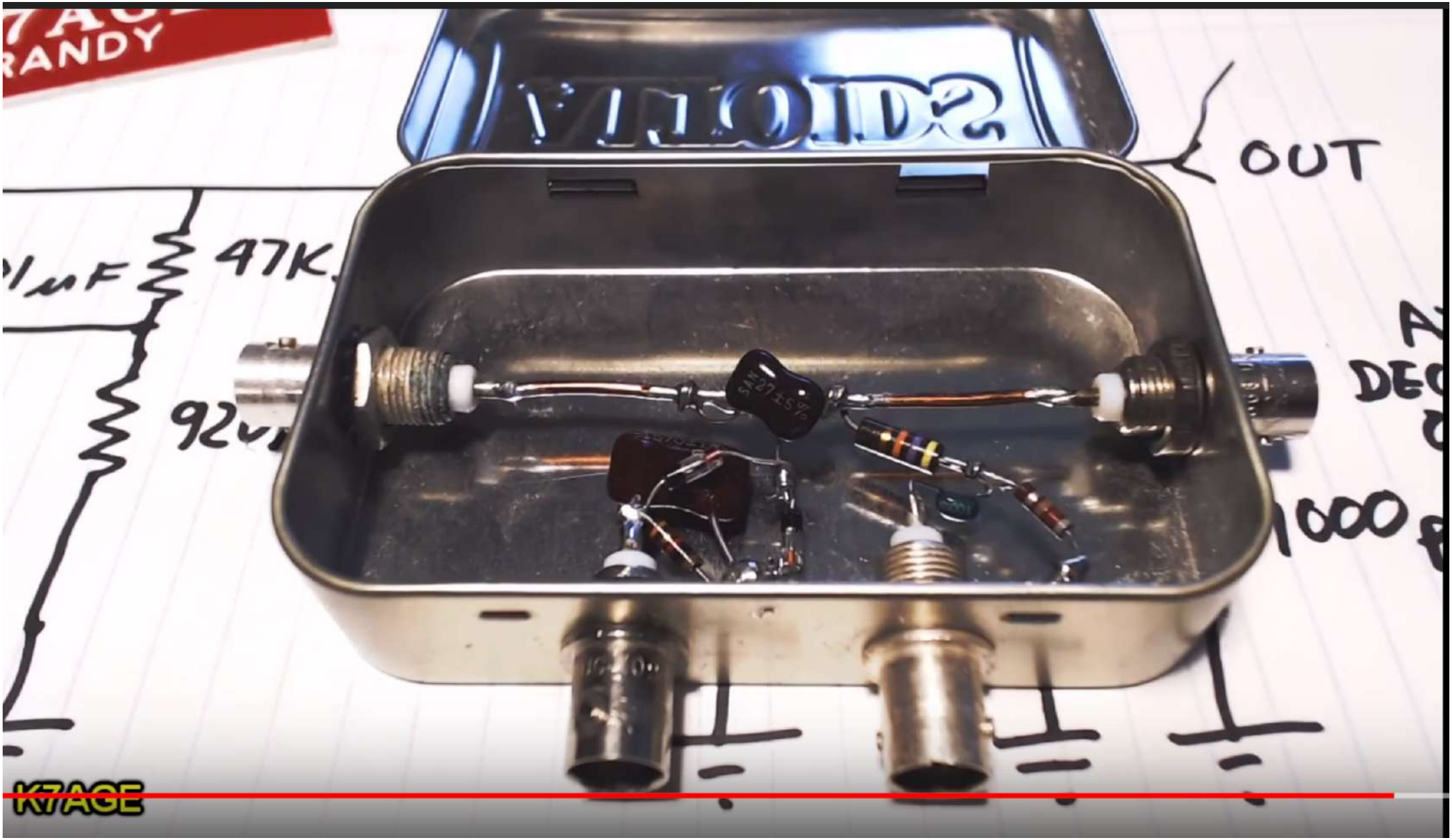

K7AGE
RANDY
The Original Celebrated
ALTOIDS®
CURIOUSLY STRONG MINTS
100% Natural
PEPPERMINT
45°
K7AGE

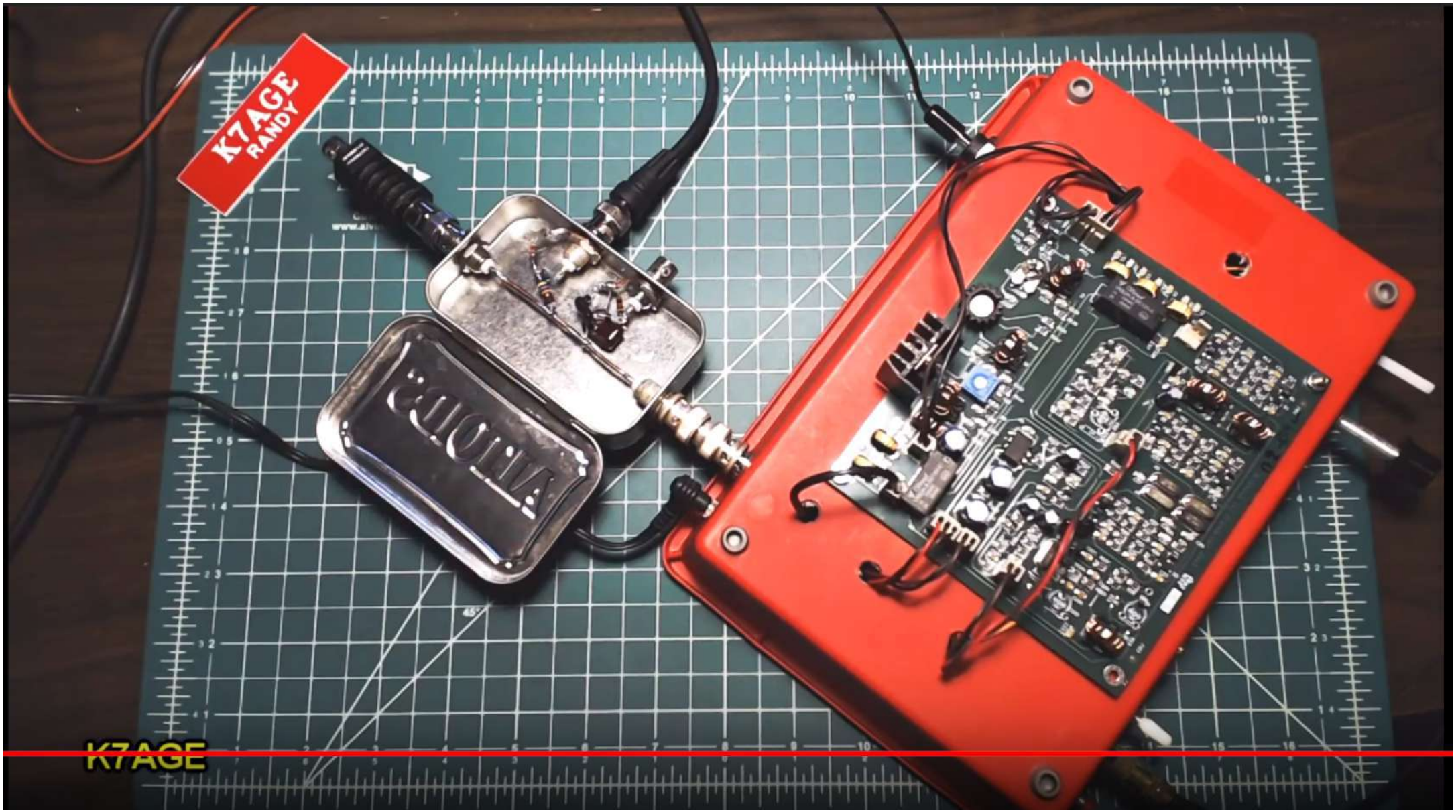

K7AGE
HANDY
K7AGE

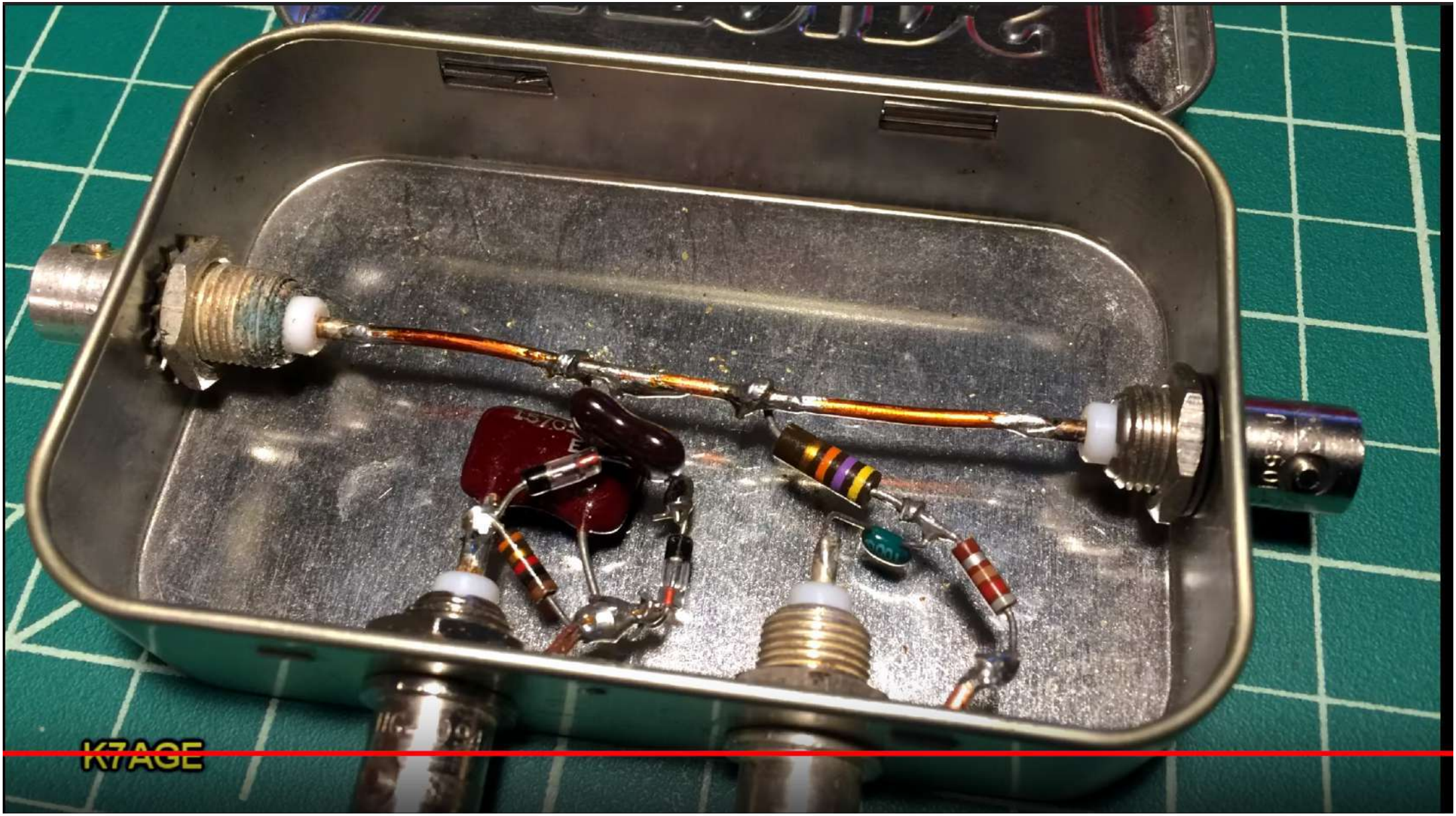

47K Ω
920 Ω
10 pF
1N34A
1K Ω
1000 pF
AM
OUT
103K
1000


K7AGE

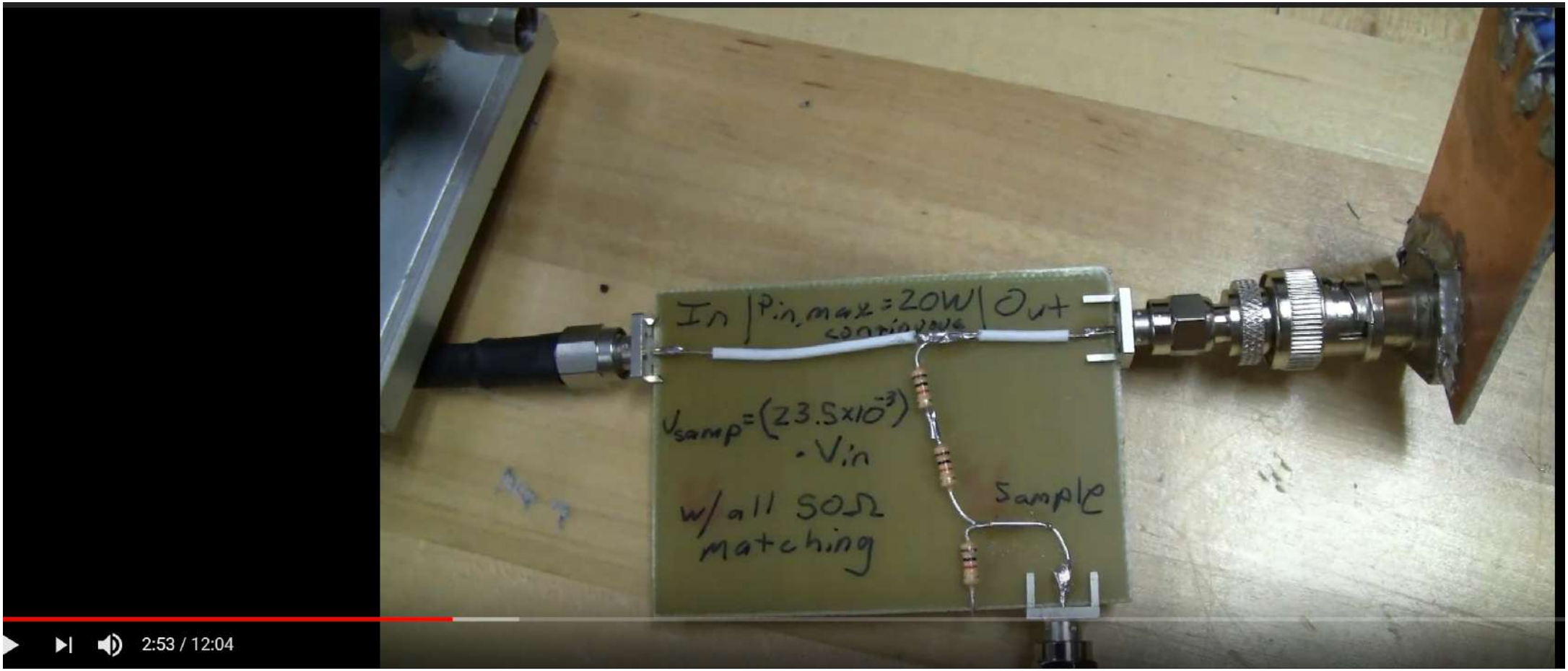

K7AGE


VIVOID
OUT
47K
.01μF
92V
1000
KTAGE


K7AGE
RANDY
K7AGE

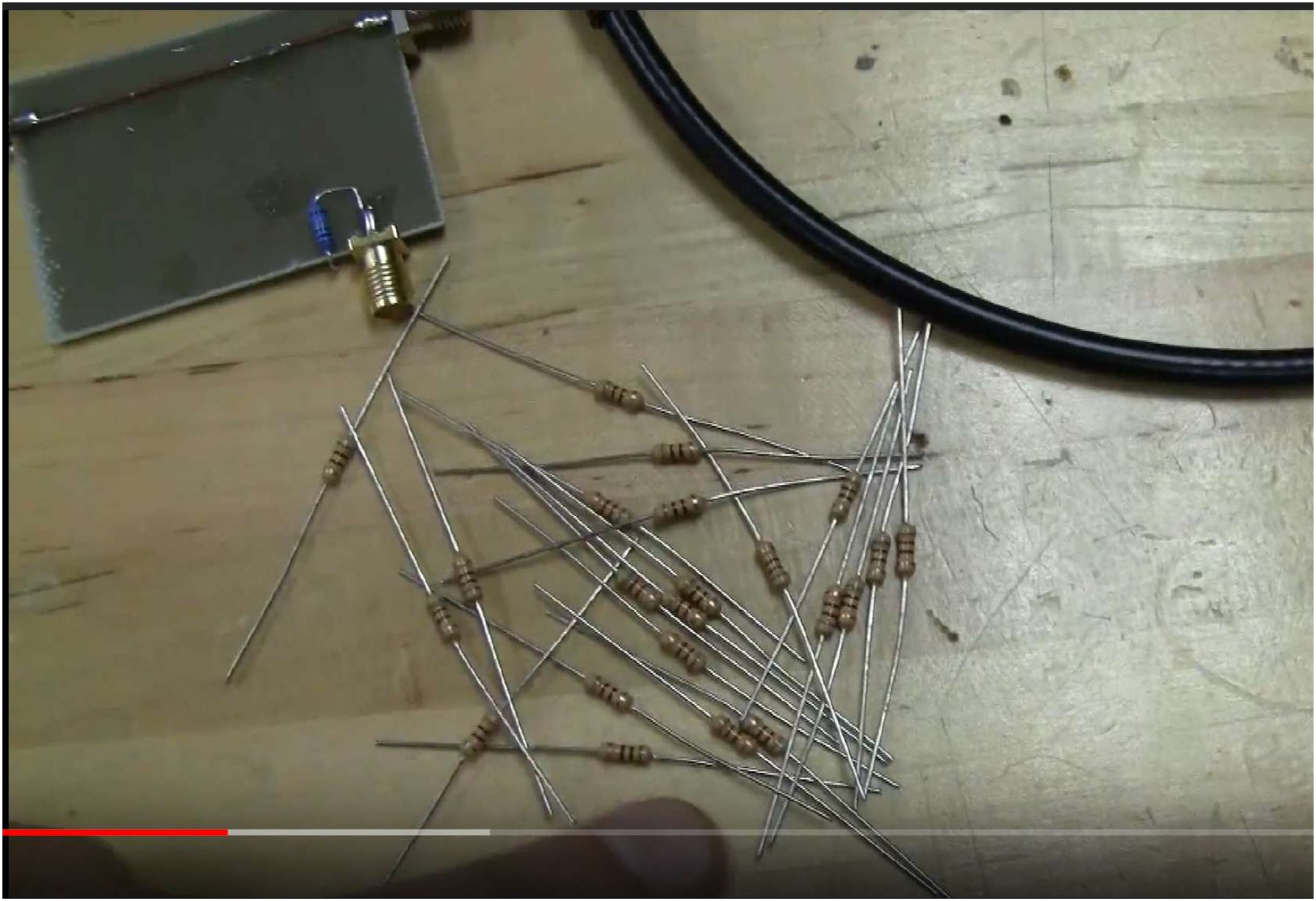

K7AGE

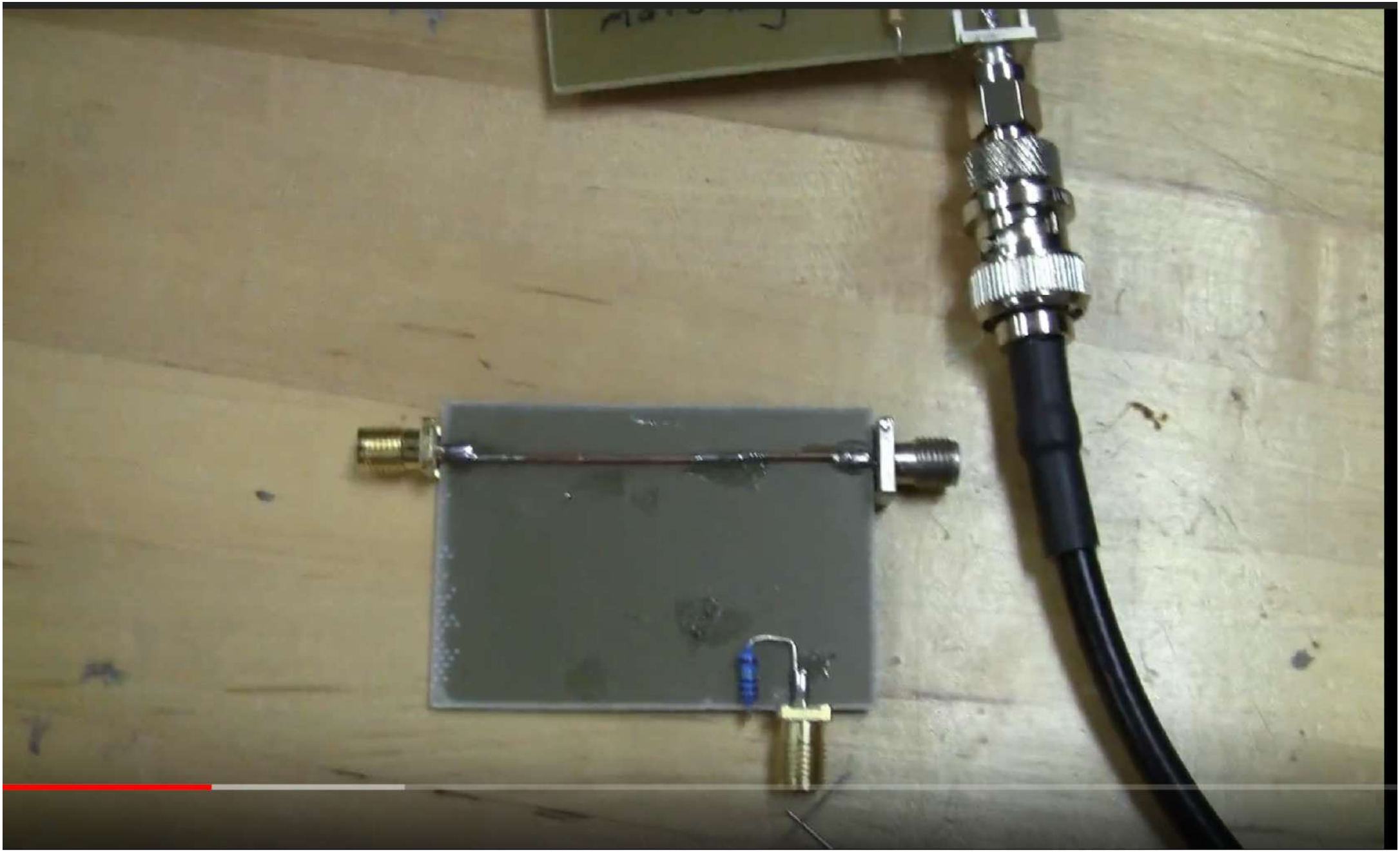

K7AGE

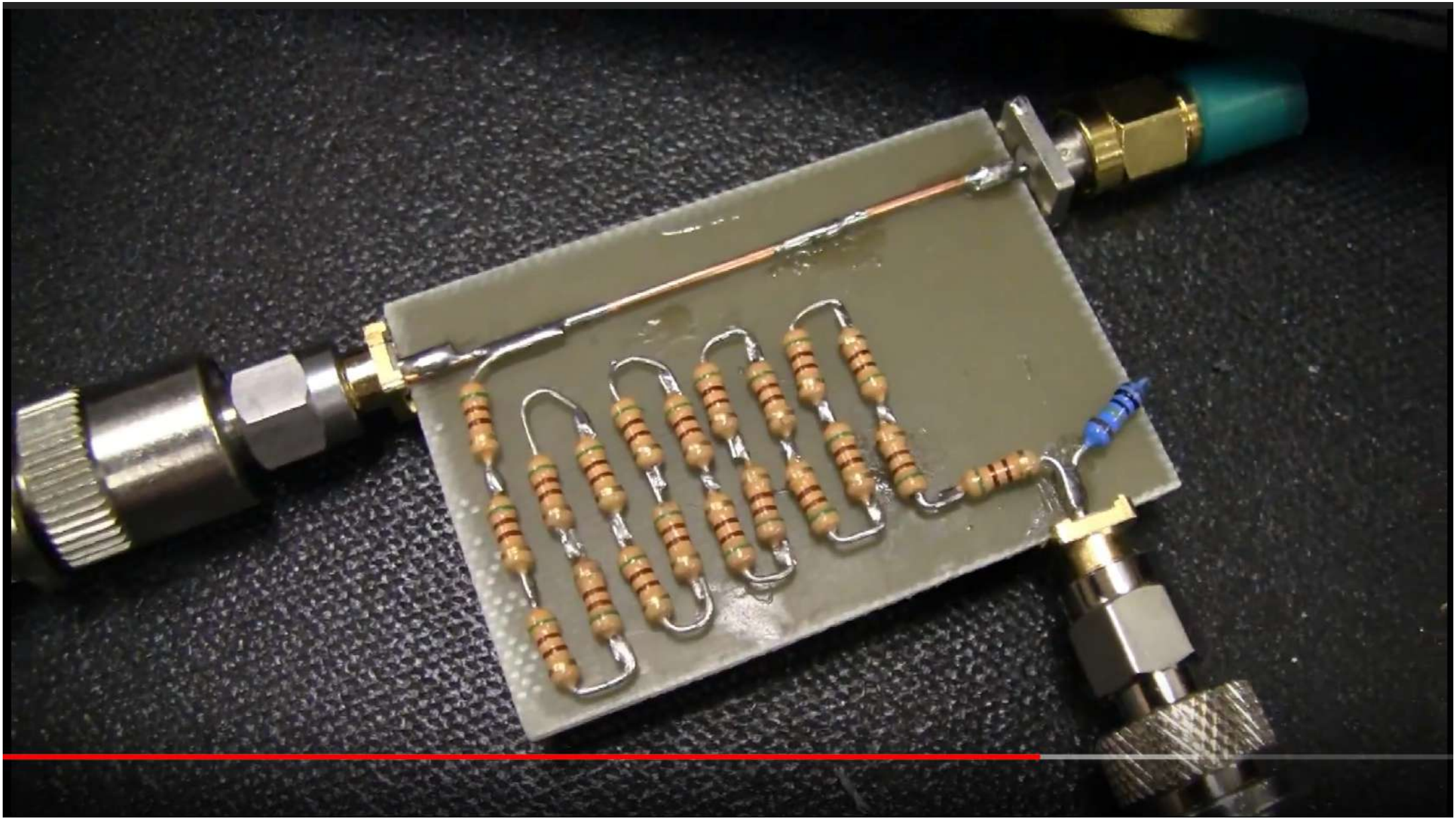


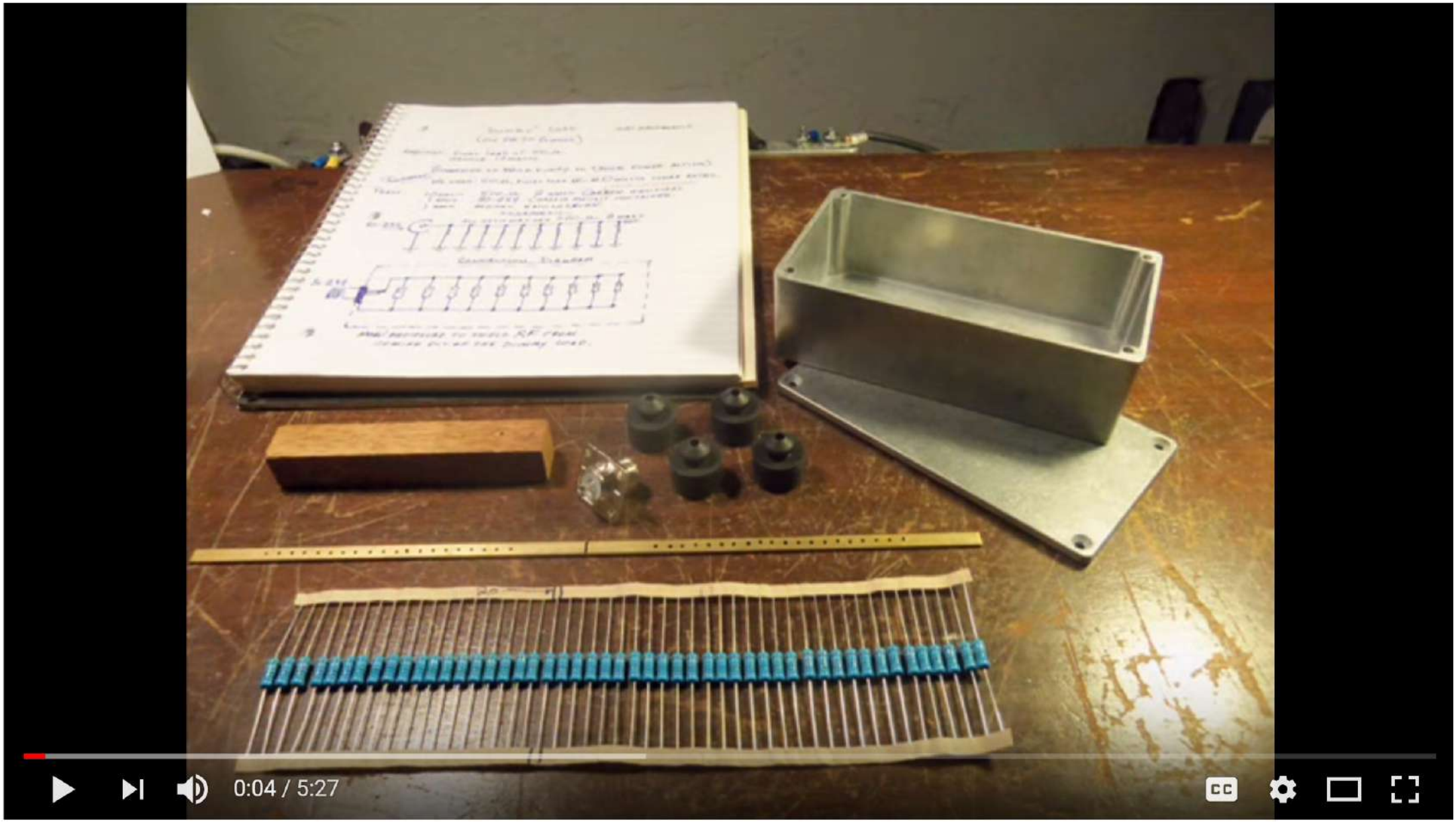
Building an RF Signal Sampler for Oscilloscope Measurements

Up next

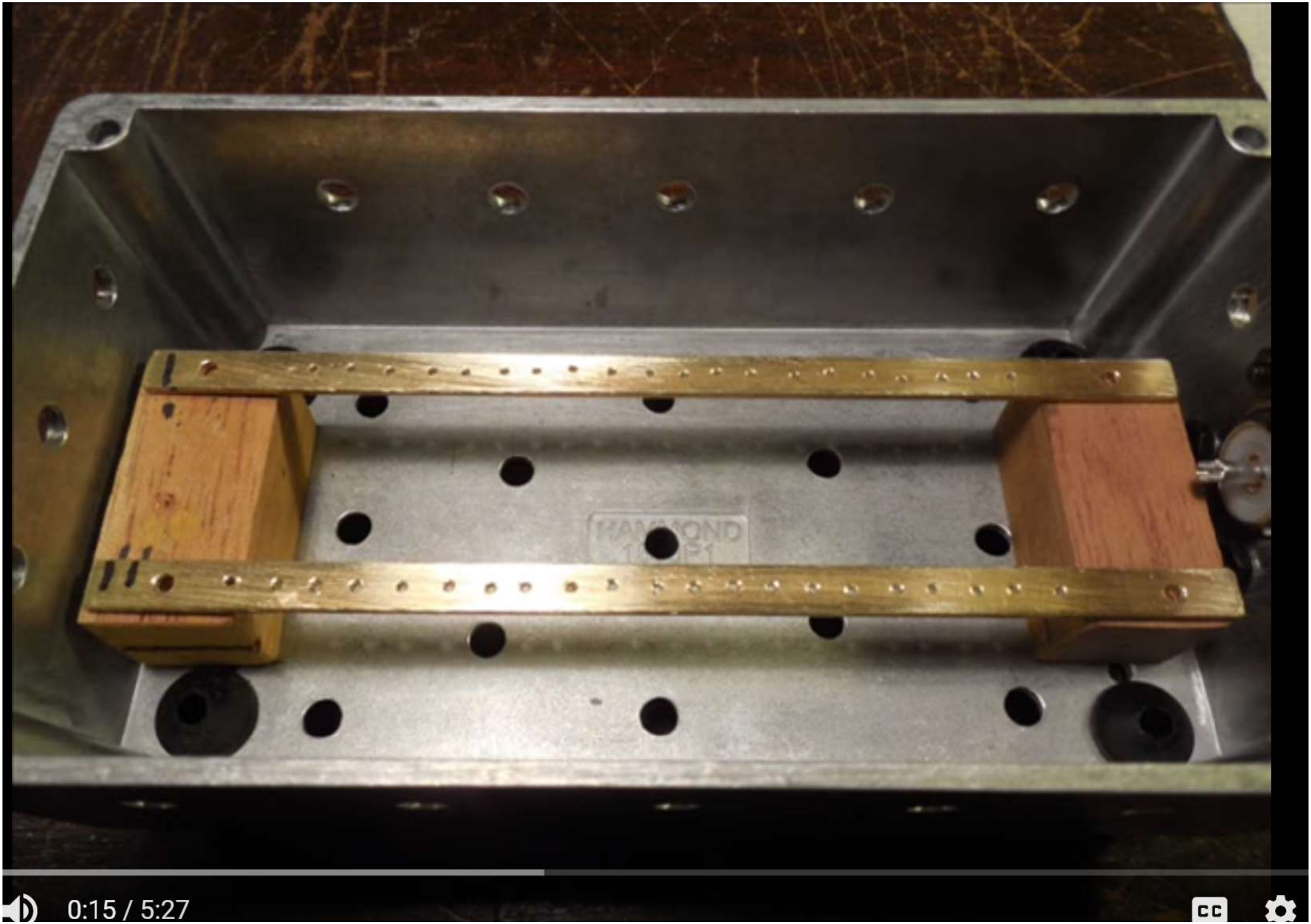


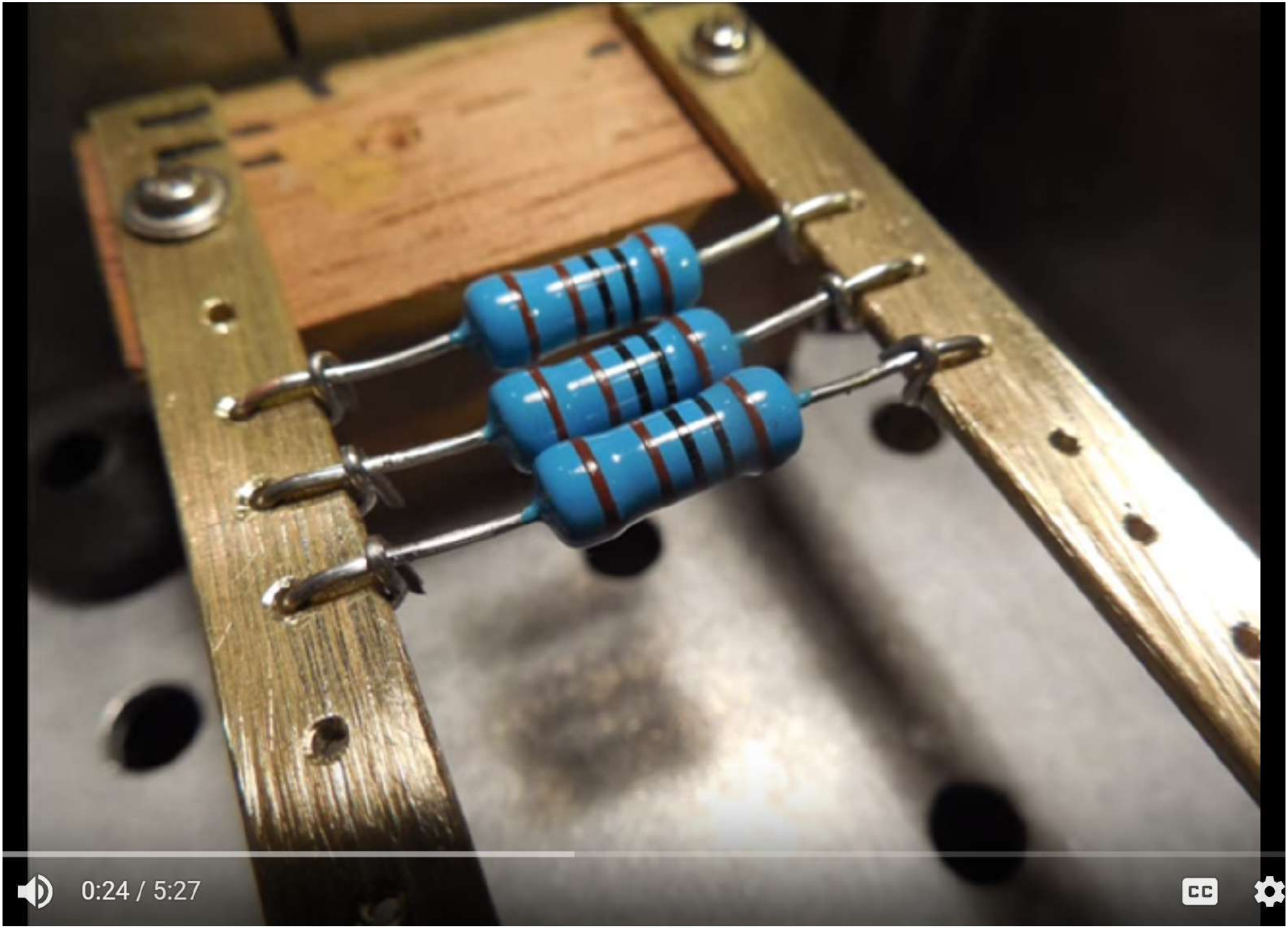


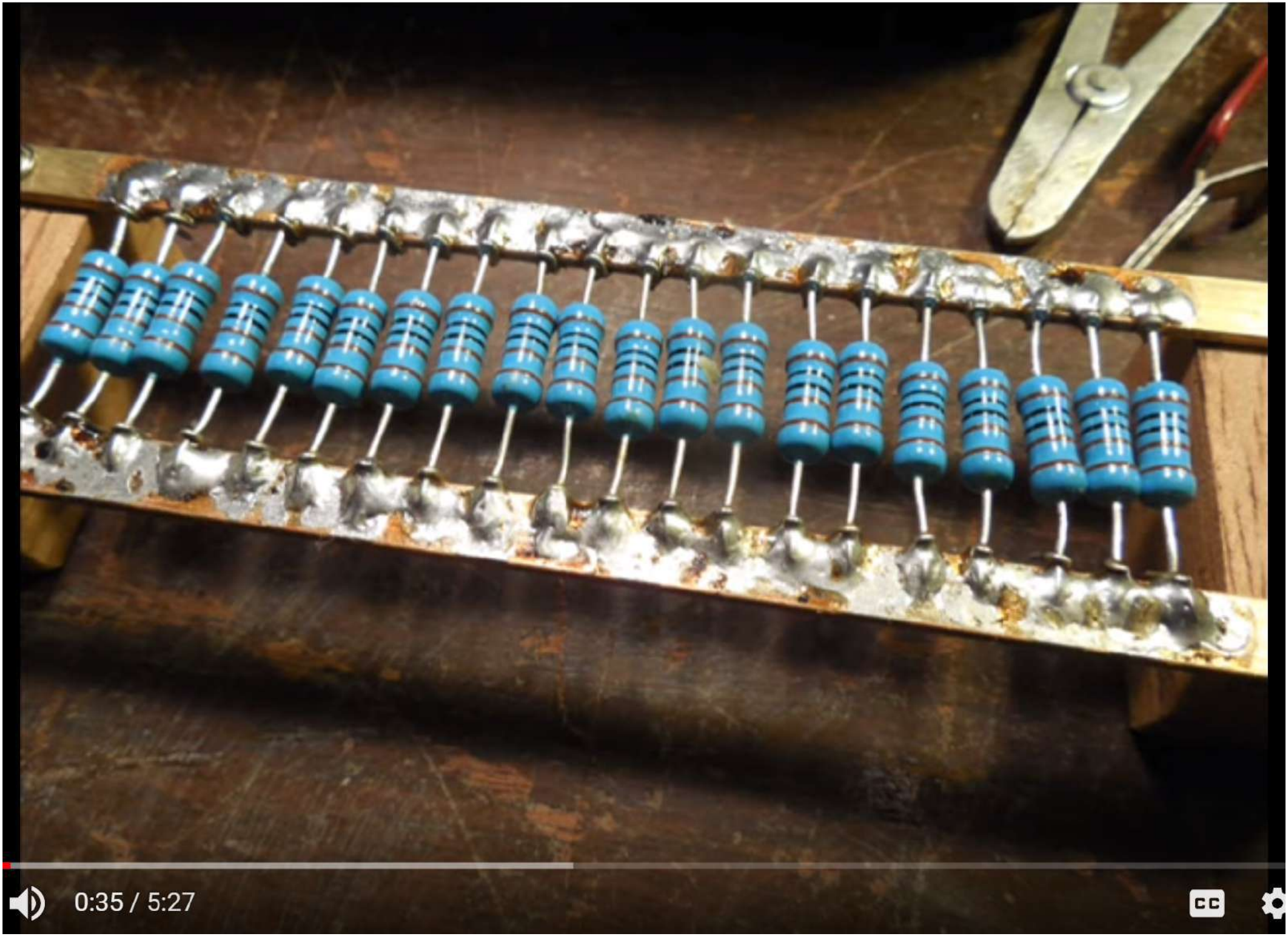




RF Dummy Load


HAMMOND
0:15 / 5:27


0:24 / 5:27
CC

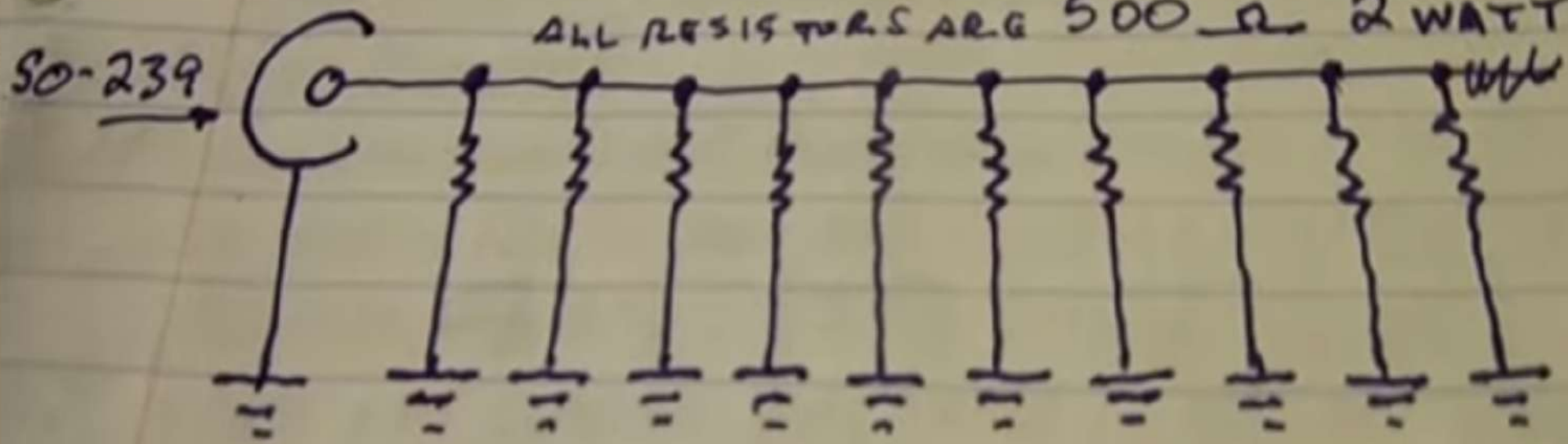

0:35 / 5:27
CC

NEVER USE WIRE

PARTS: 10 EACH 500 Ω 2 WATT CARBON RESISTE
1 EACH SO-239 CHASSIS MOUNT CONTAINE
1 EACH METAL ENCLOSURE

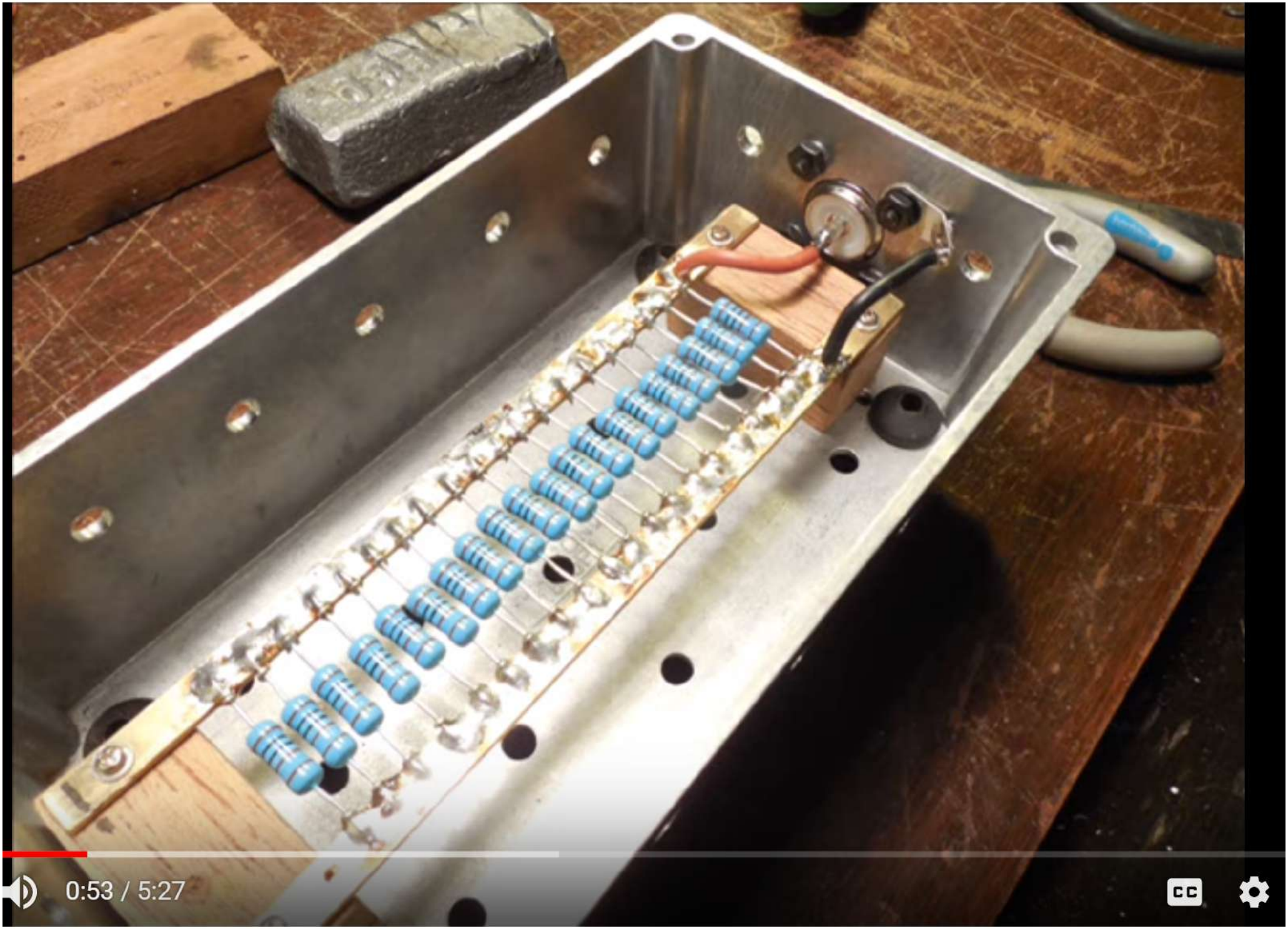
SCHEMATIC

ALL RESISTORS ARE 500 Ω 2 WATT

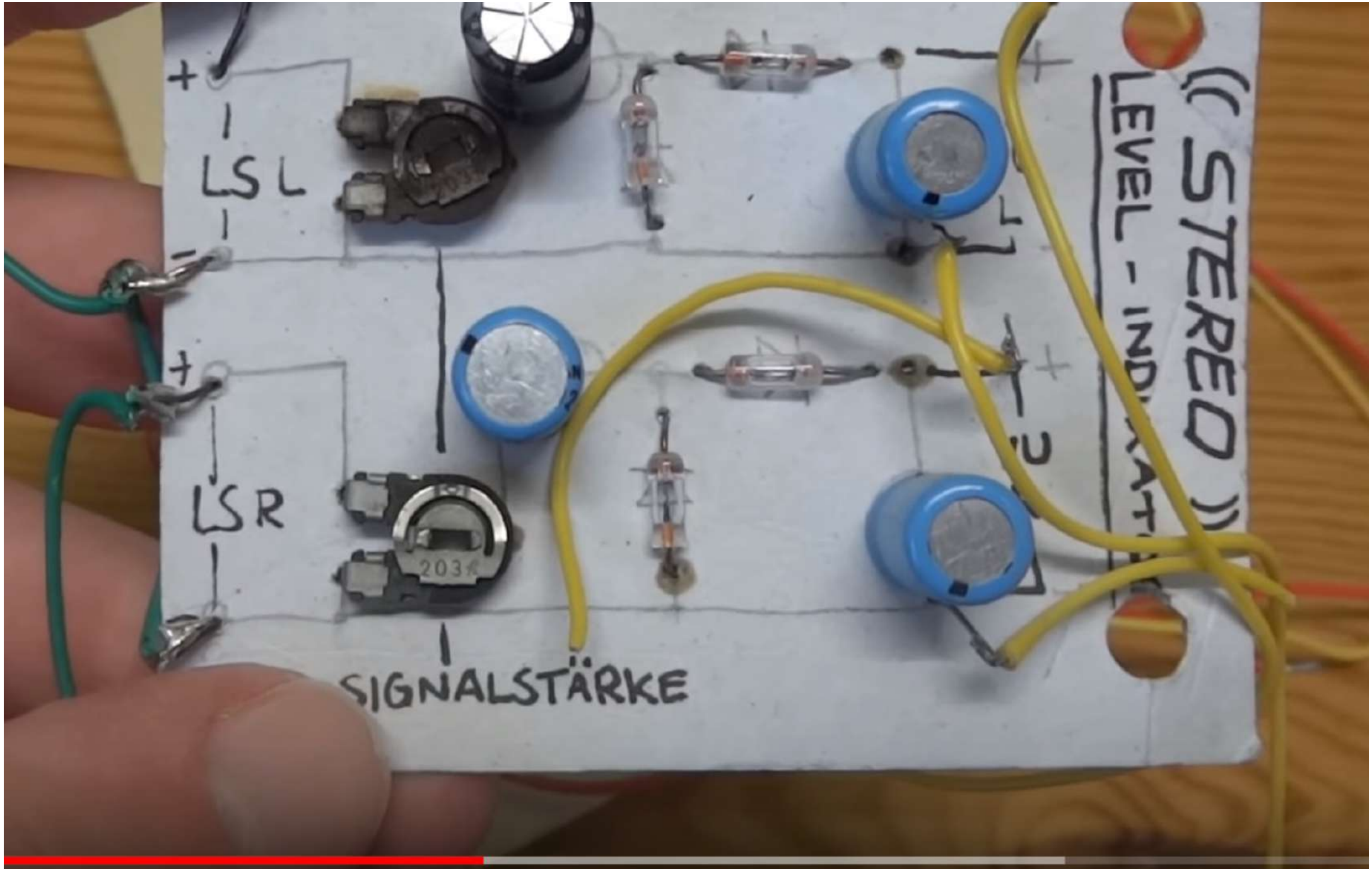


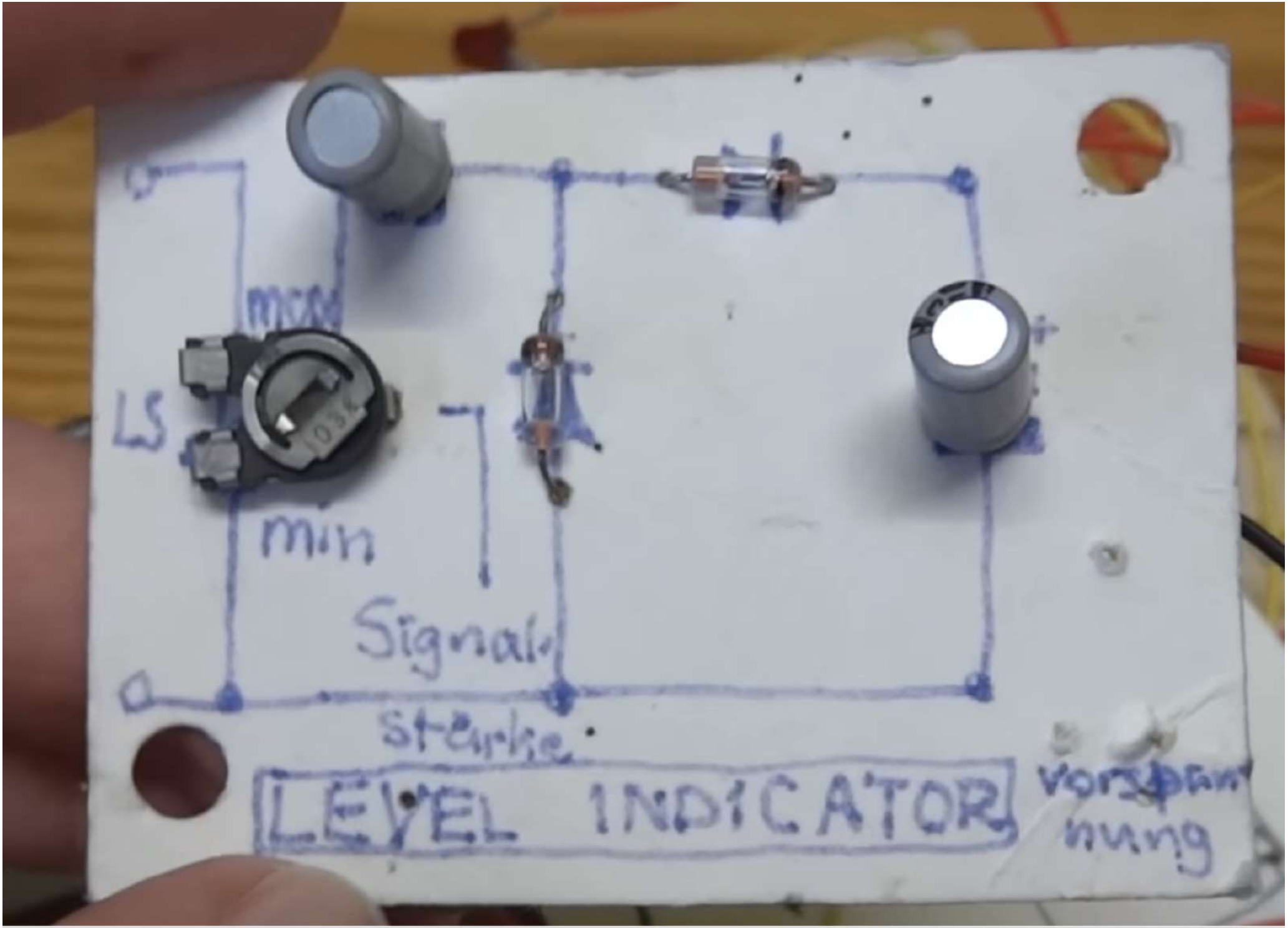
CONNECTION DIAGRAM

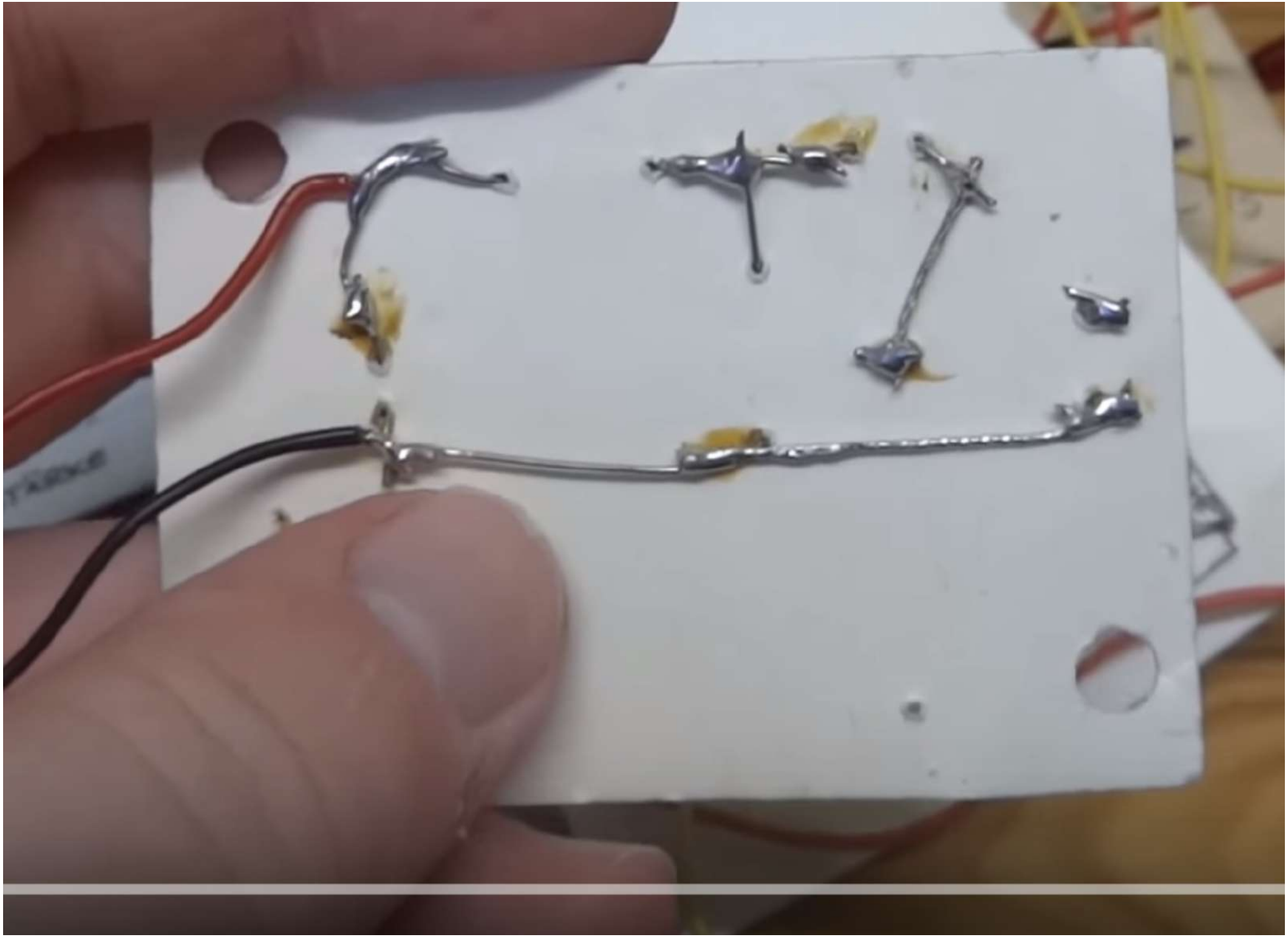
2:23 / 5:27

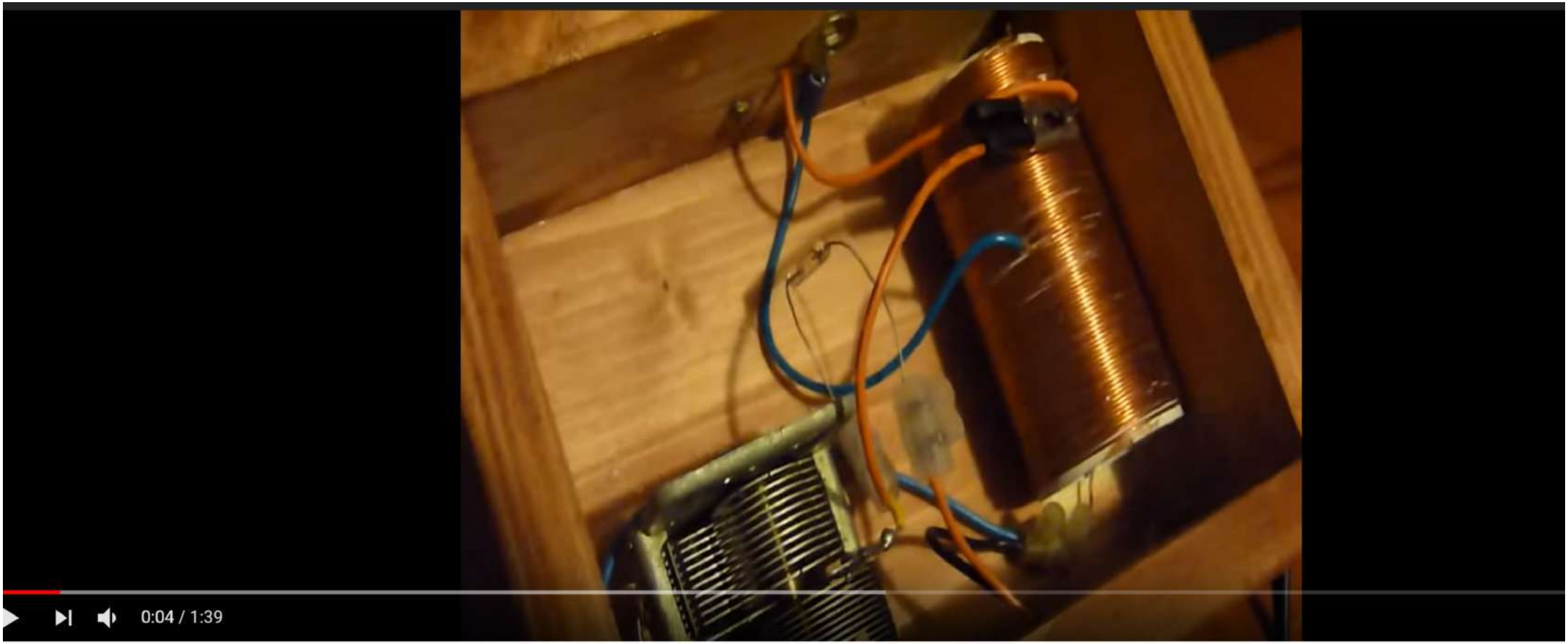

0:53 / 5:27


Dummy" LOAD
(FOR HW-20 PAWNEE)
LOAD of 50Ω
DLE 10 WATTS
RESISTANCE
IN
PARALLEL
DUMMY LOAD
50 OHMS
20 WATTS
3:47 / 5:27


+
LSL
−
+
LSR
SIGNALSTÄRKE
((STEREO))
LEVEL - IND

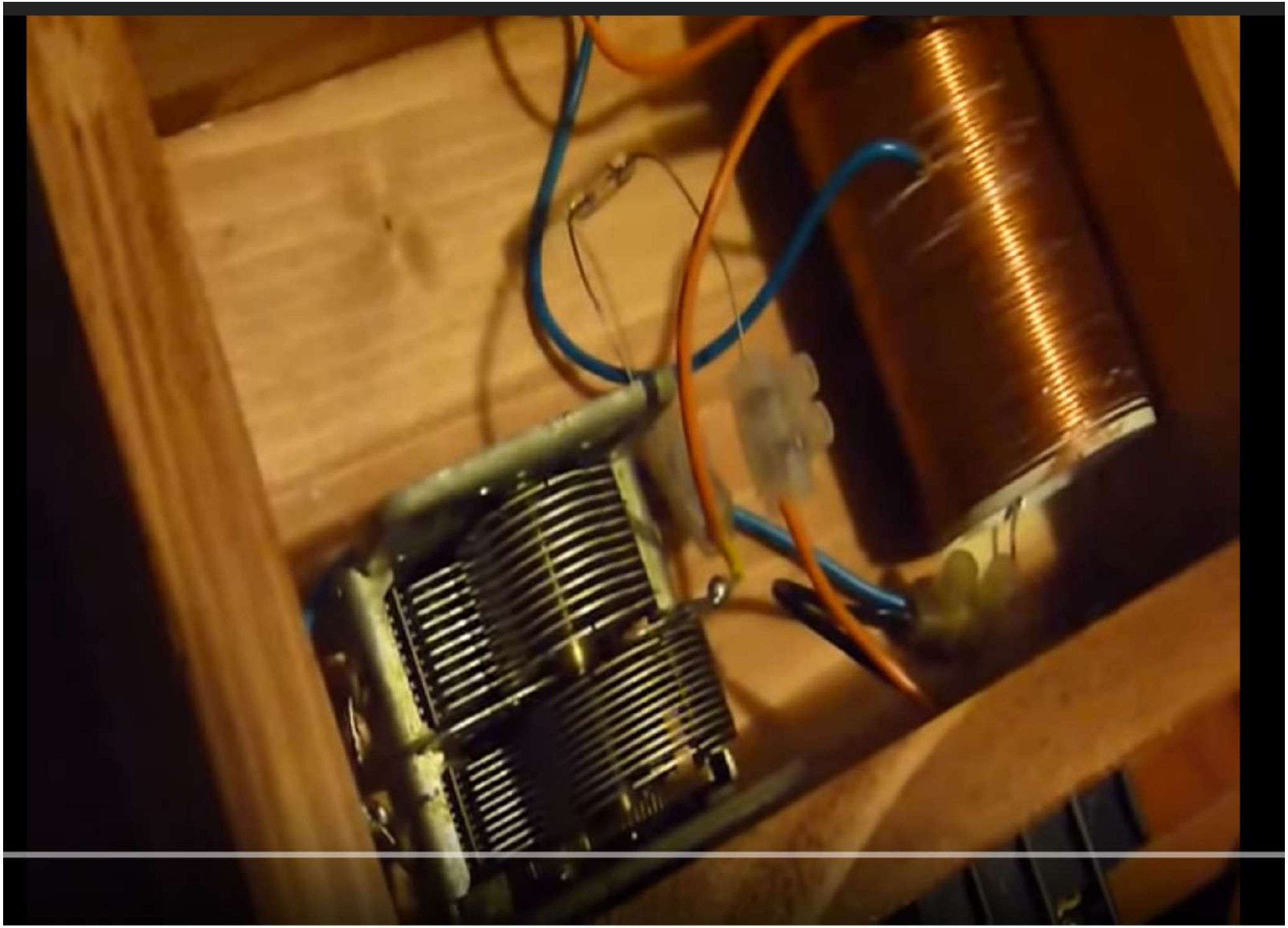

LS
min
Signal
LEVEL INDICATOR

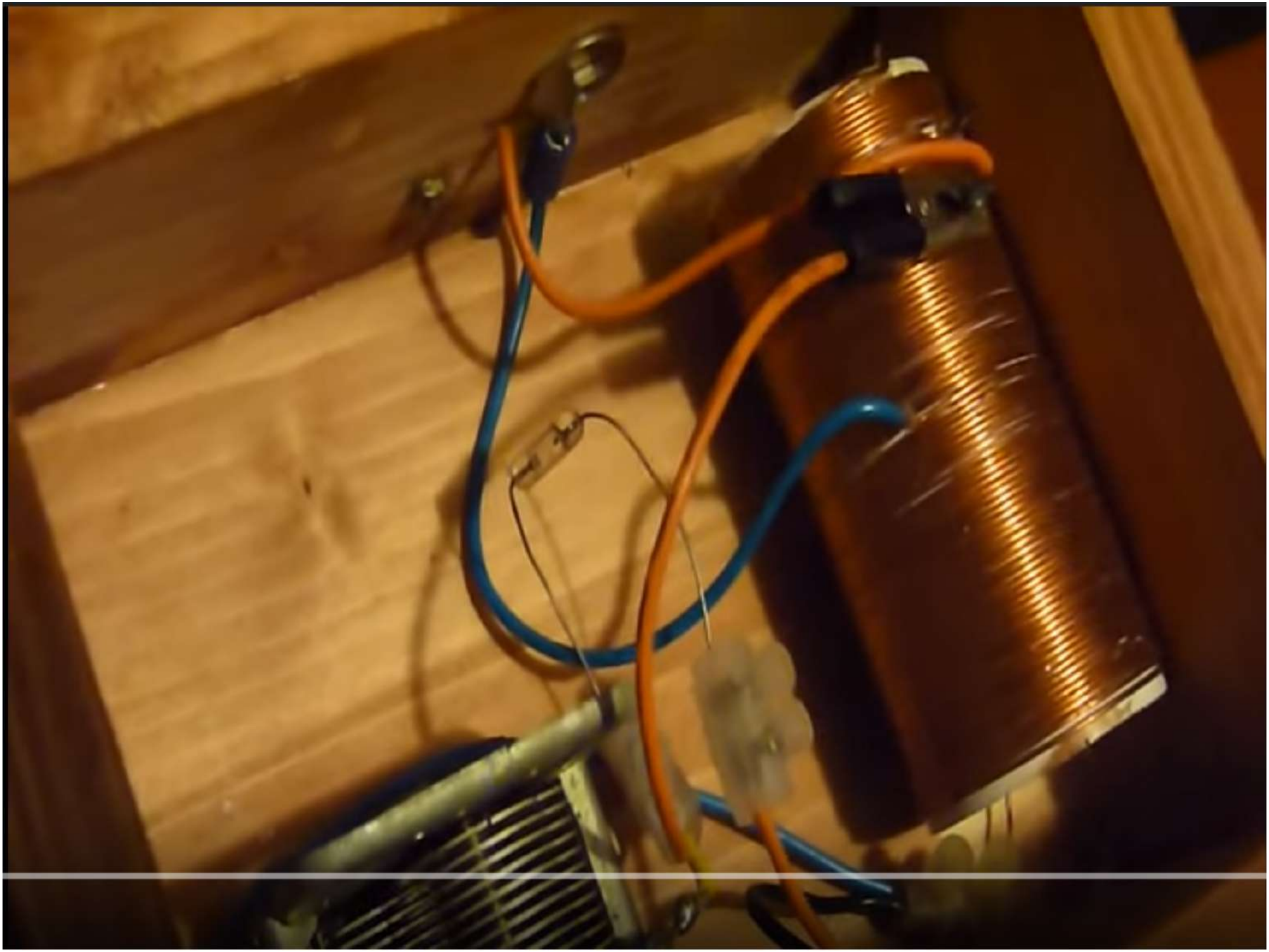




Radio a galena

Up next

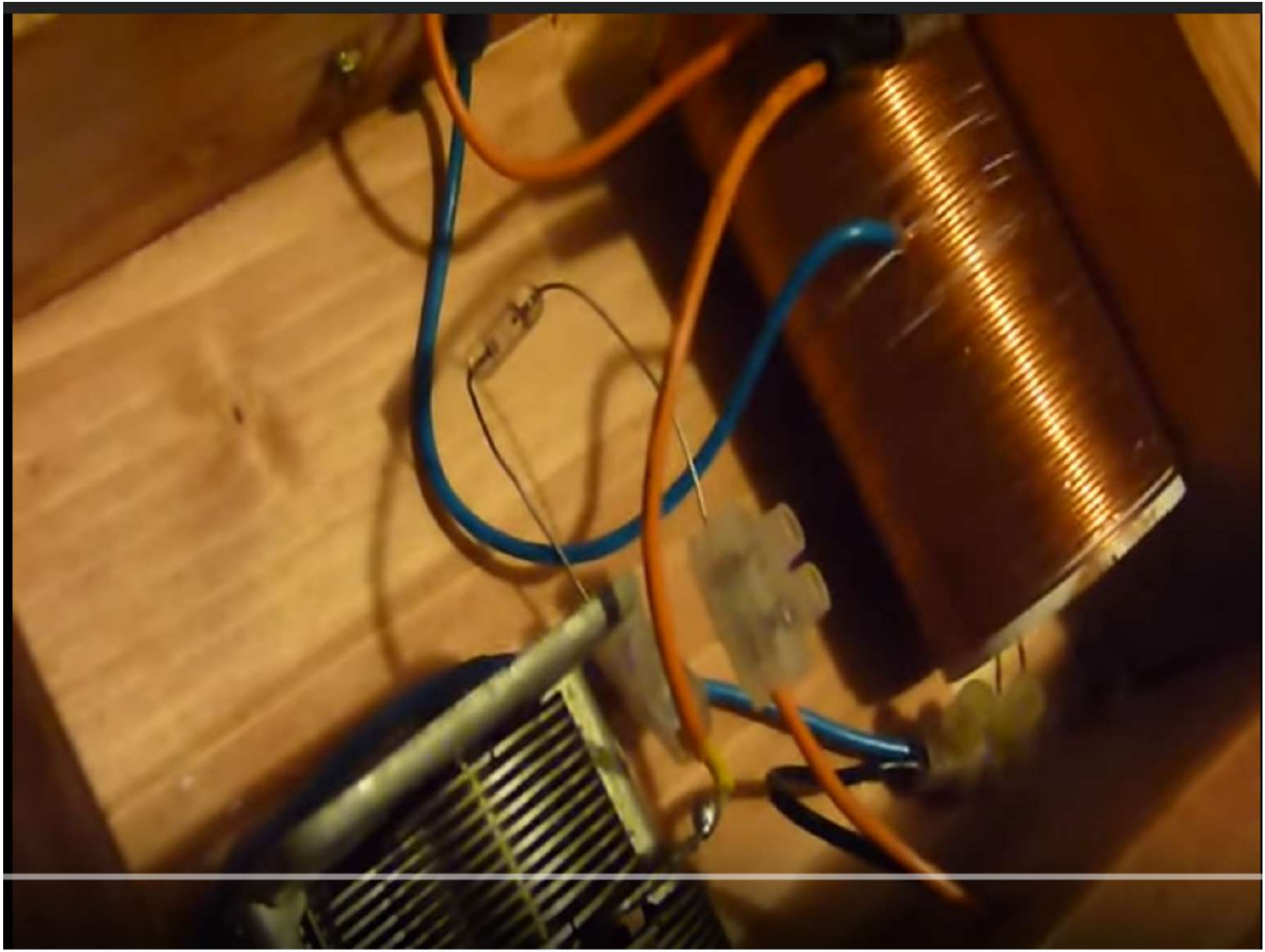


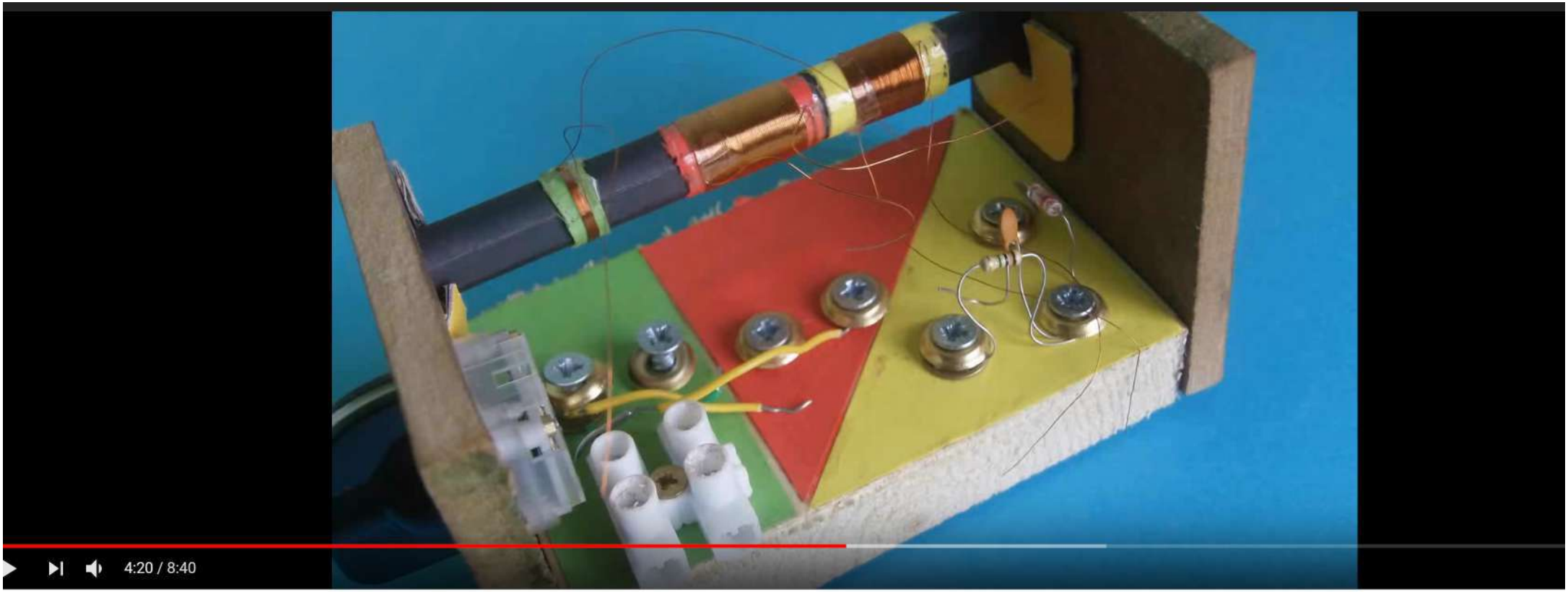








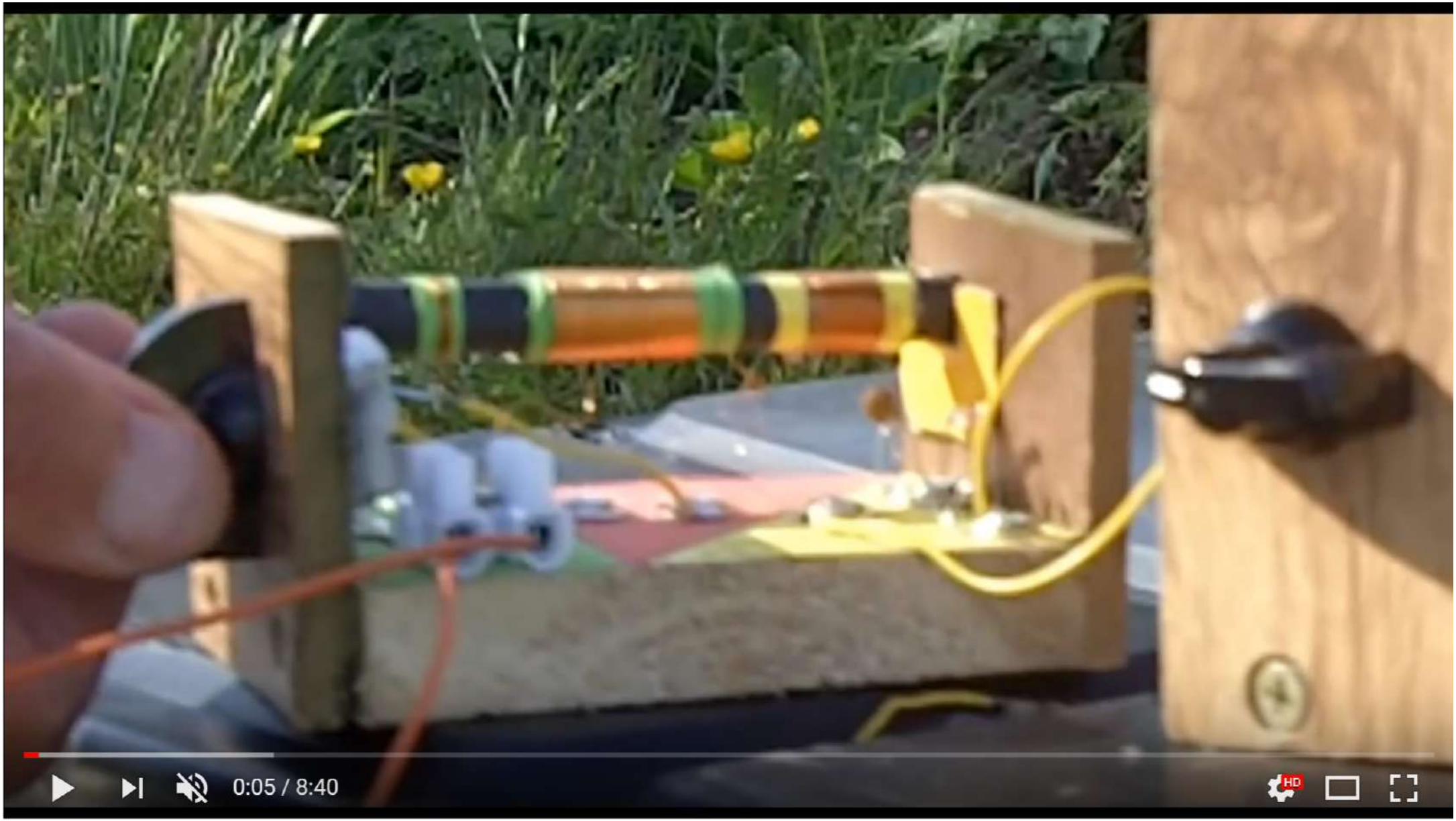




Making a Crystal Radio (How to make a Crystal Radio)

Up next AU

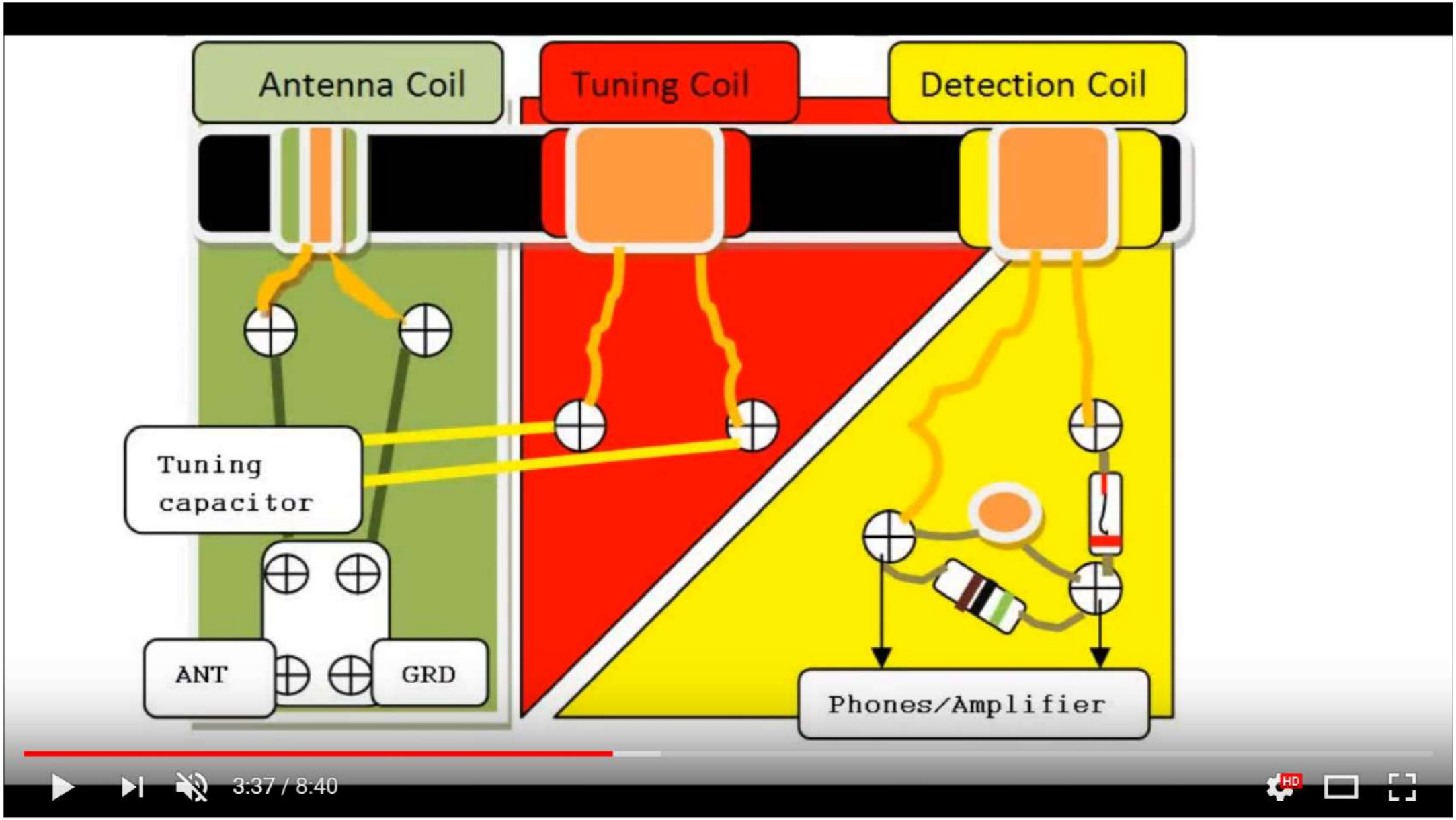


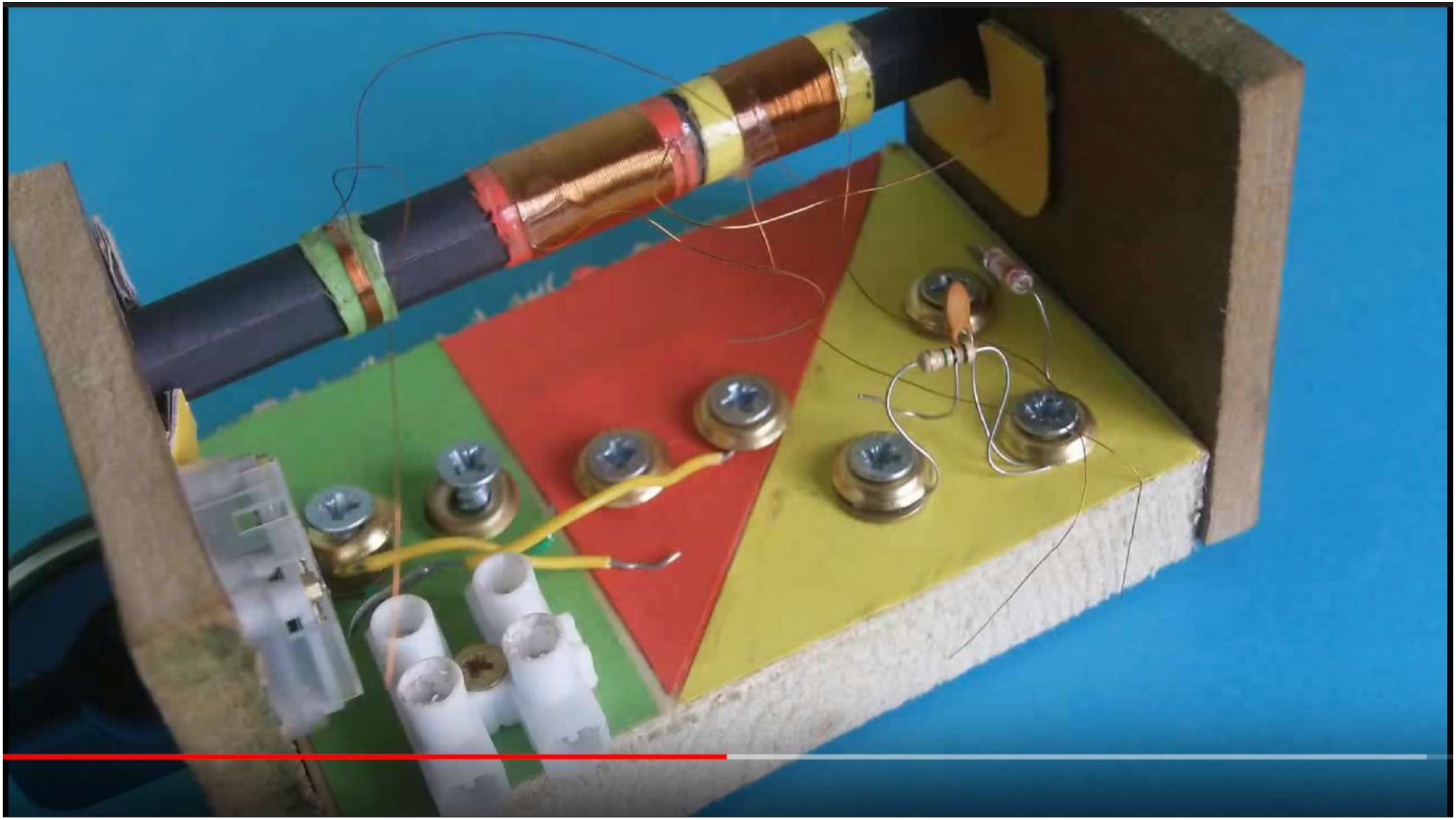

0:05 / 8:40
HD








Antenna Coil
Tuning Coil
Detection Coil
Tuning capacitor
ANT
GRD
Phones/Amplifier
3:37 / 8:40






fix tip of coil end to
base with tape



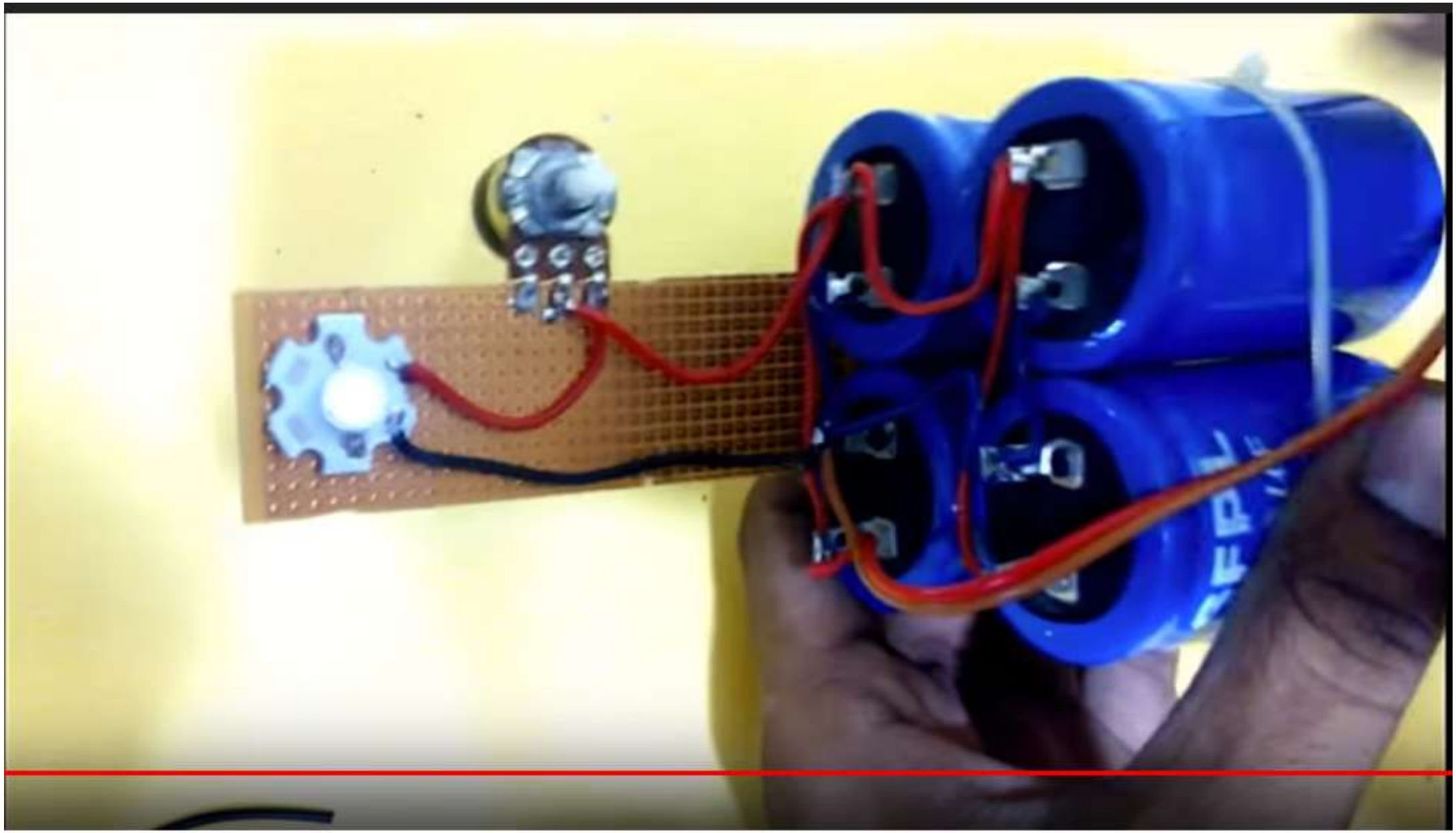






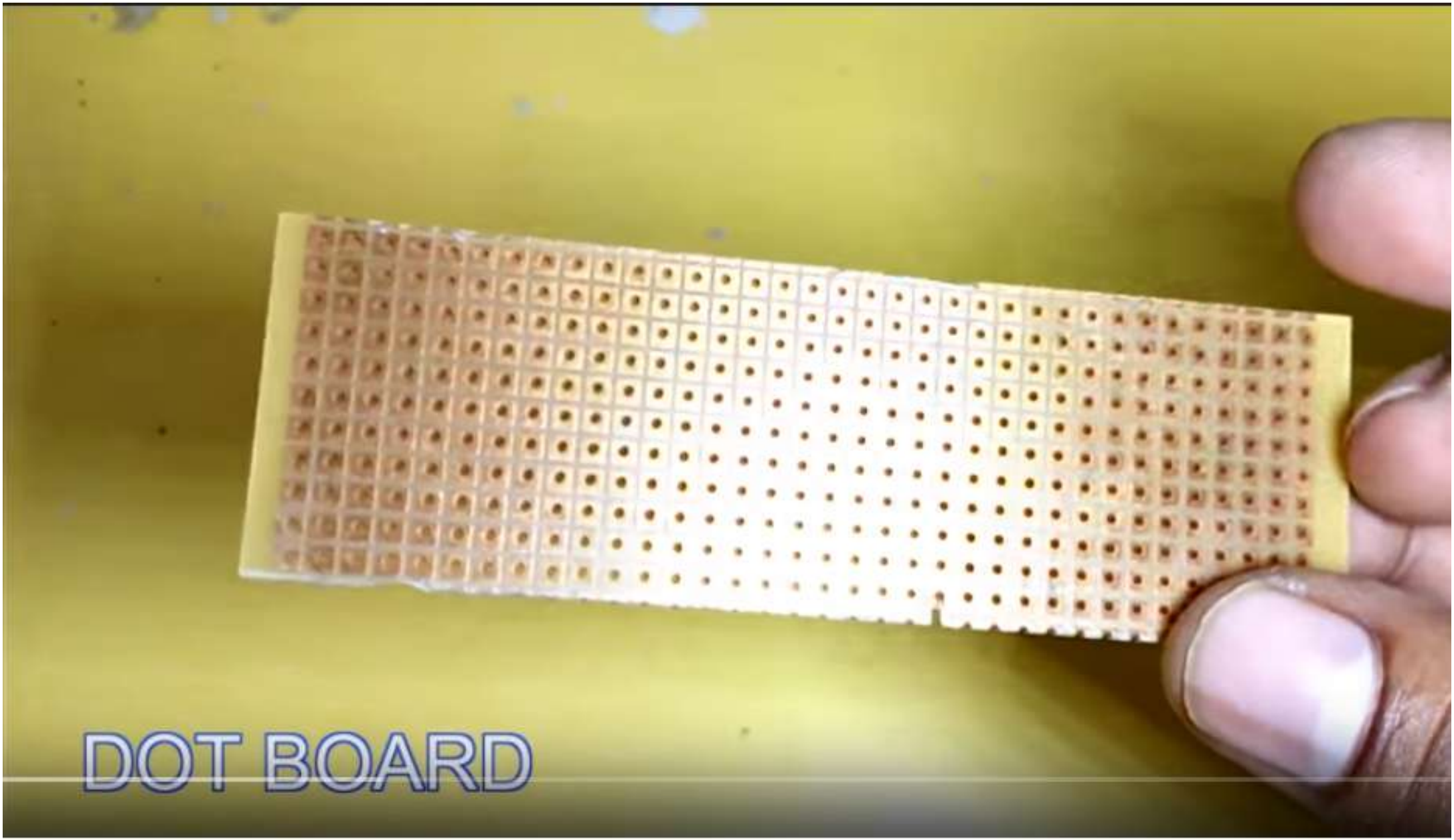


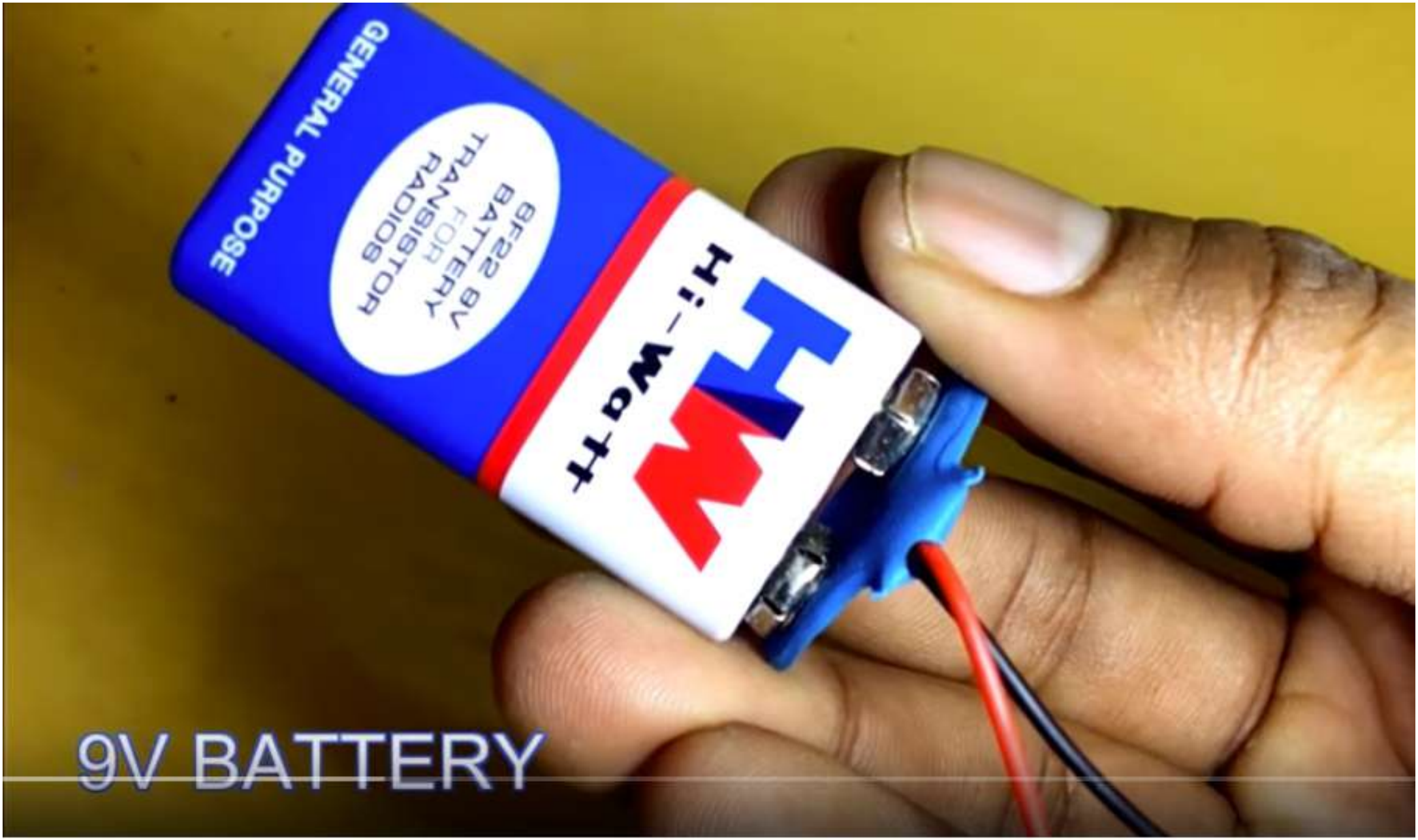

inspired by
Making a Transistor Radio
Ladybird Books
1972



5000µF
50 Vdc
105°C
-10 + 10%
(Black Neg.)
5000MFD/50V


10K V.C


DOT BOARD

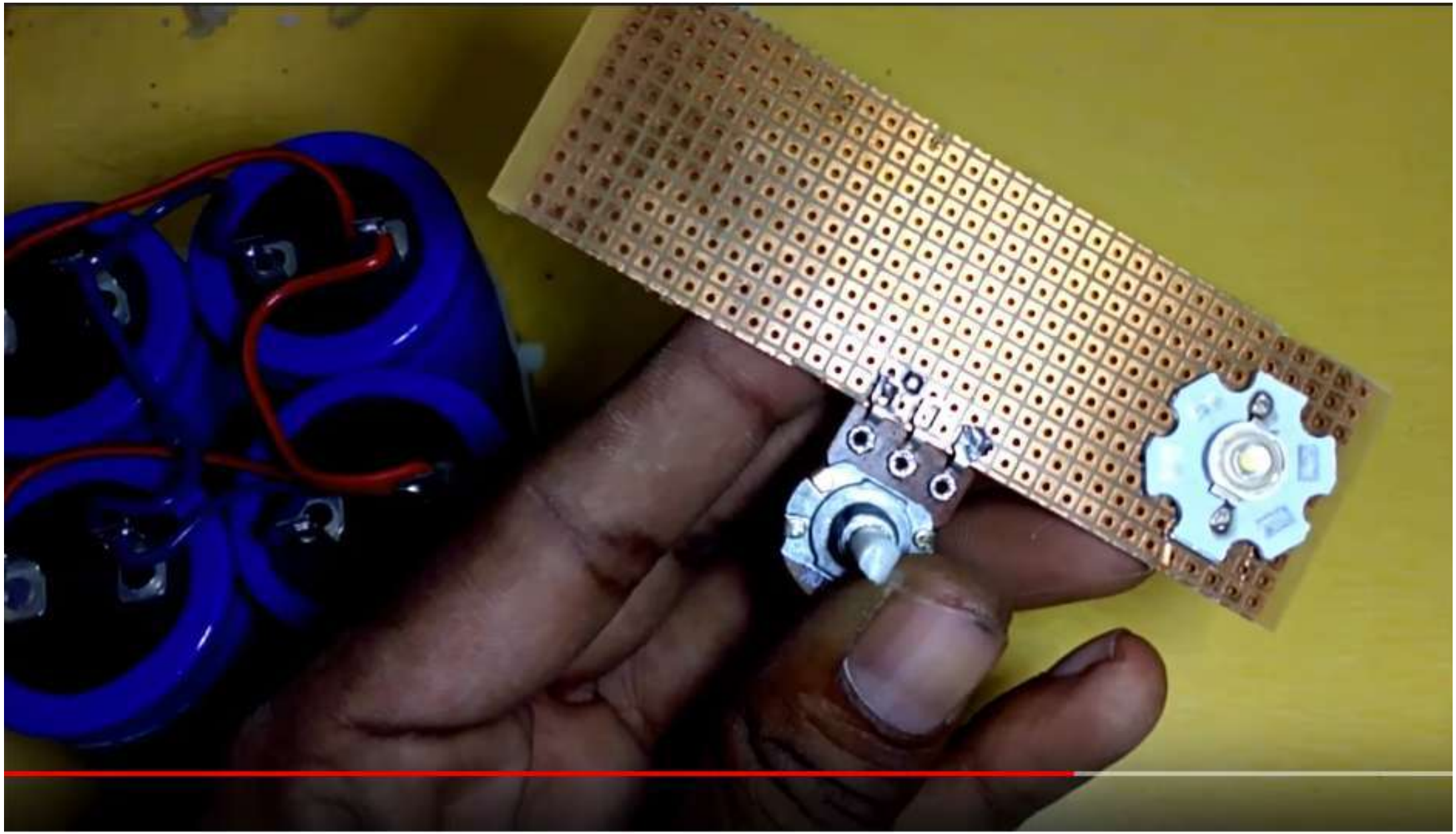

GENERAL PURPOSE
6F22 9V
BATTERY
FOR
TRANSISTOR
RADIOS
Hi-Watt
9V BATTERY

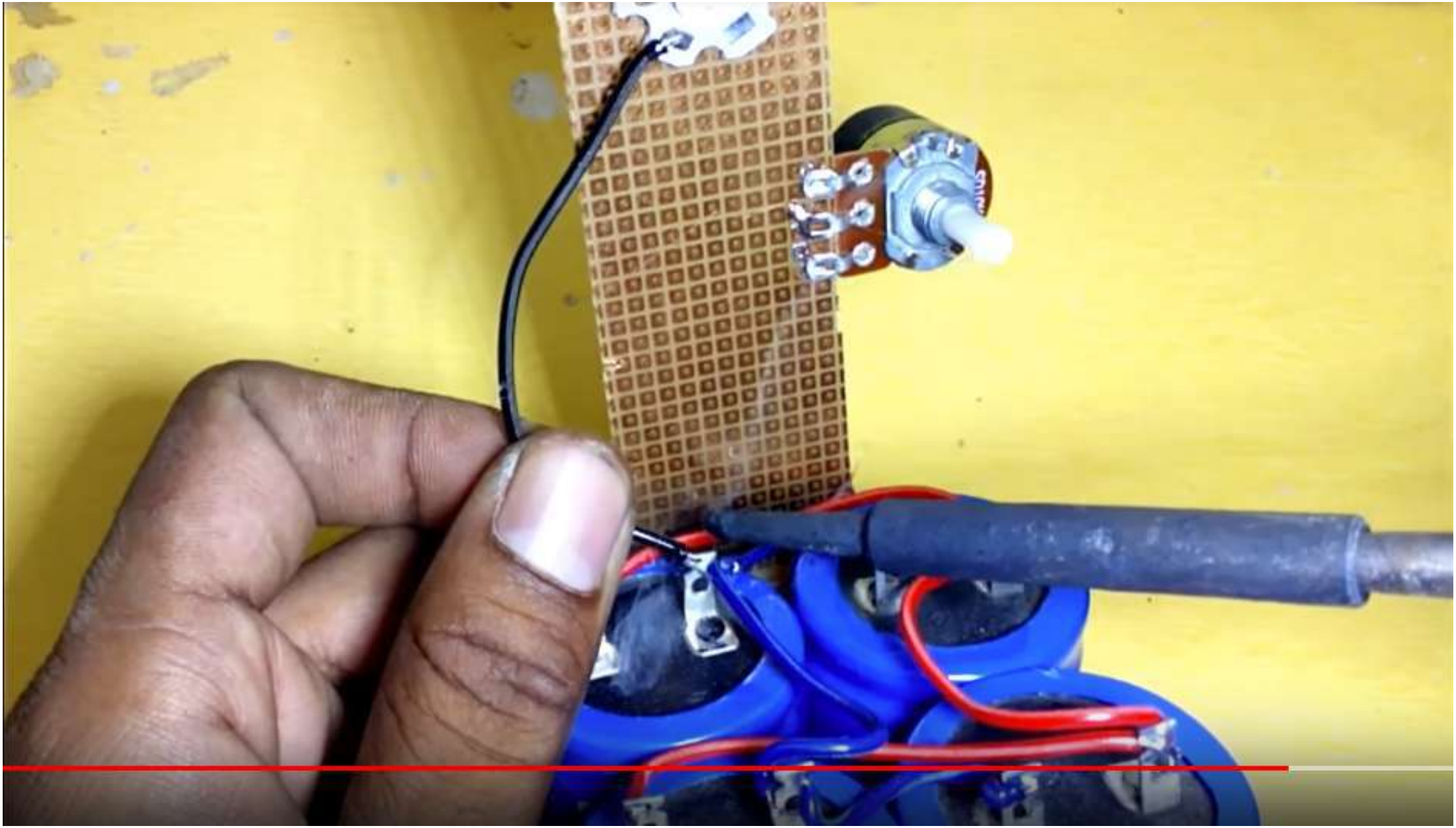

3V LED

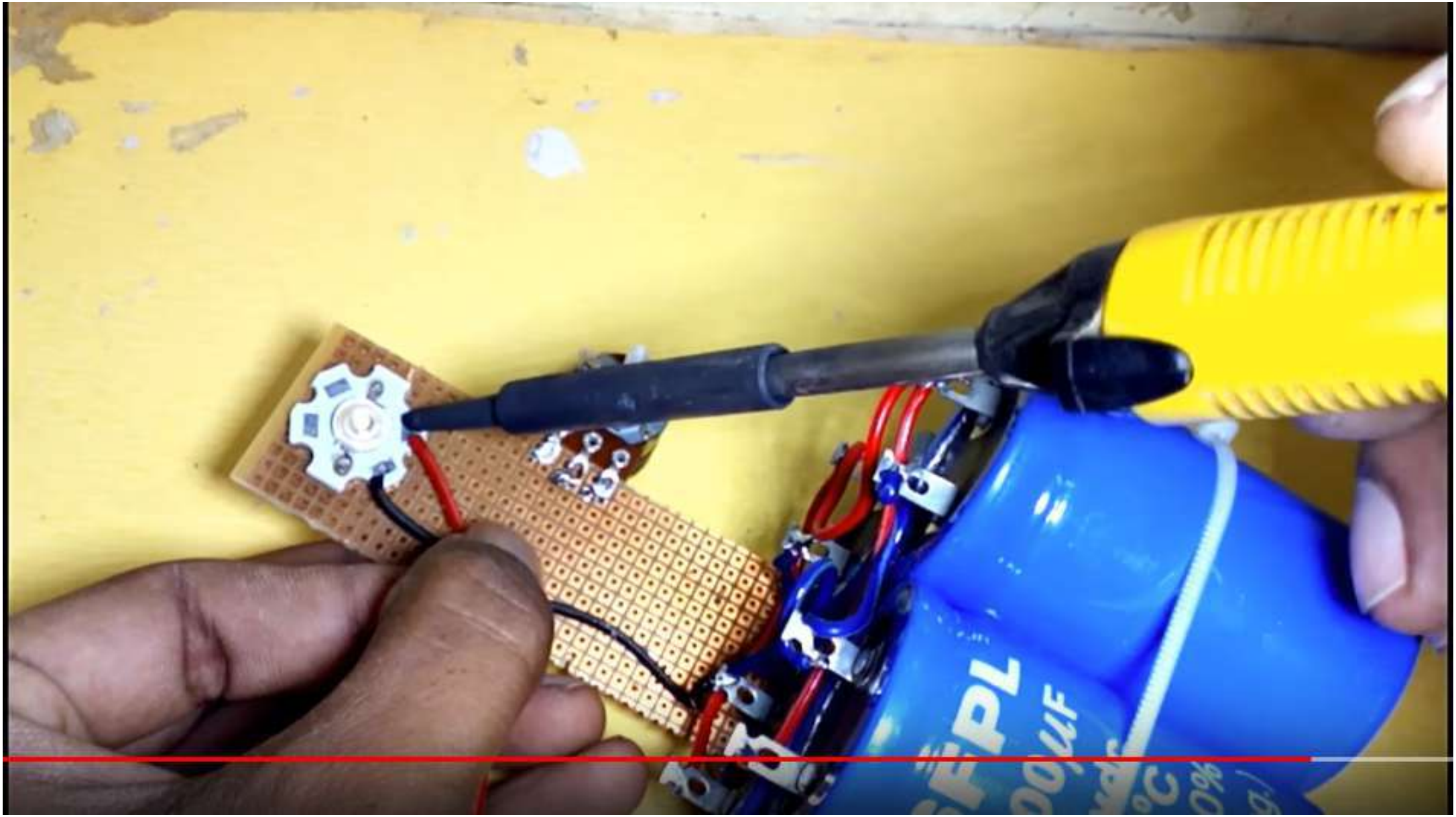


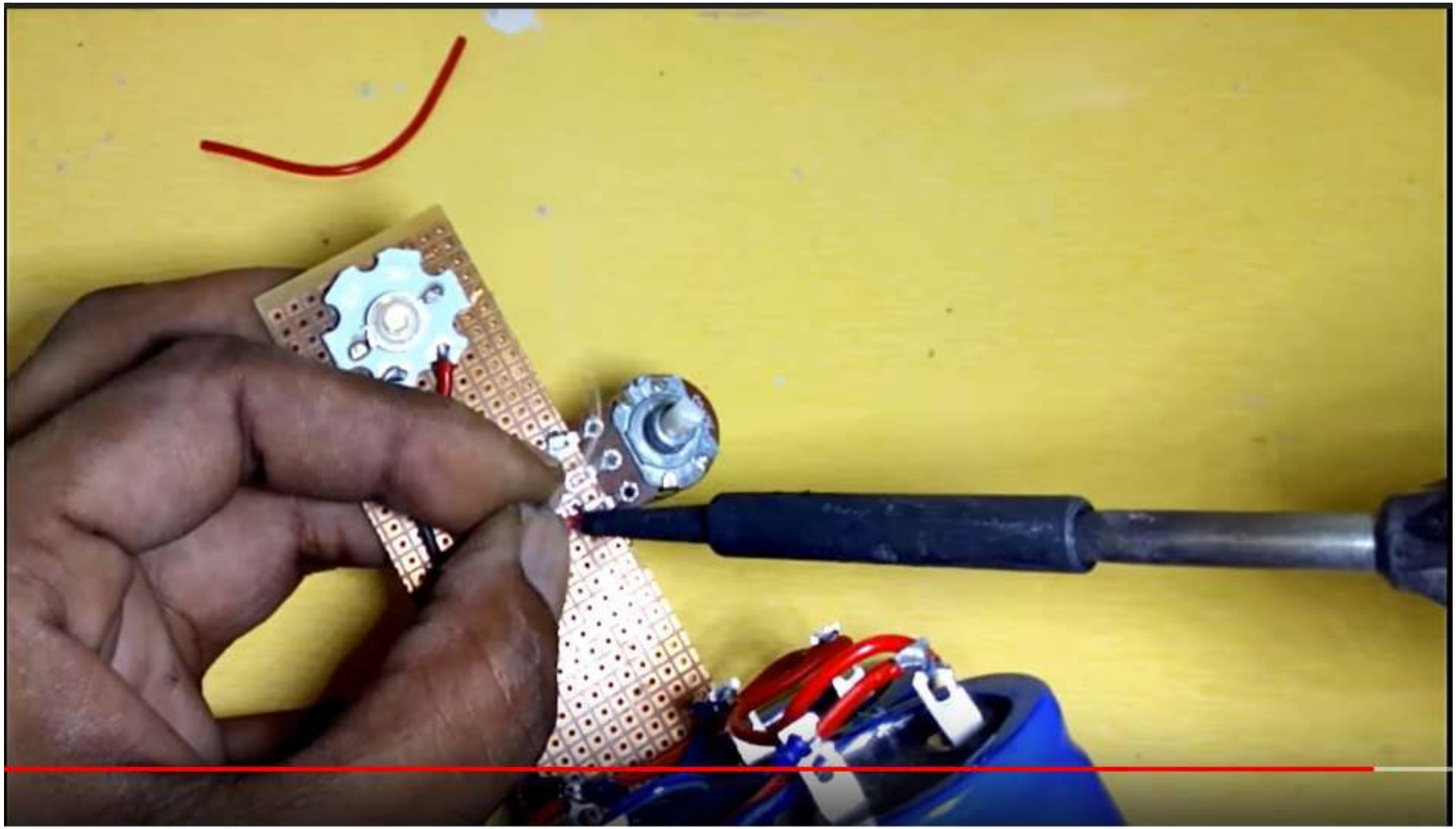


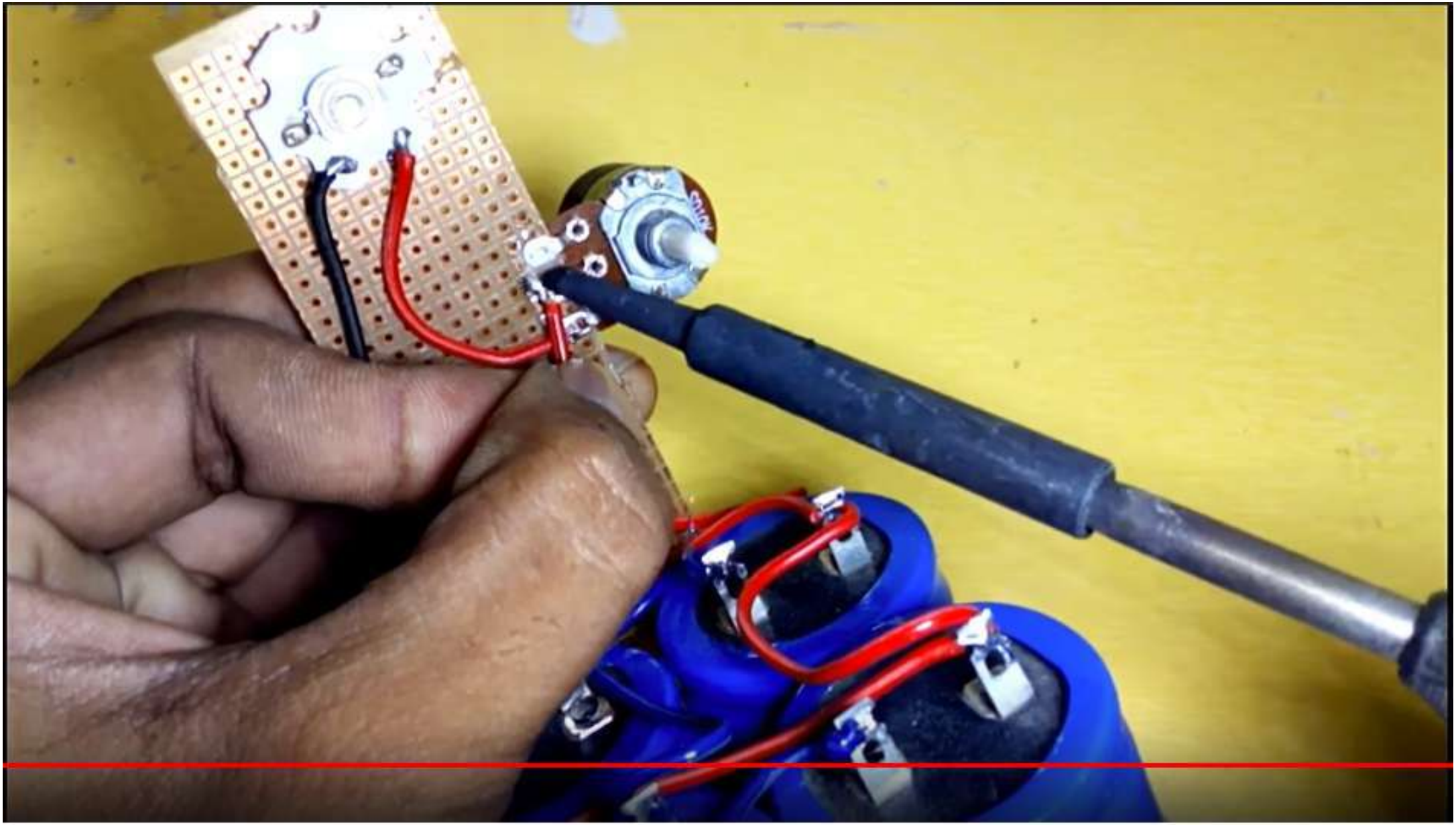




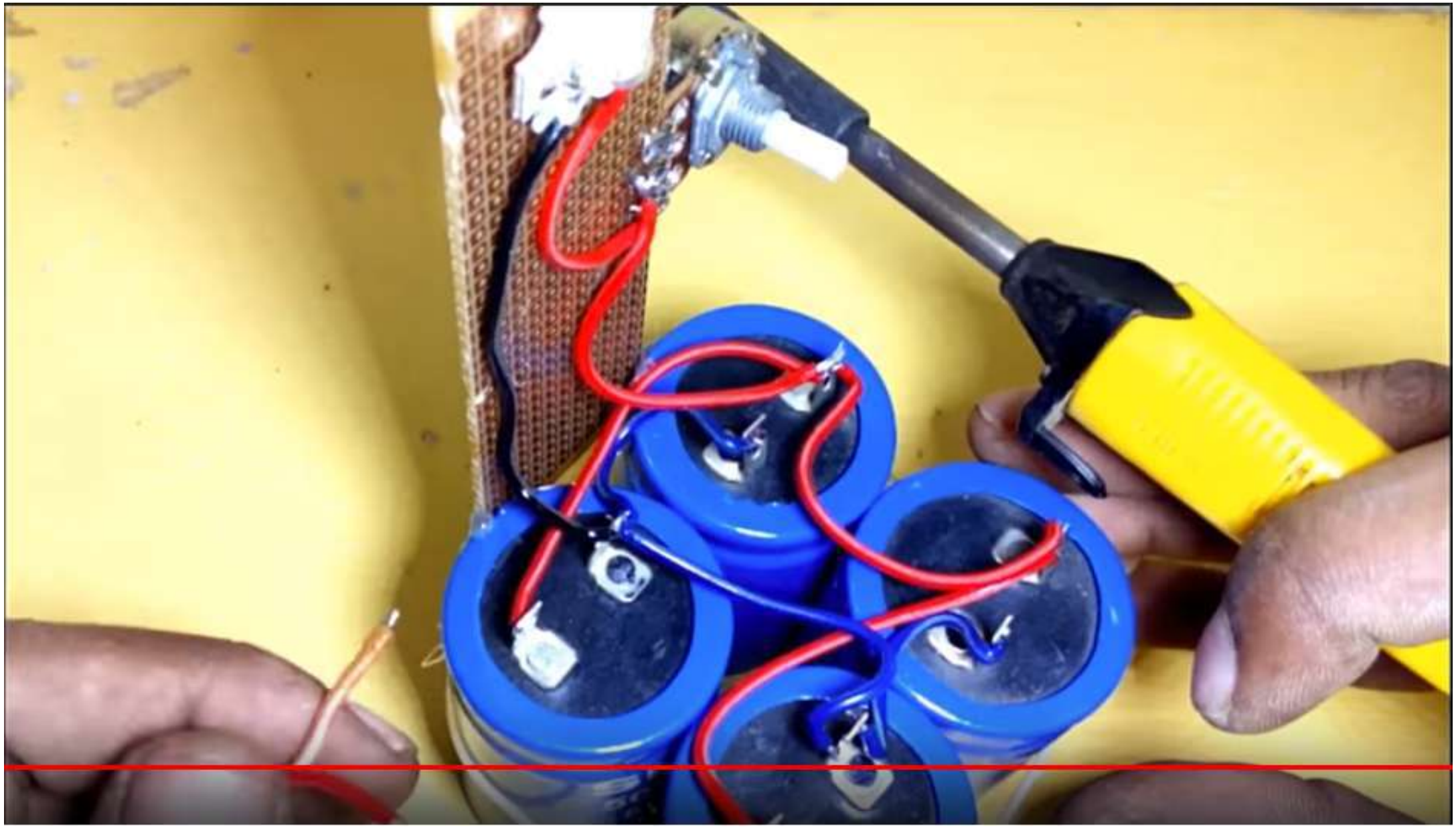




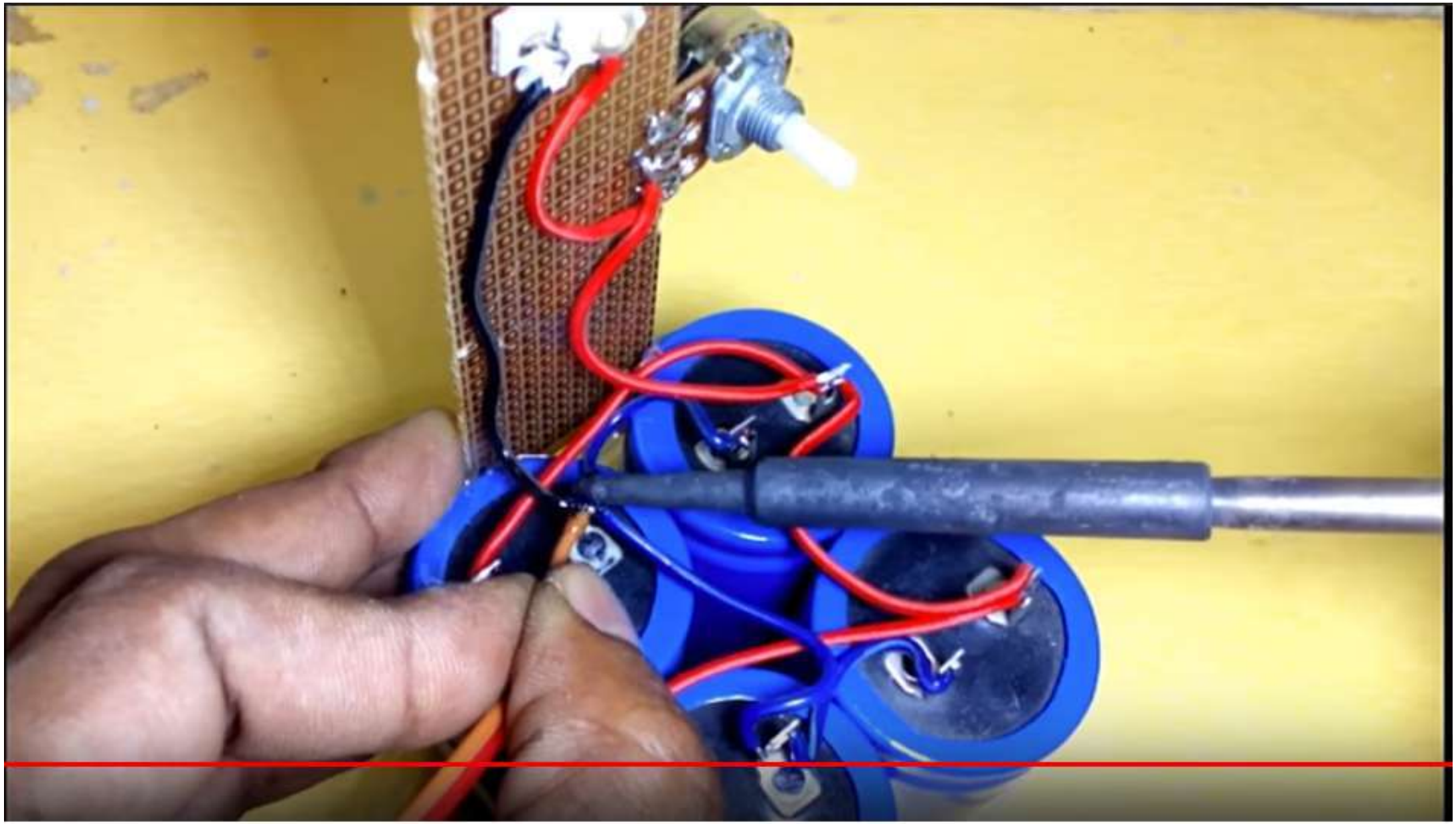


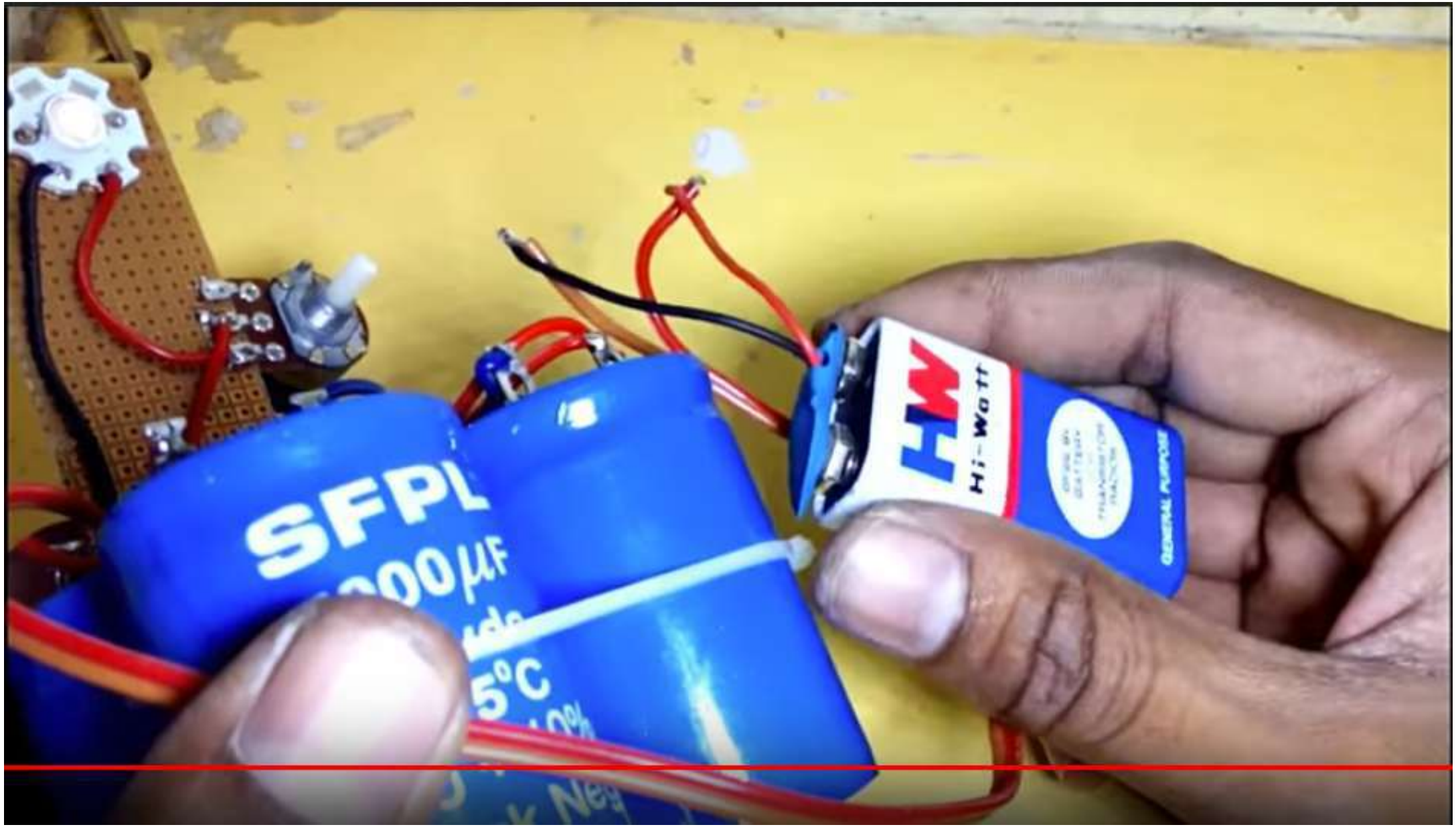


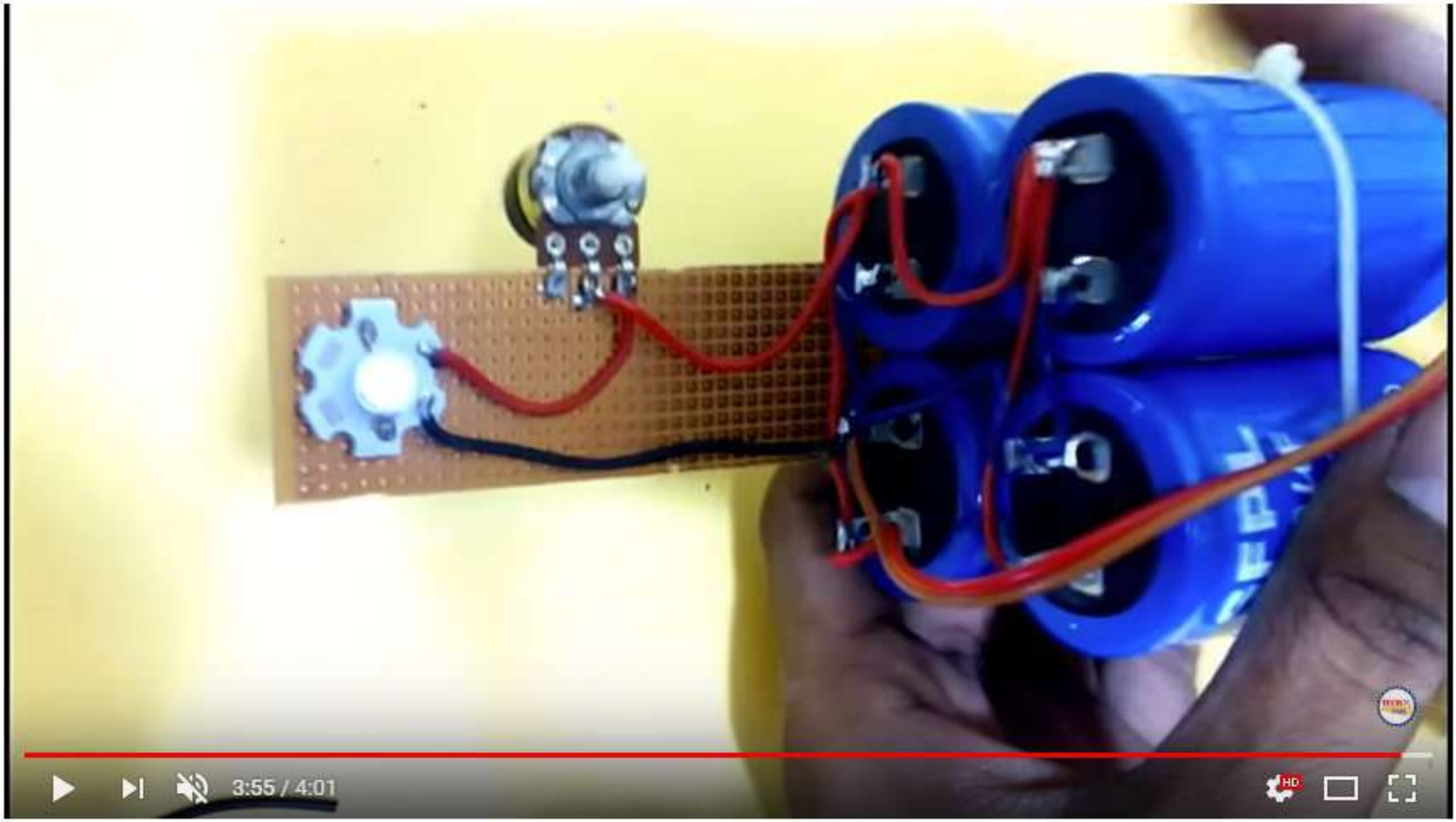




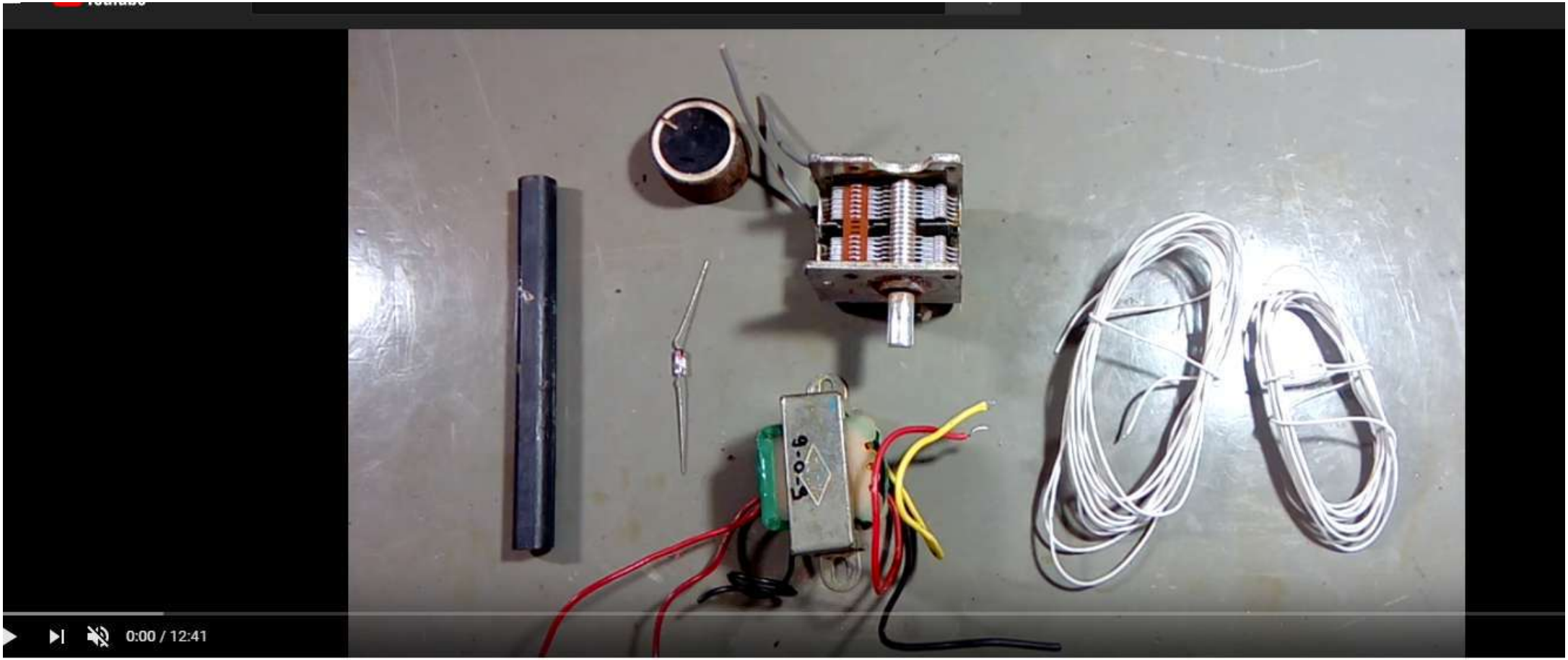





SFPL
Hi-Watt

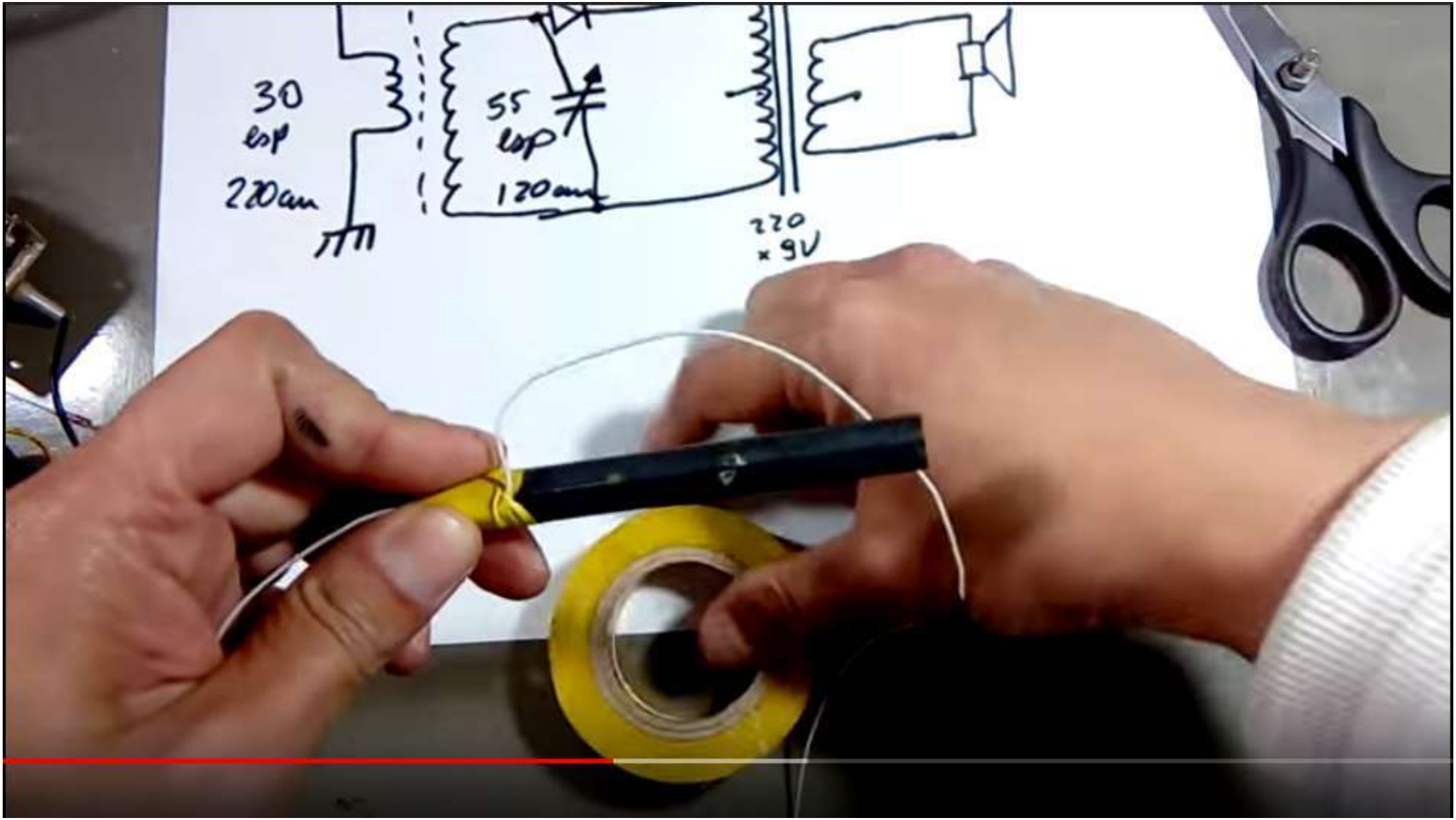


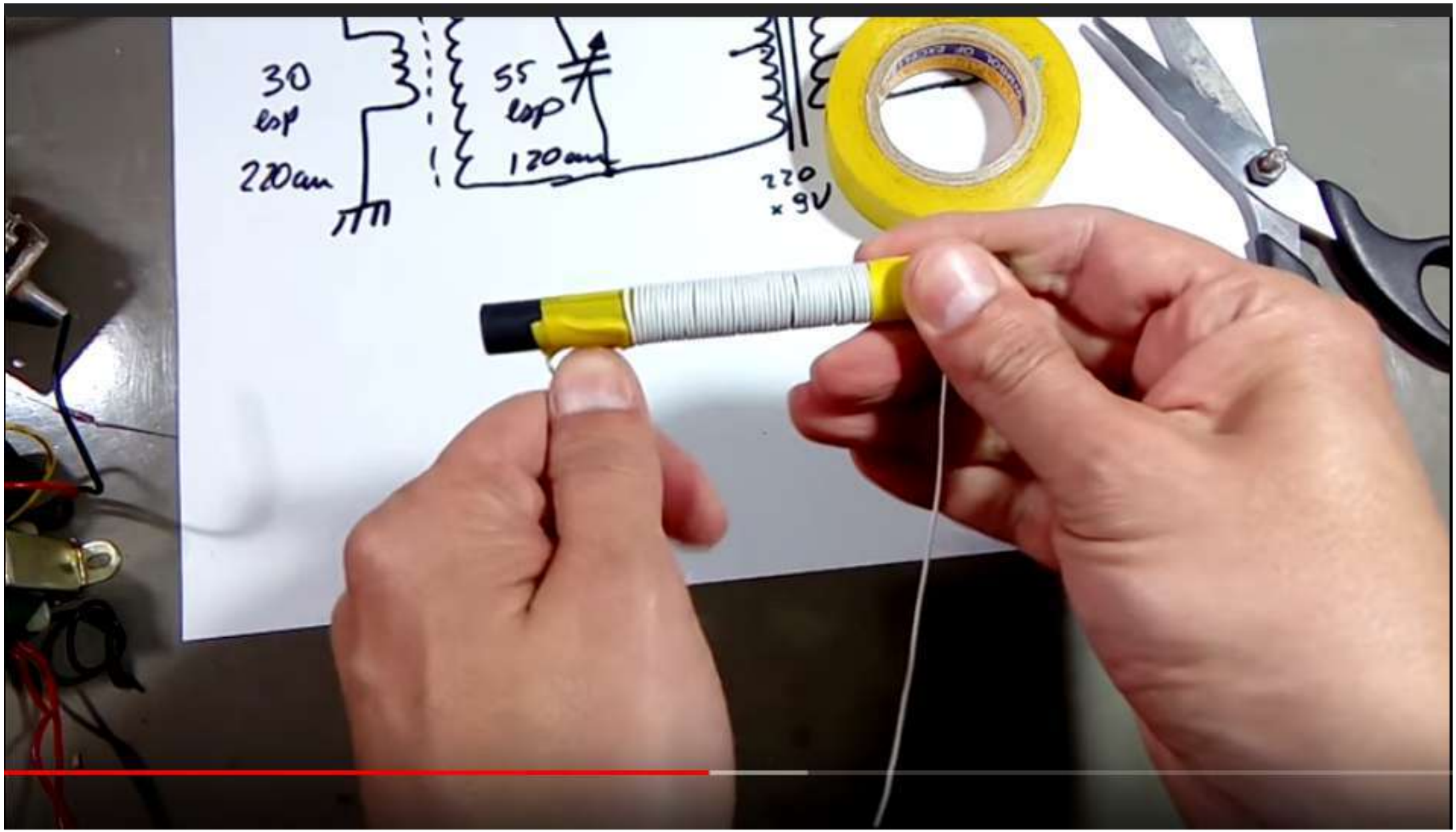
Real free energy using capacitor 1000% working

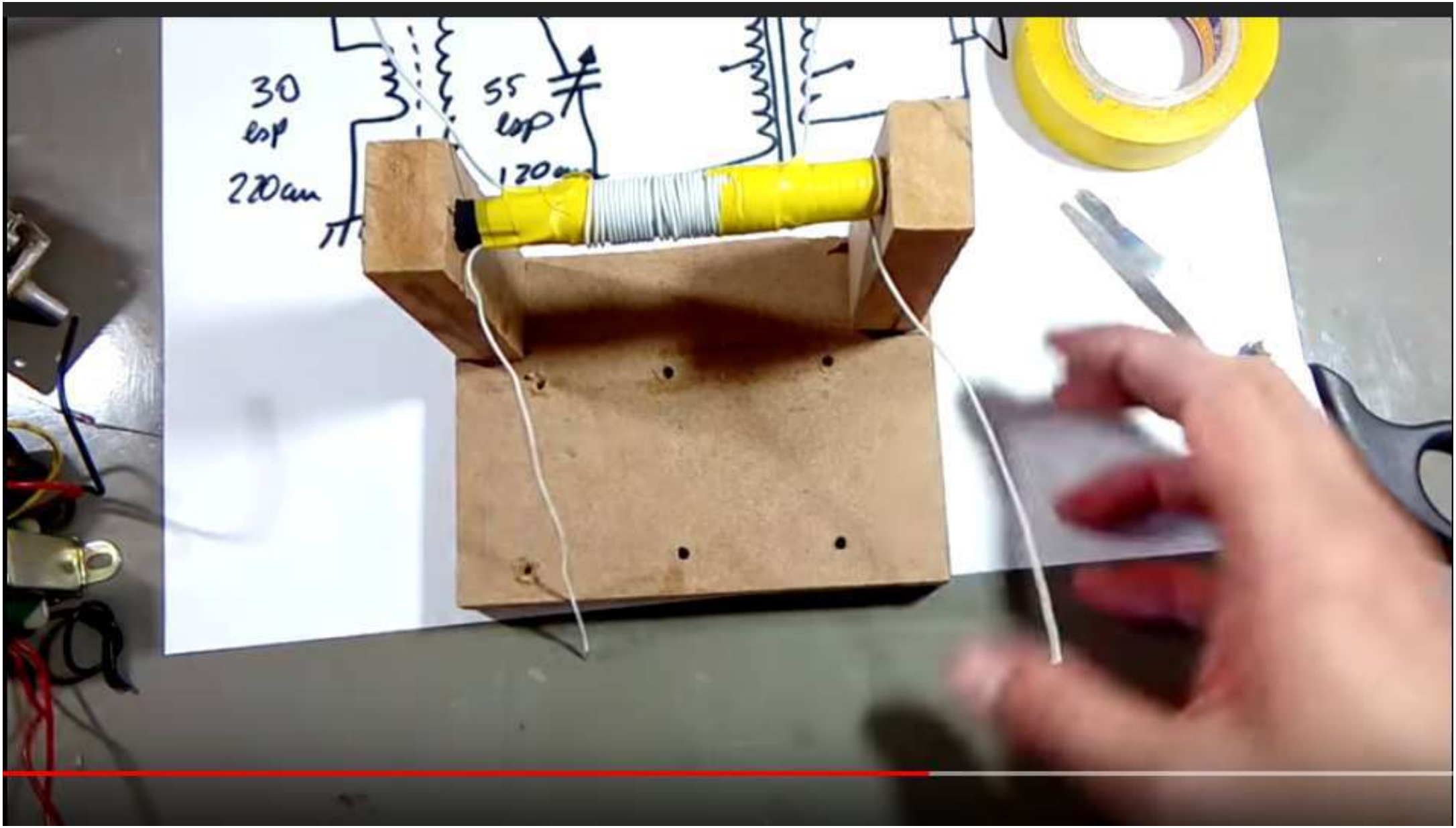


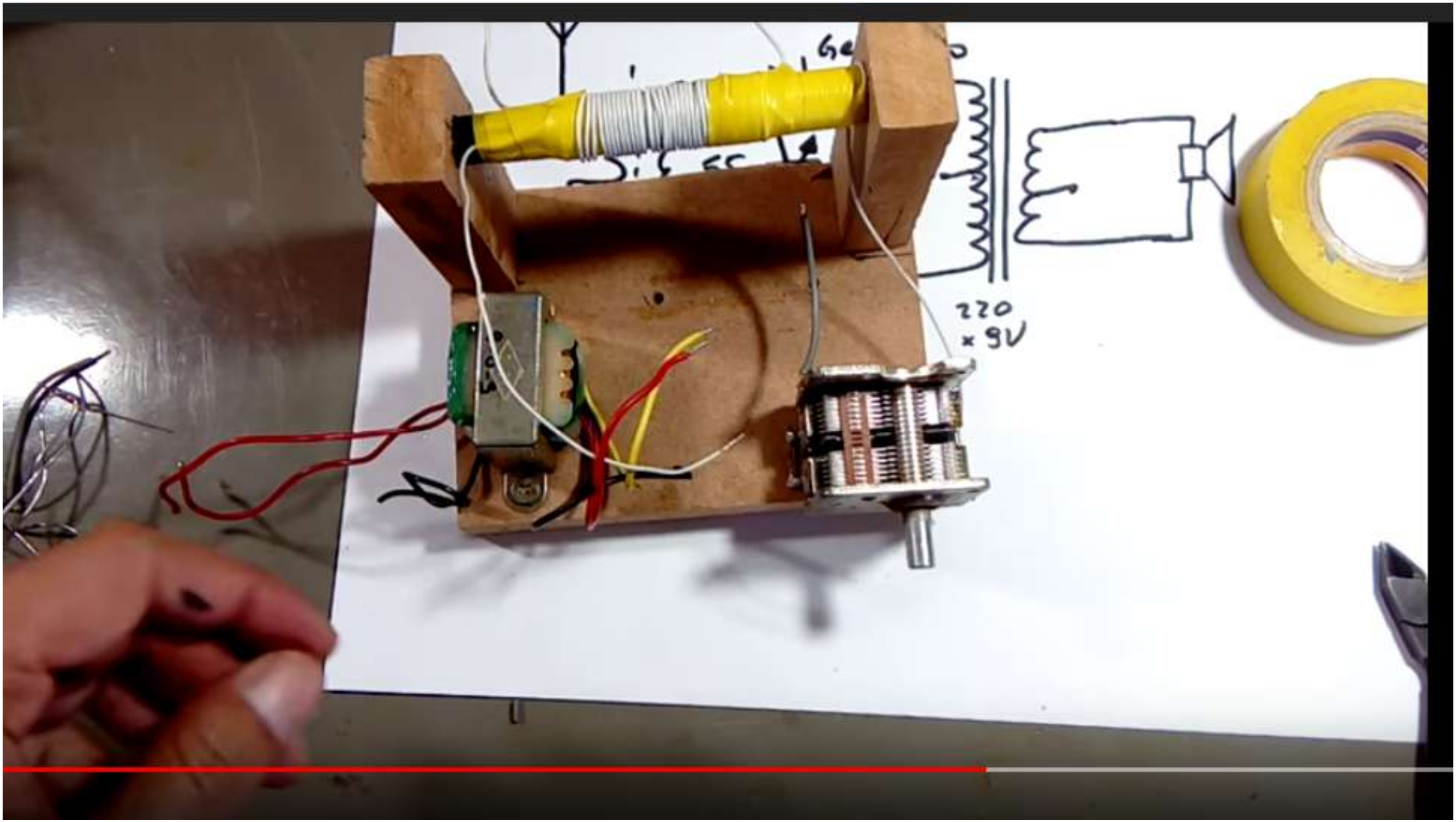
Montagem de um rádio AM a cristal de Germânio

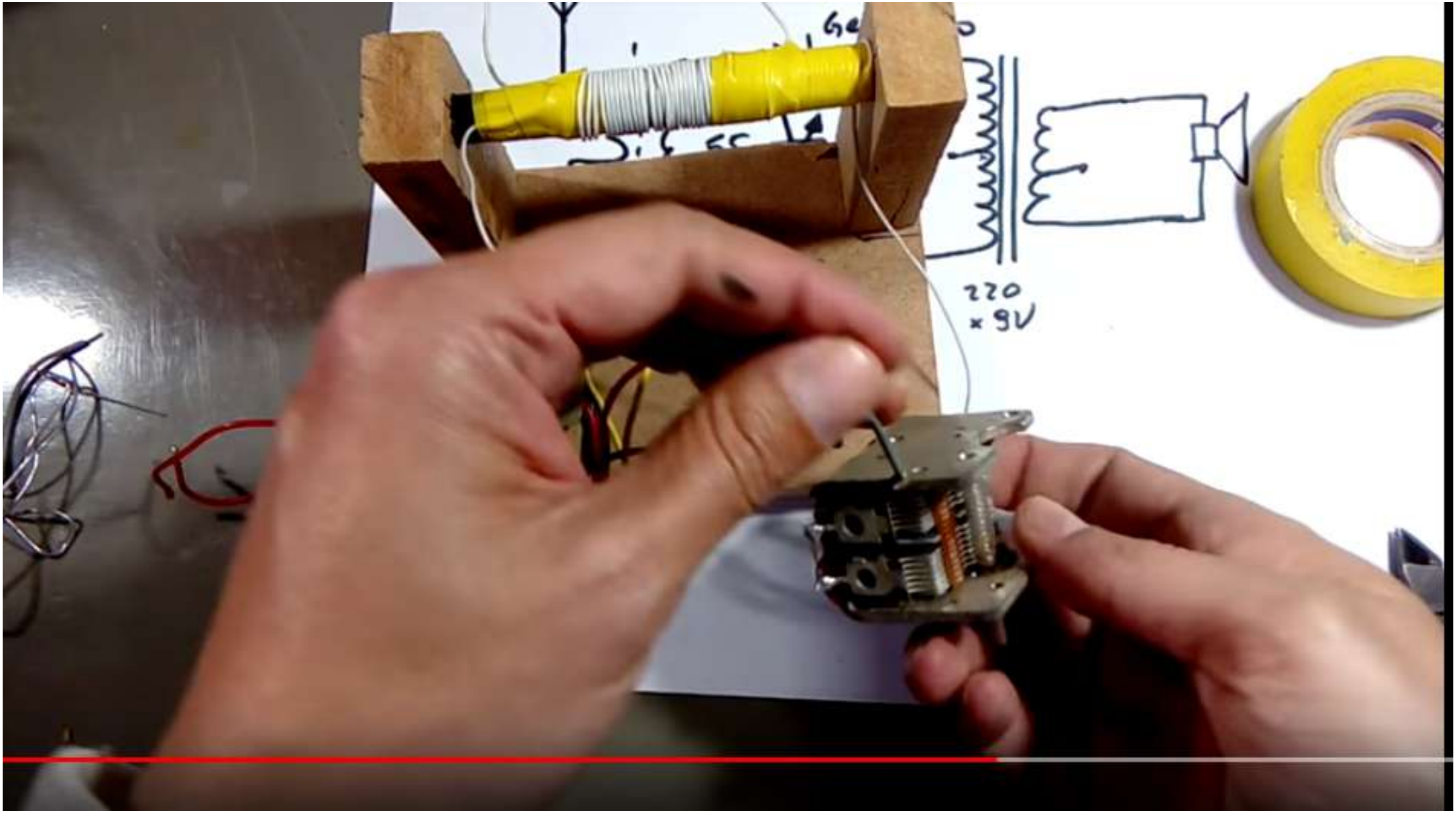
Smarter Data

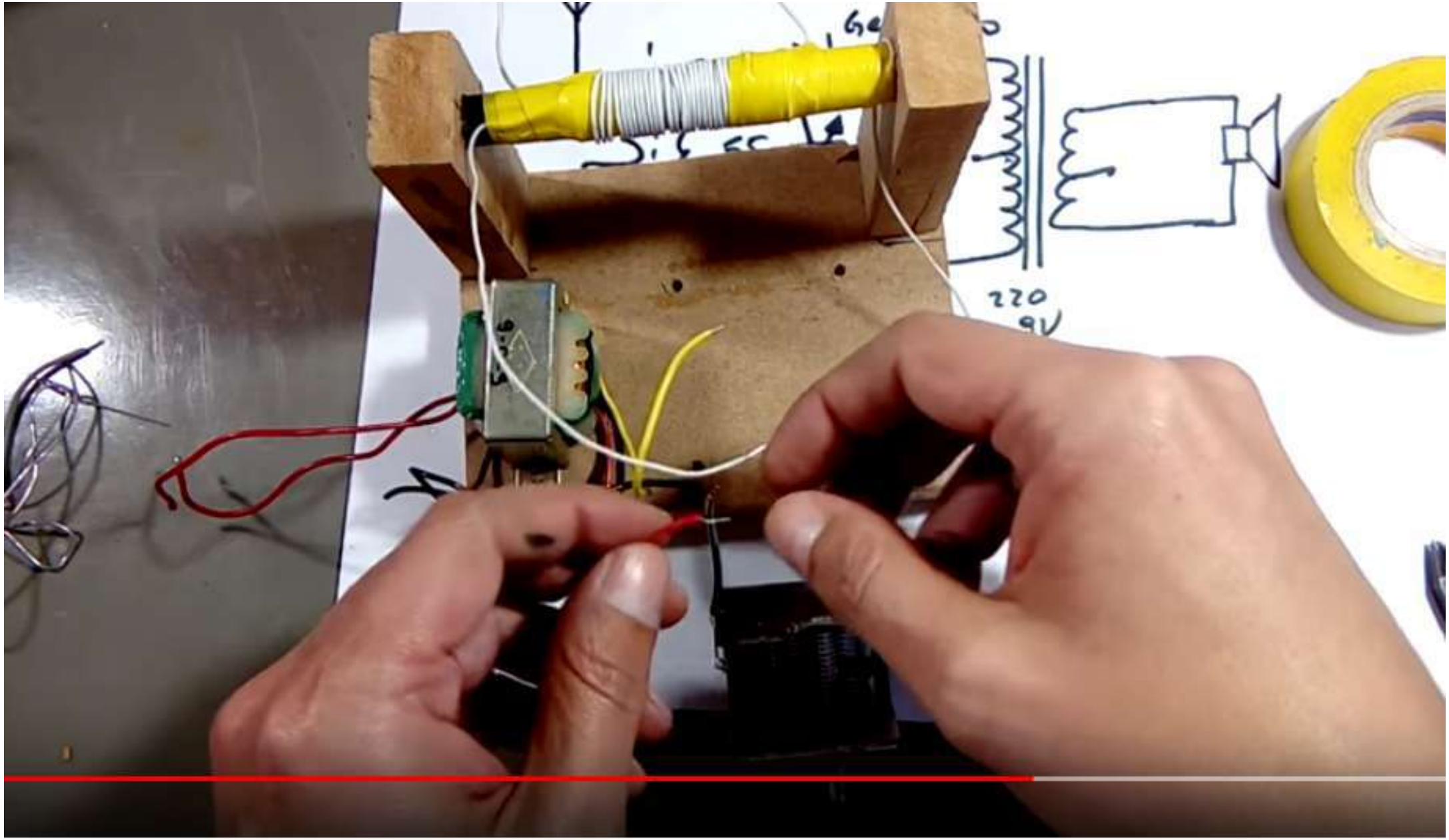

30
lop
220cm
55
lop
120cm
220
x 9V

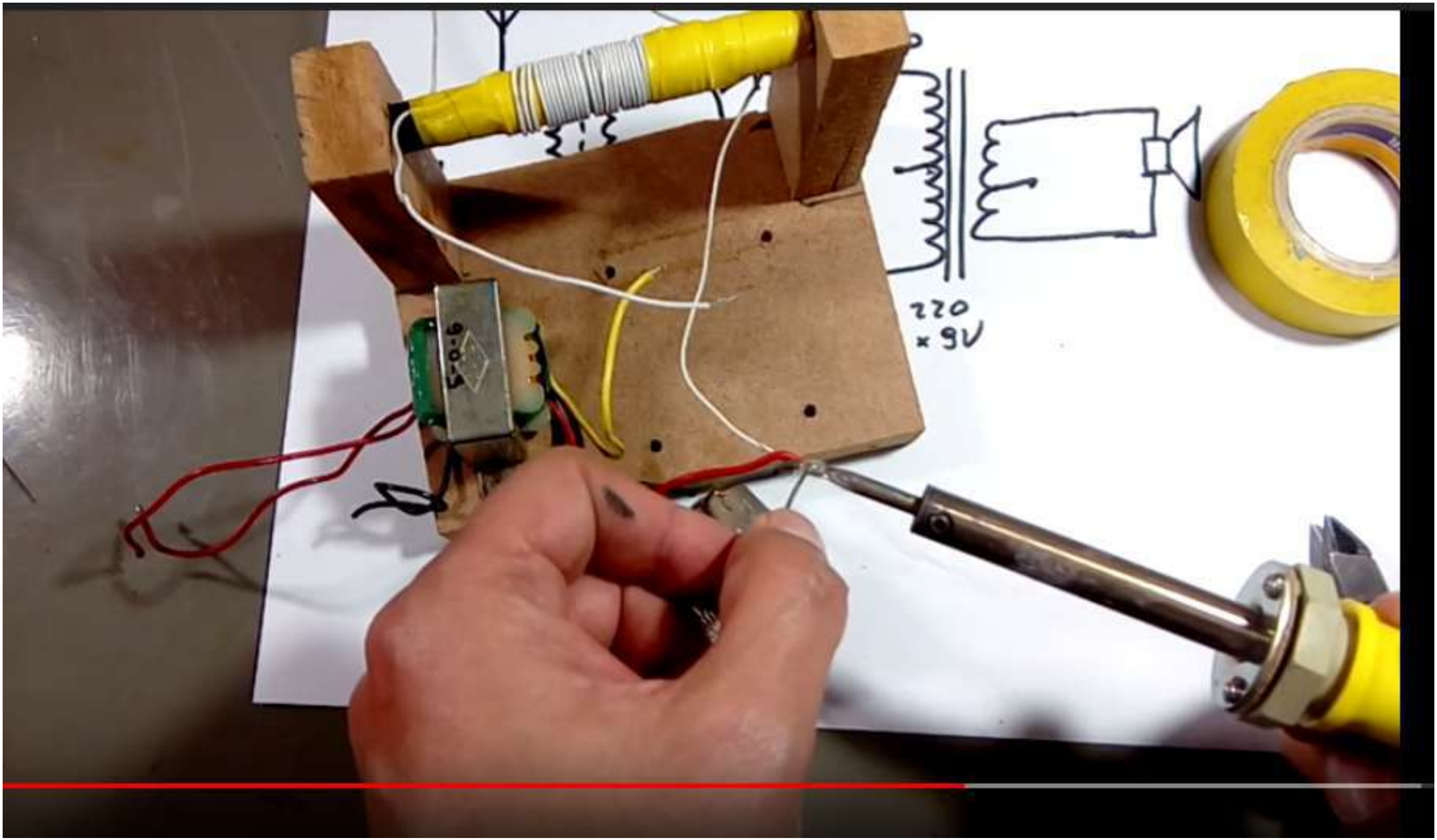

30
esp
220cm
55
esp
120cm
220
x 9V

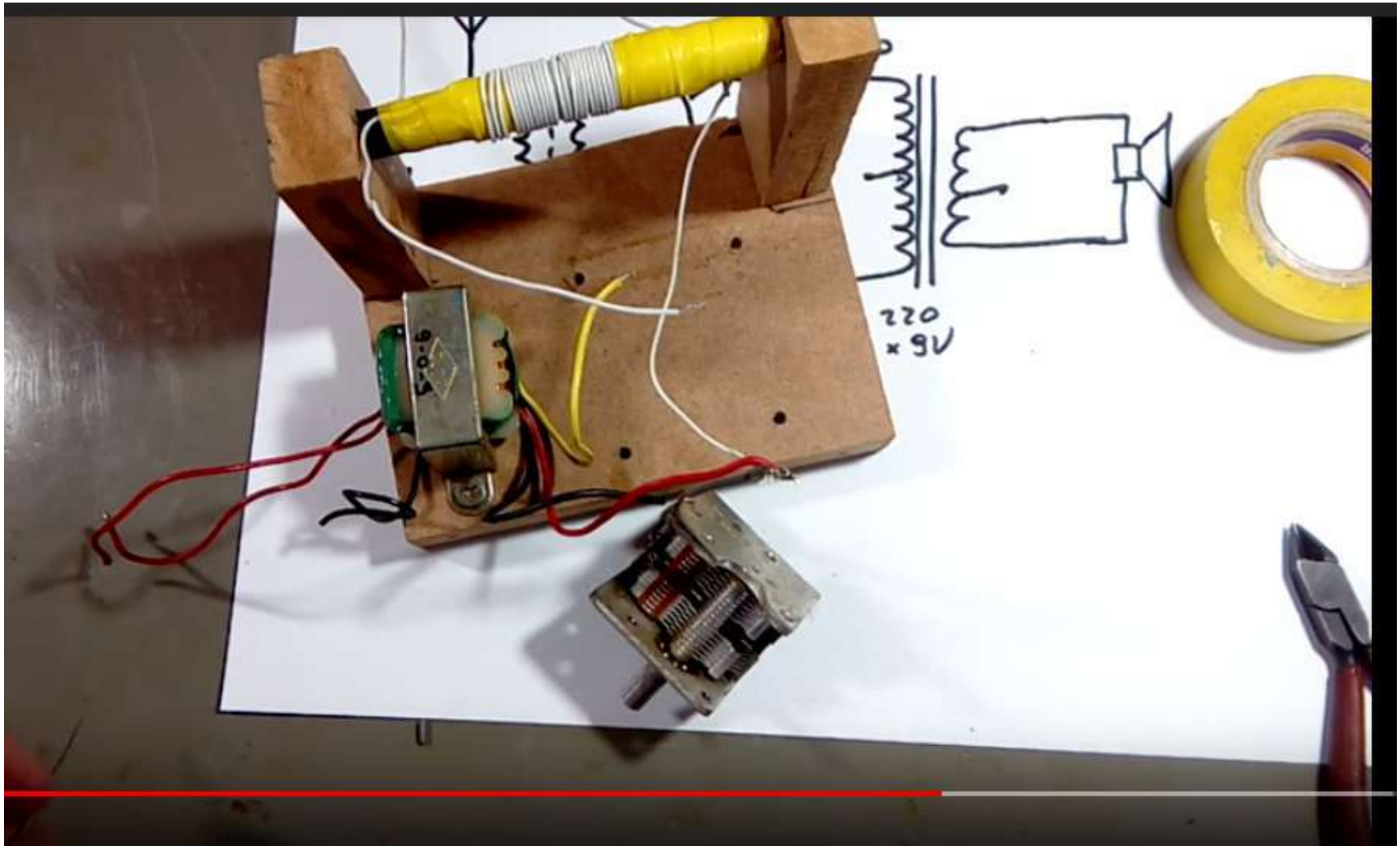

30
esp
220cm
55
esp
120cm

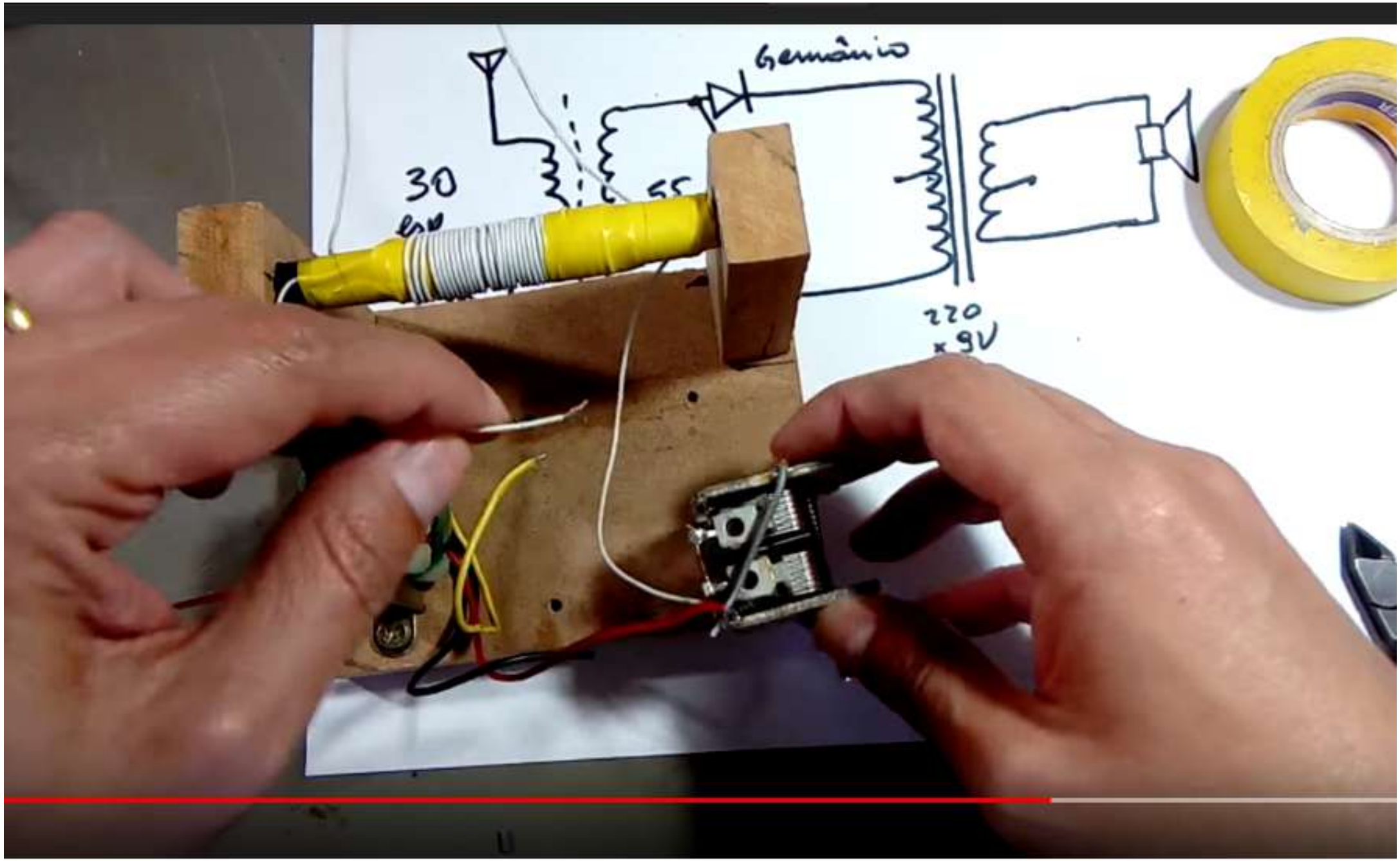

220
x 9V

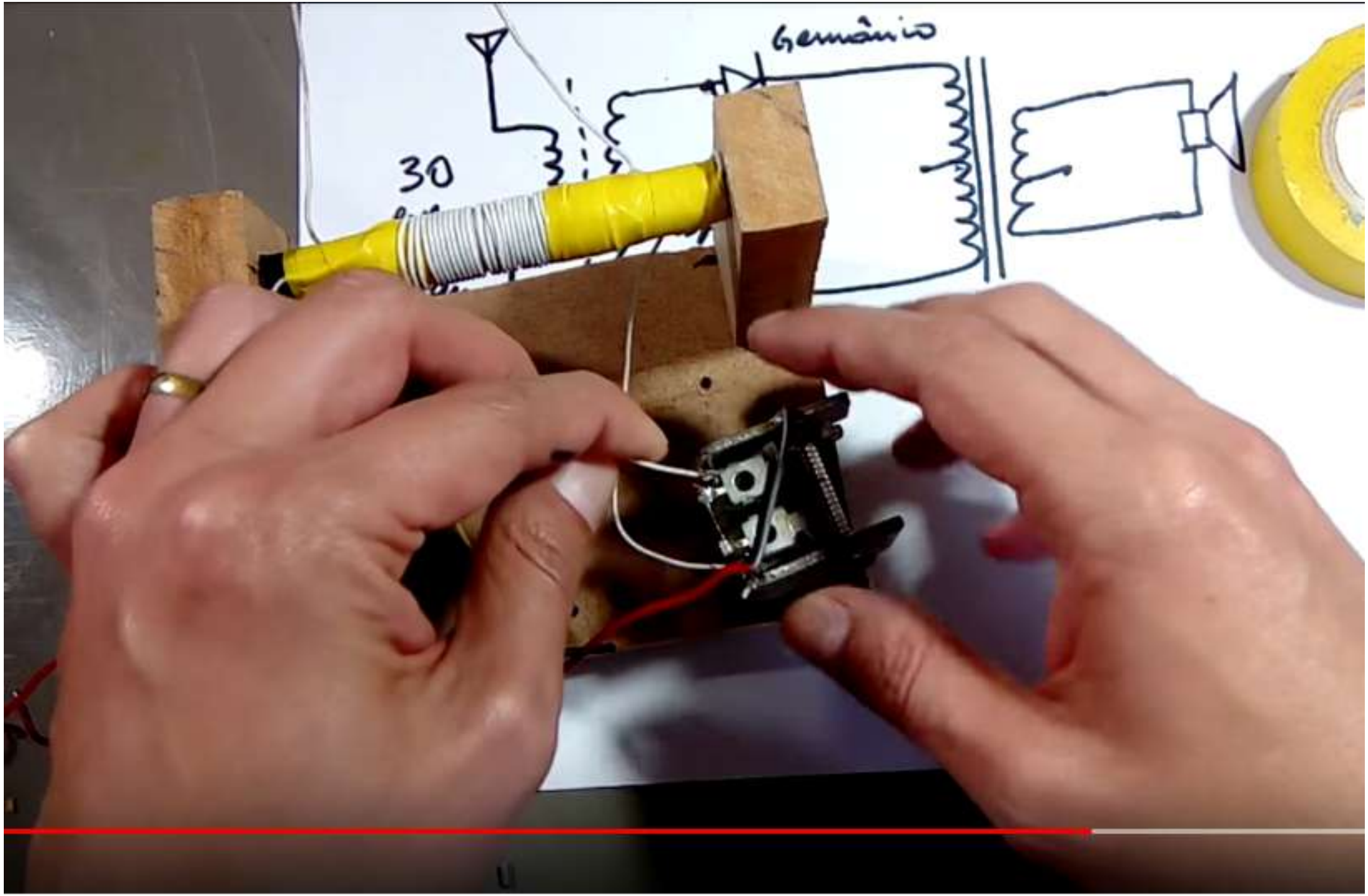

220
× 9V

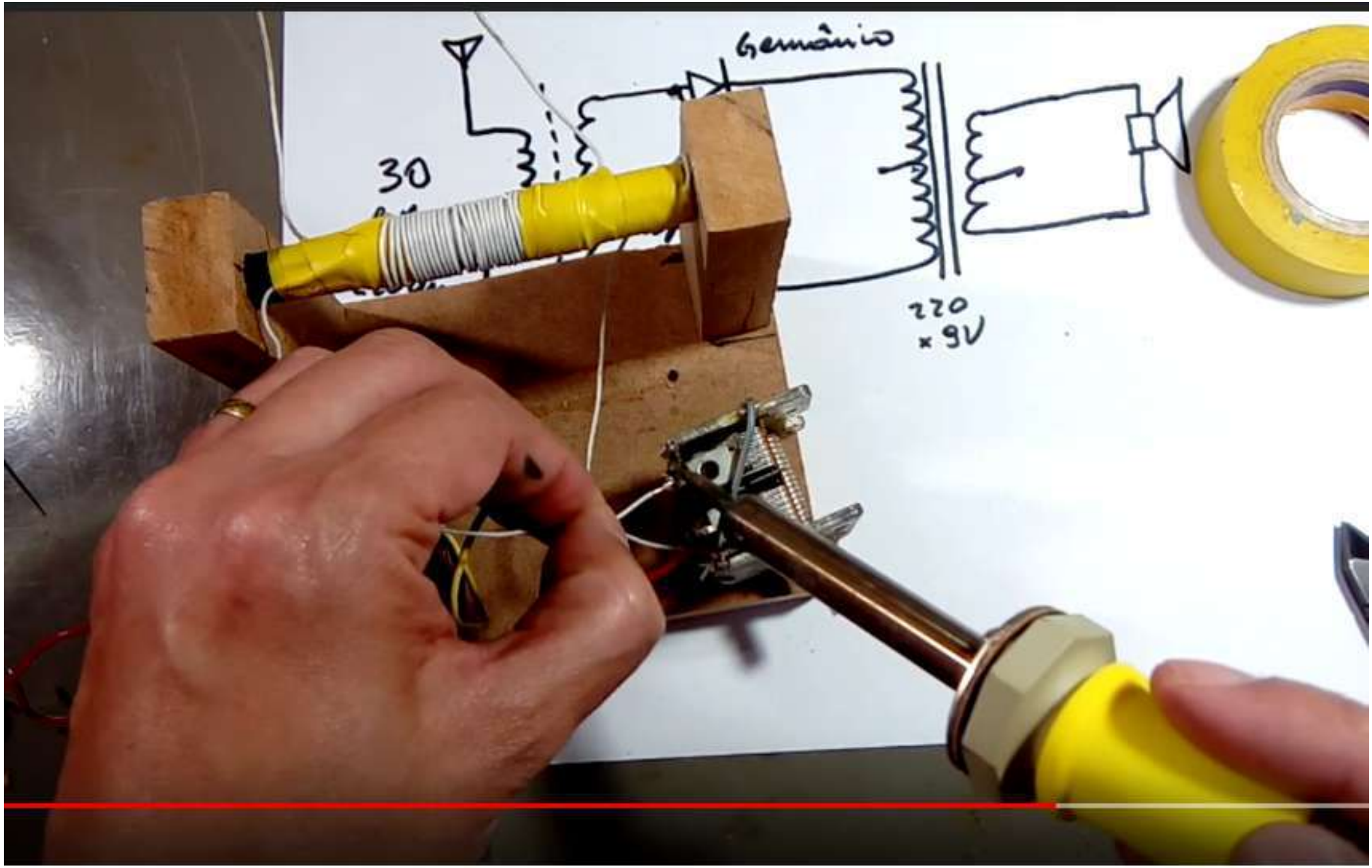

220
9V

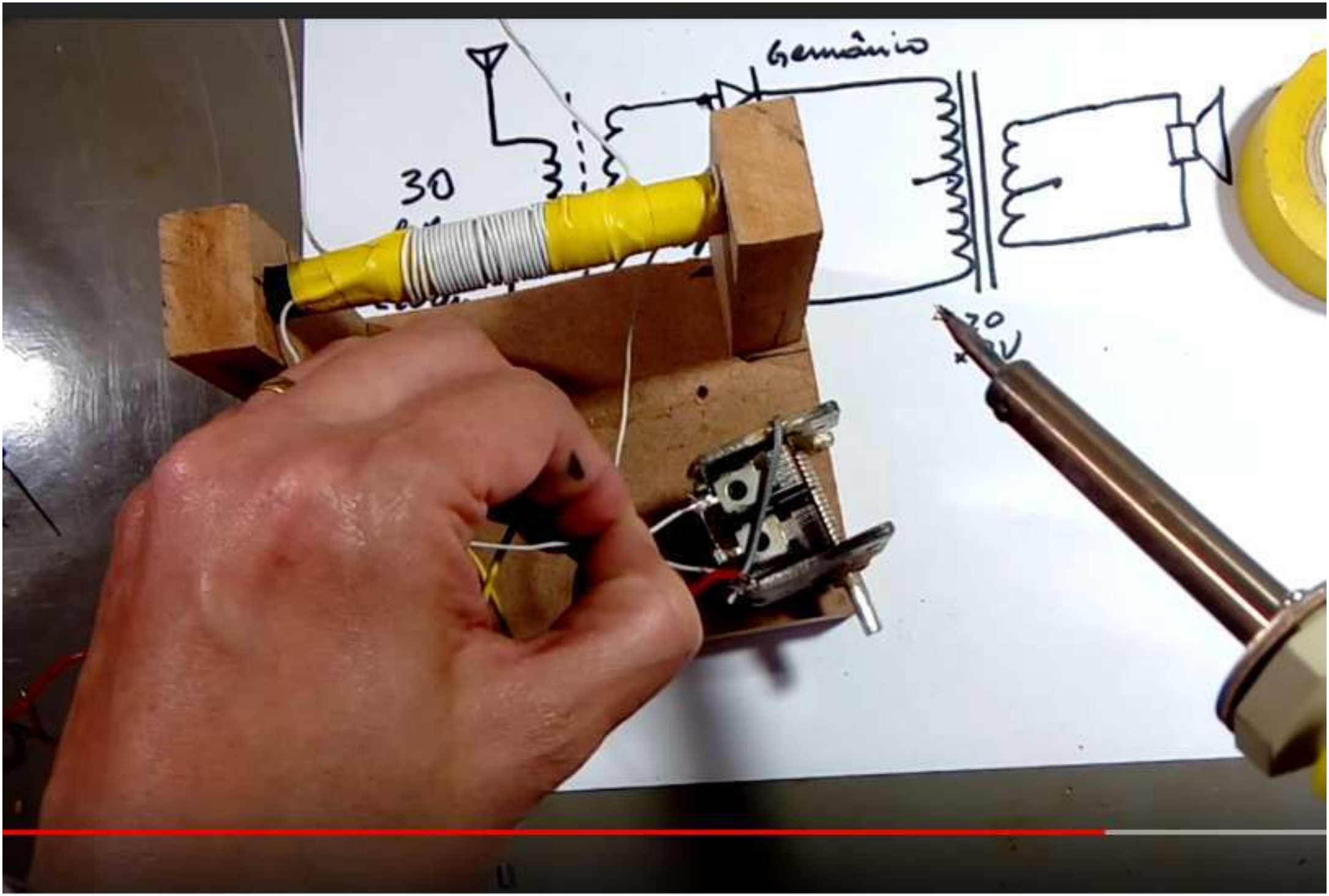

220
x 9V


220
x 9V

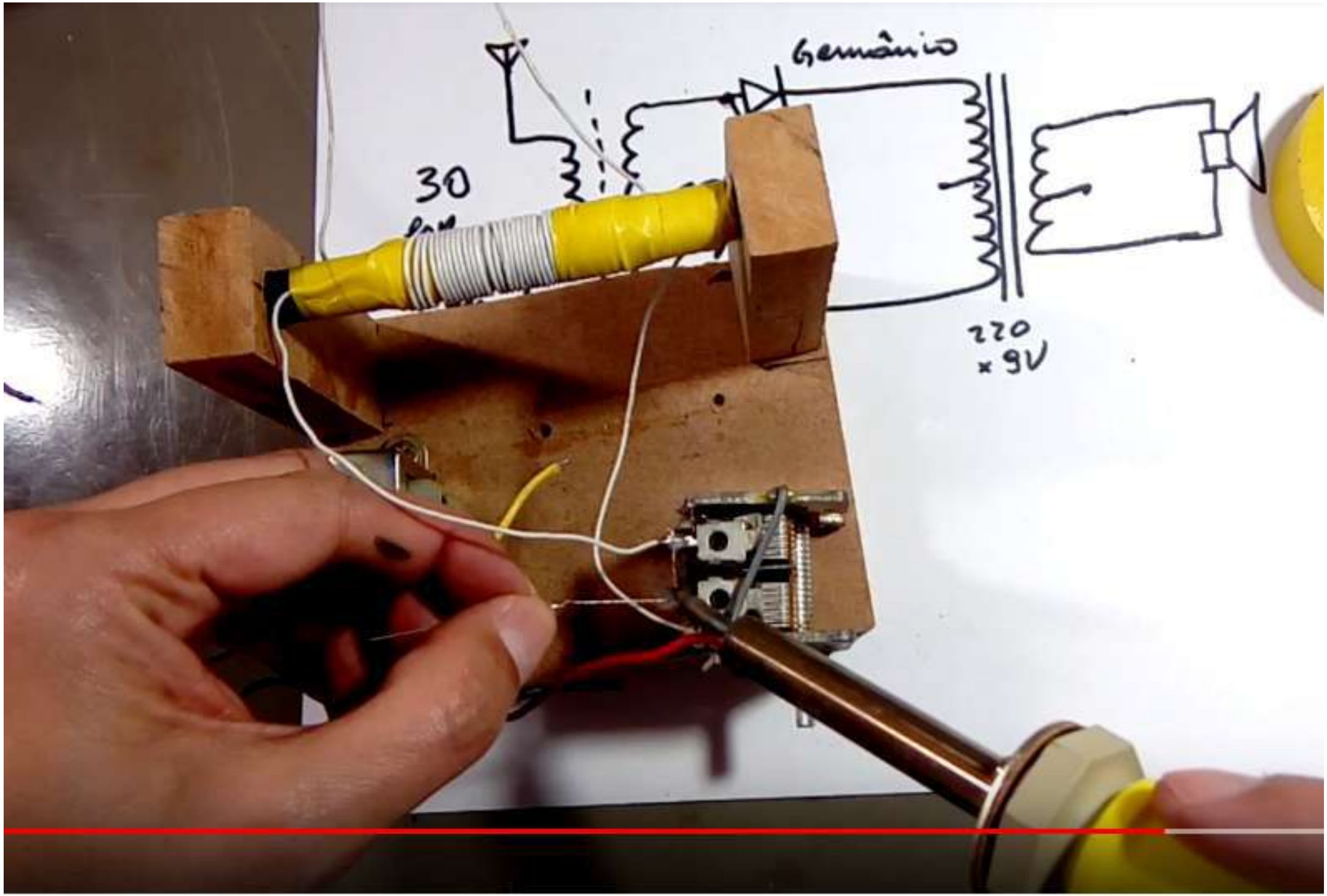

Germânio
30
220
+9V

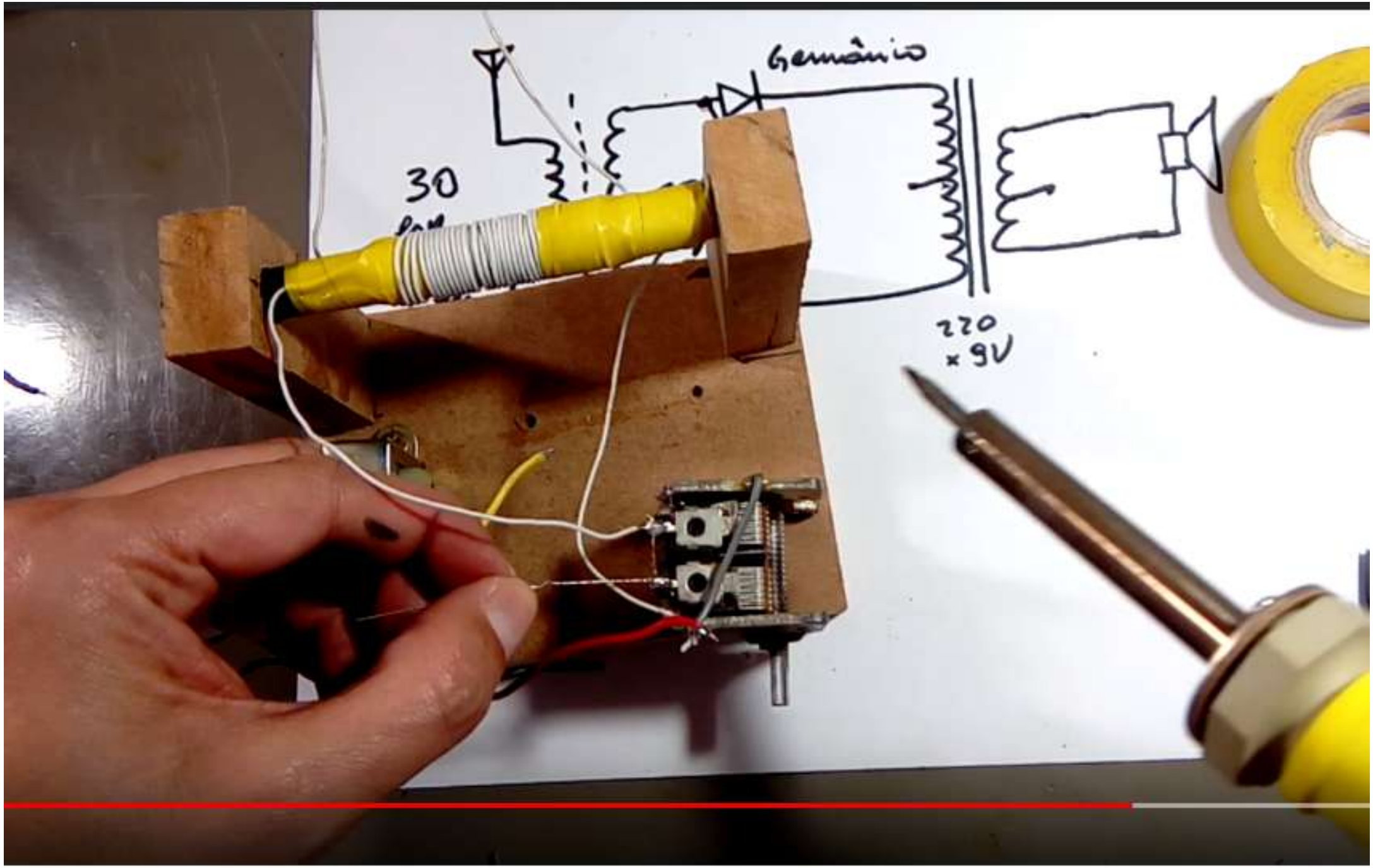

Germânio
30

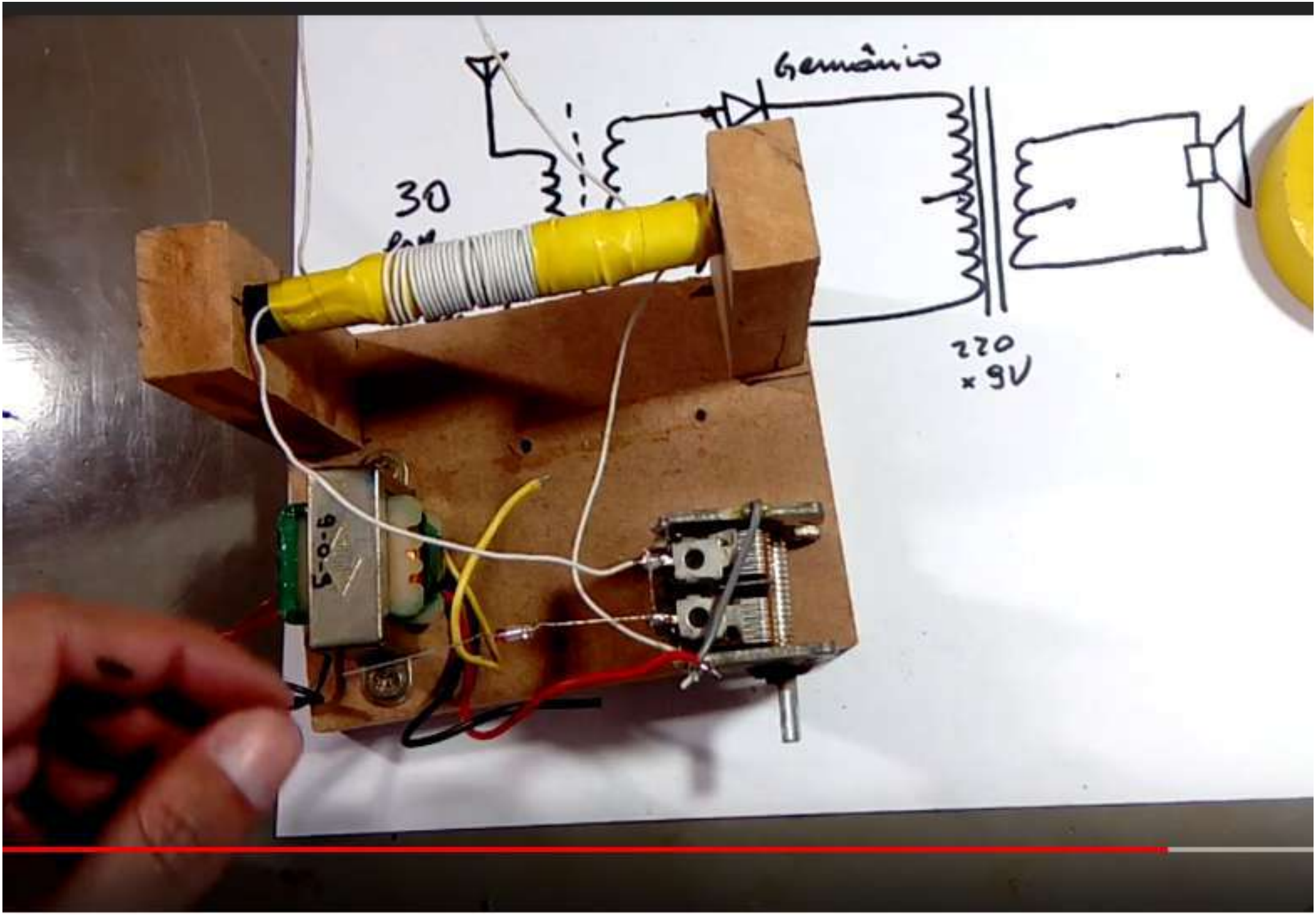

Germânio
30
220
x 9V

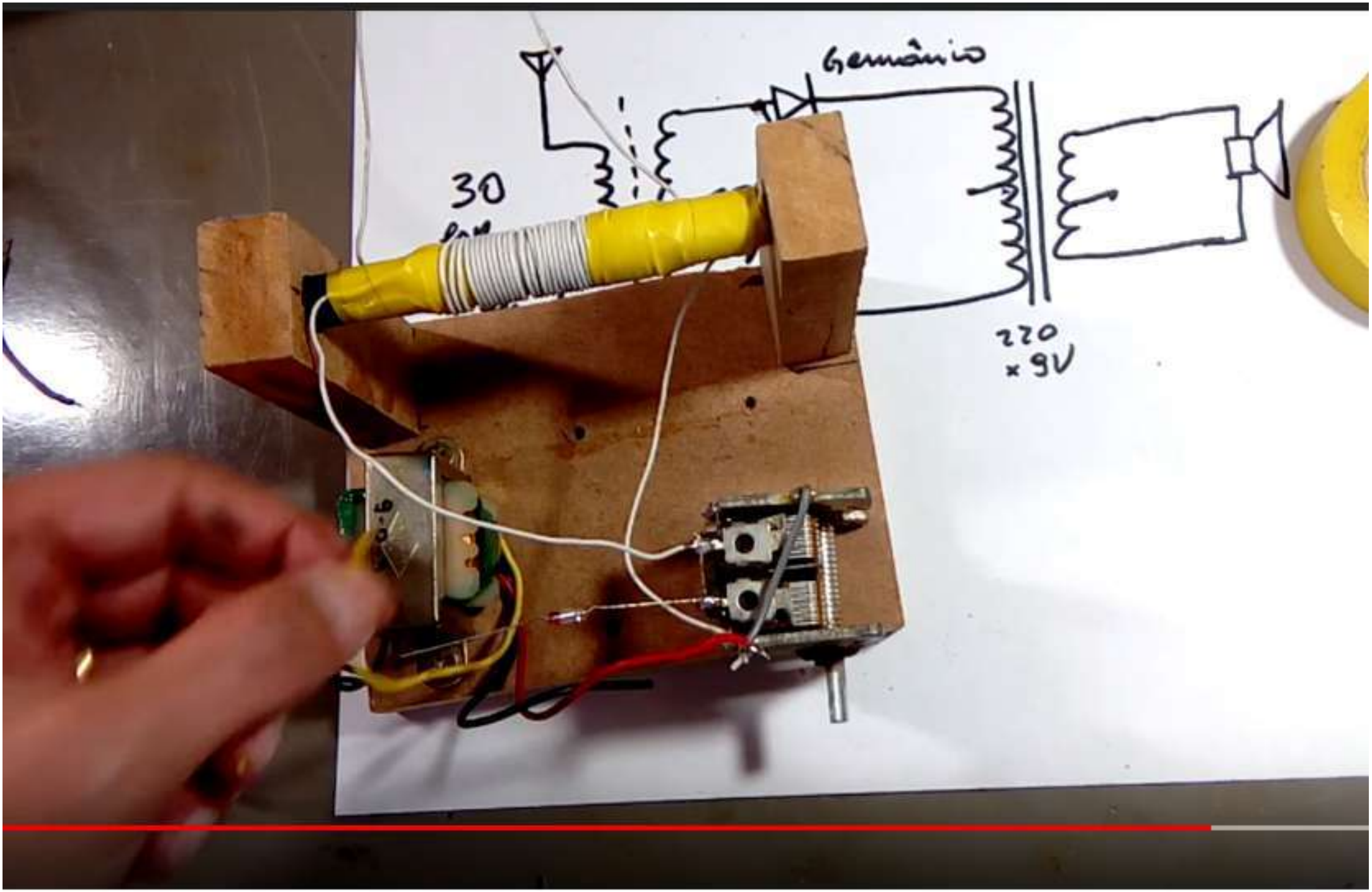

Germânio
30

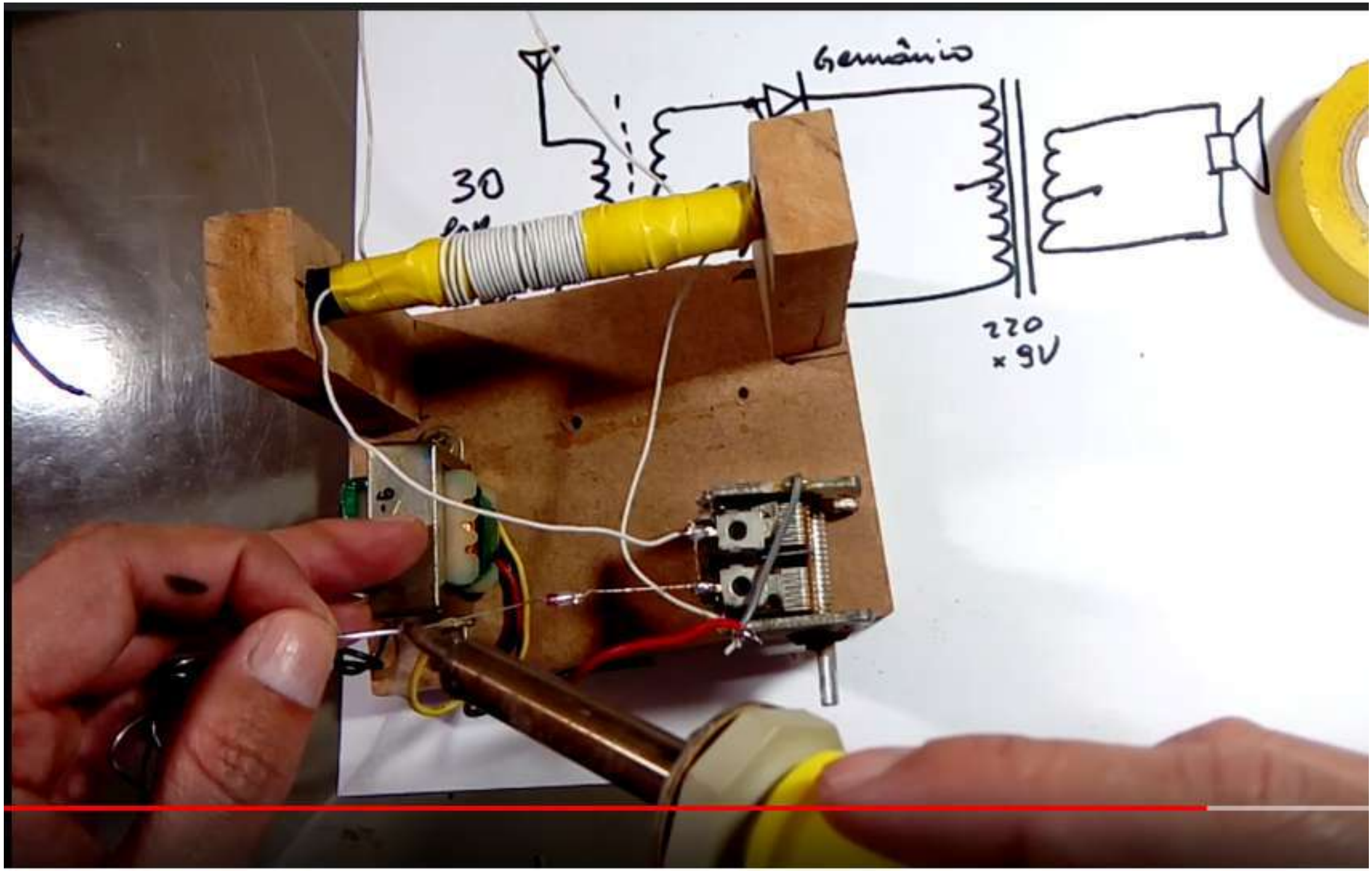
Germânio
30
220
x 9V

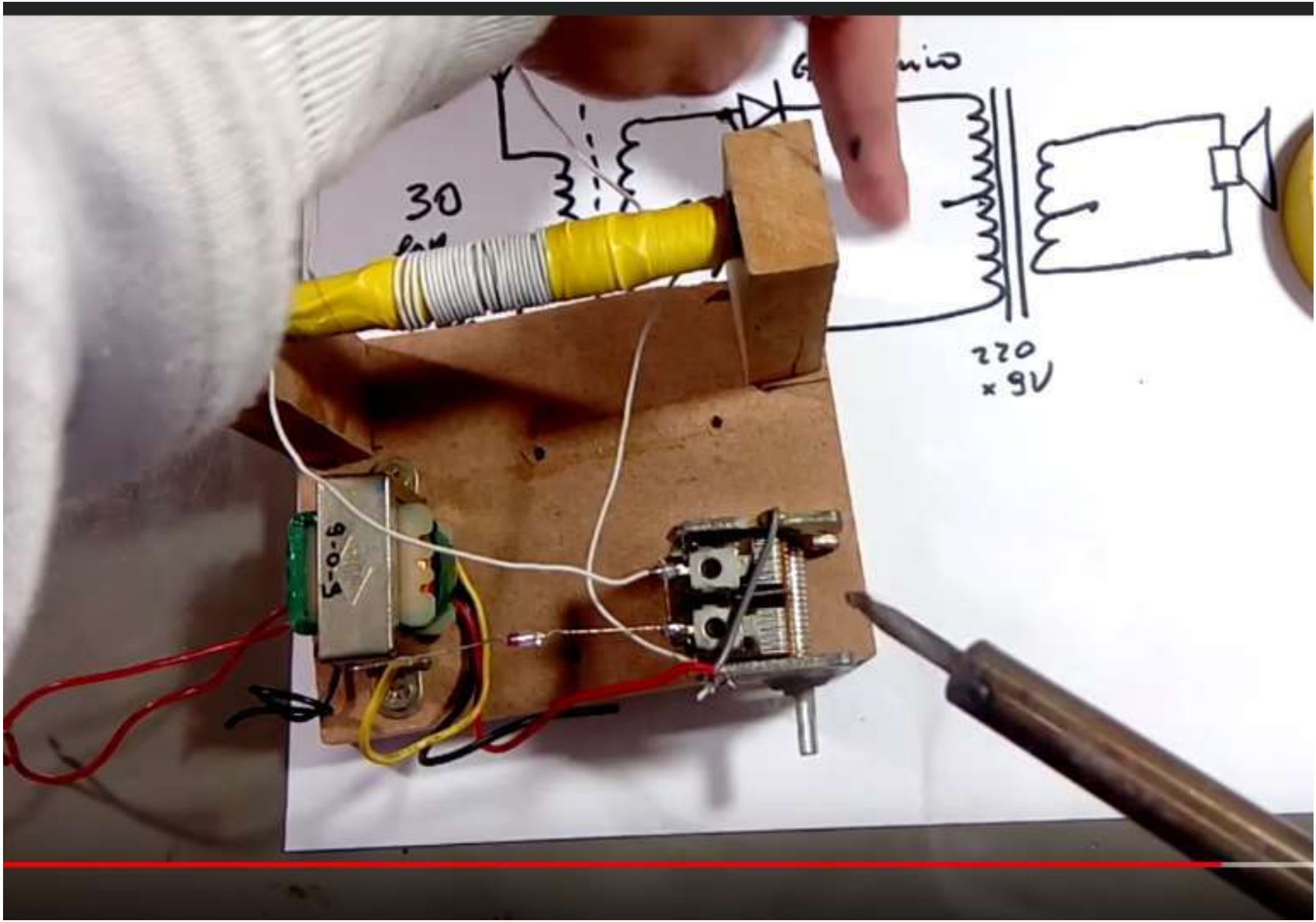

Germânio
30
220
x 9V

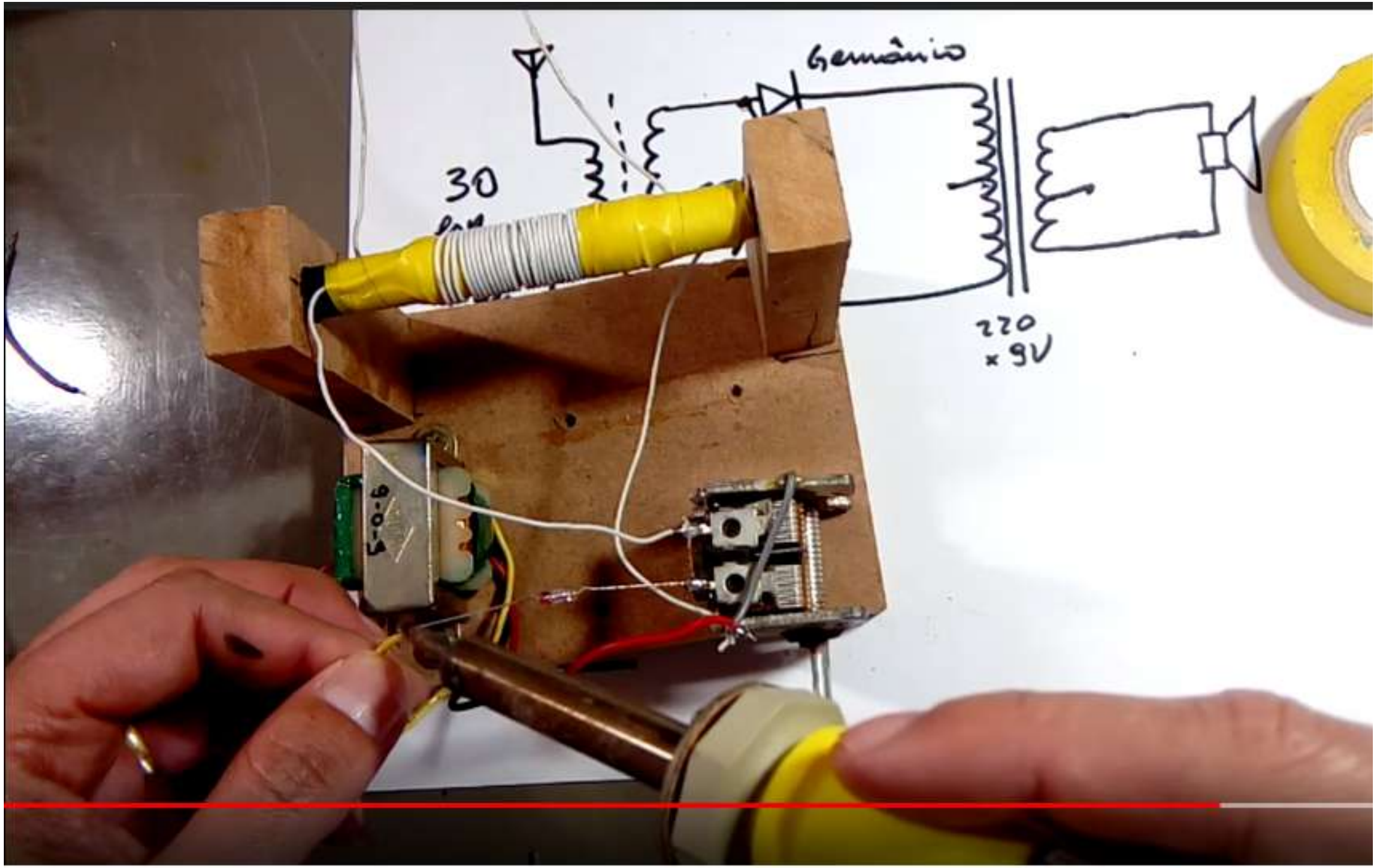

Germânio
30
220
x 9V


Germânio
30
220
x 9V

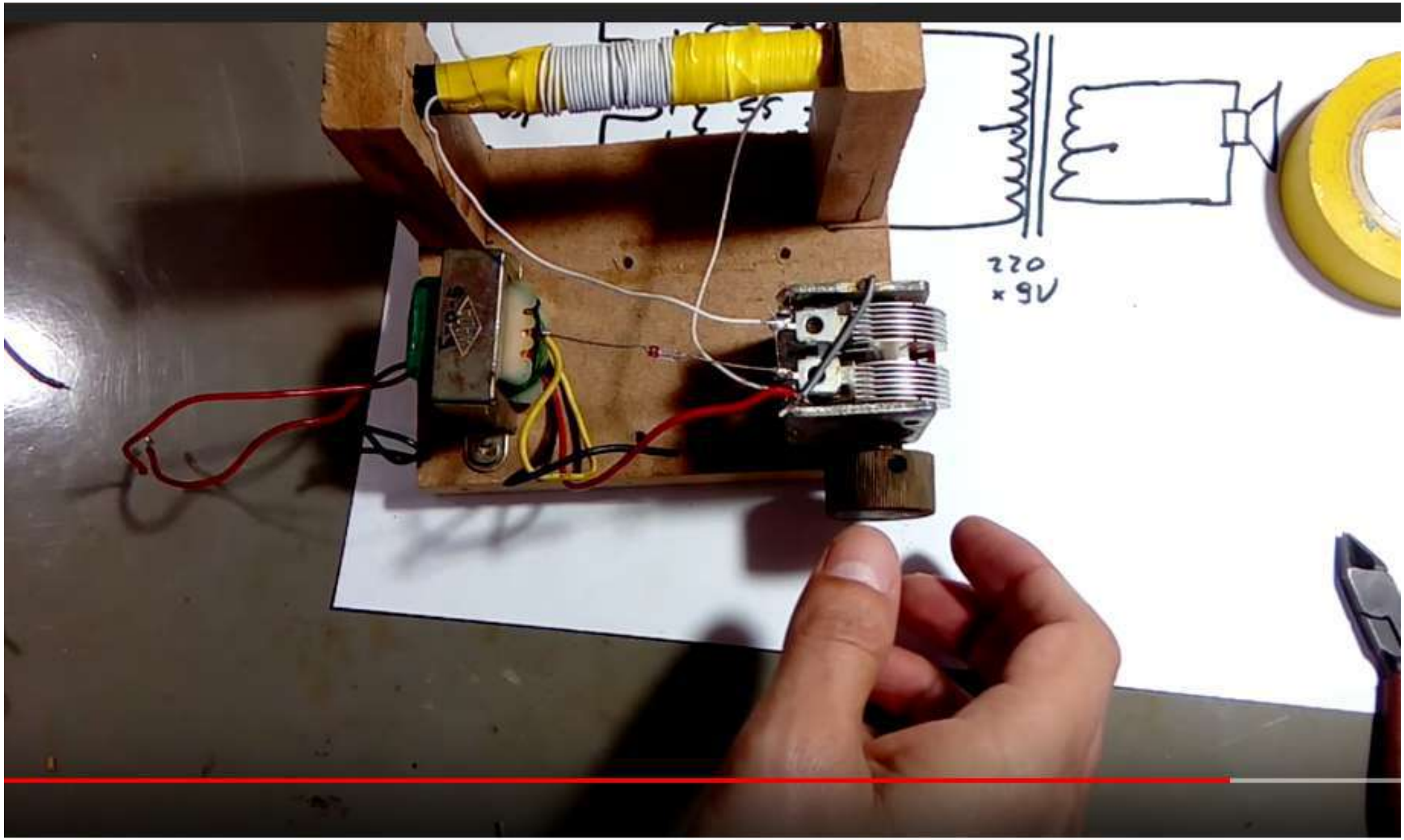

Germânio
30
220
x 9V

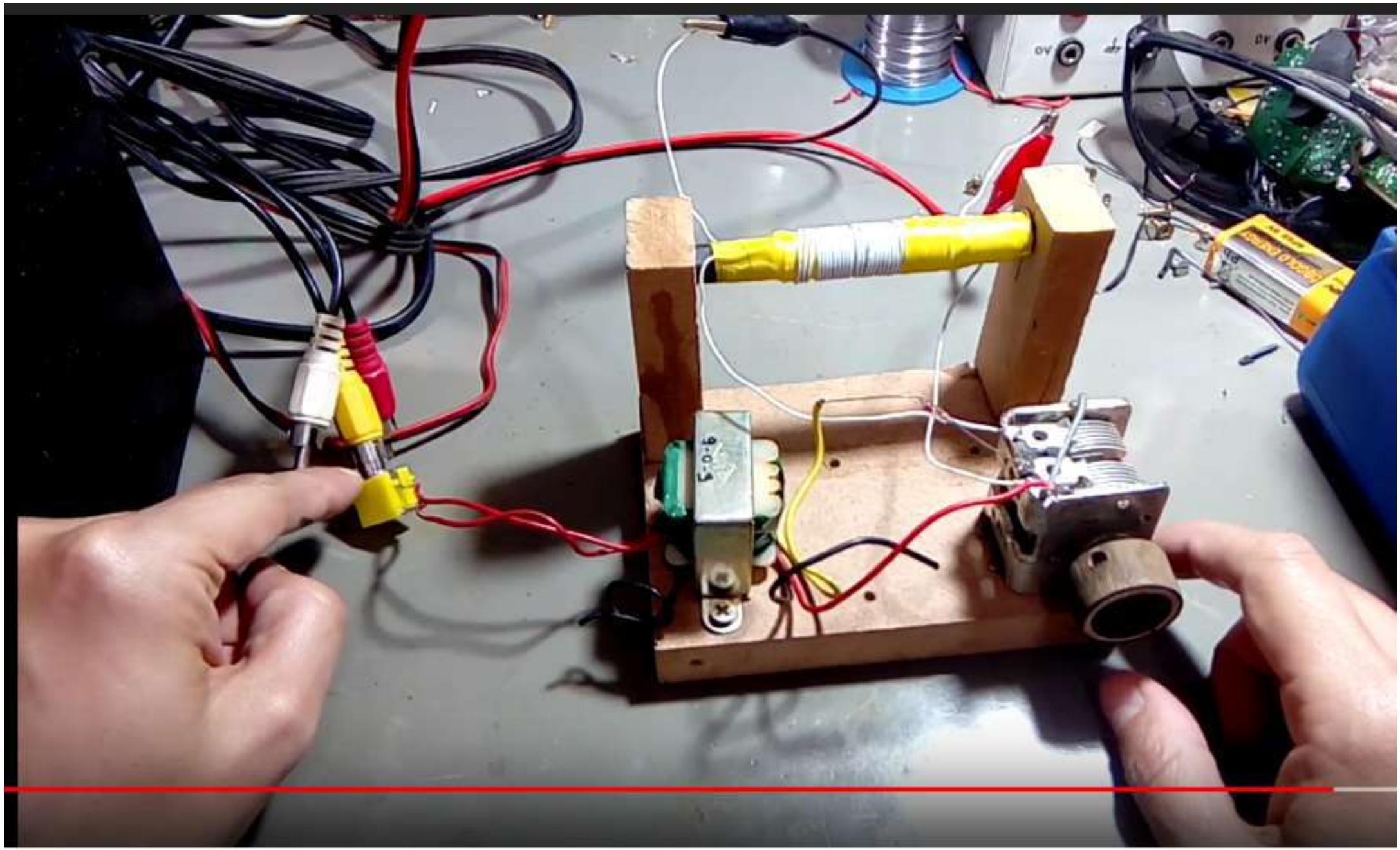

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x 9V

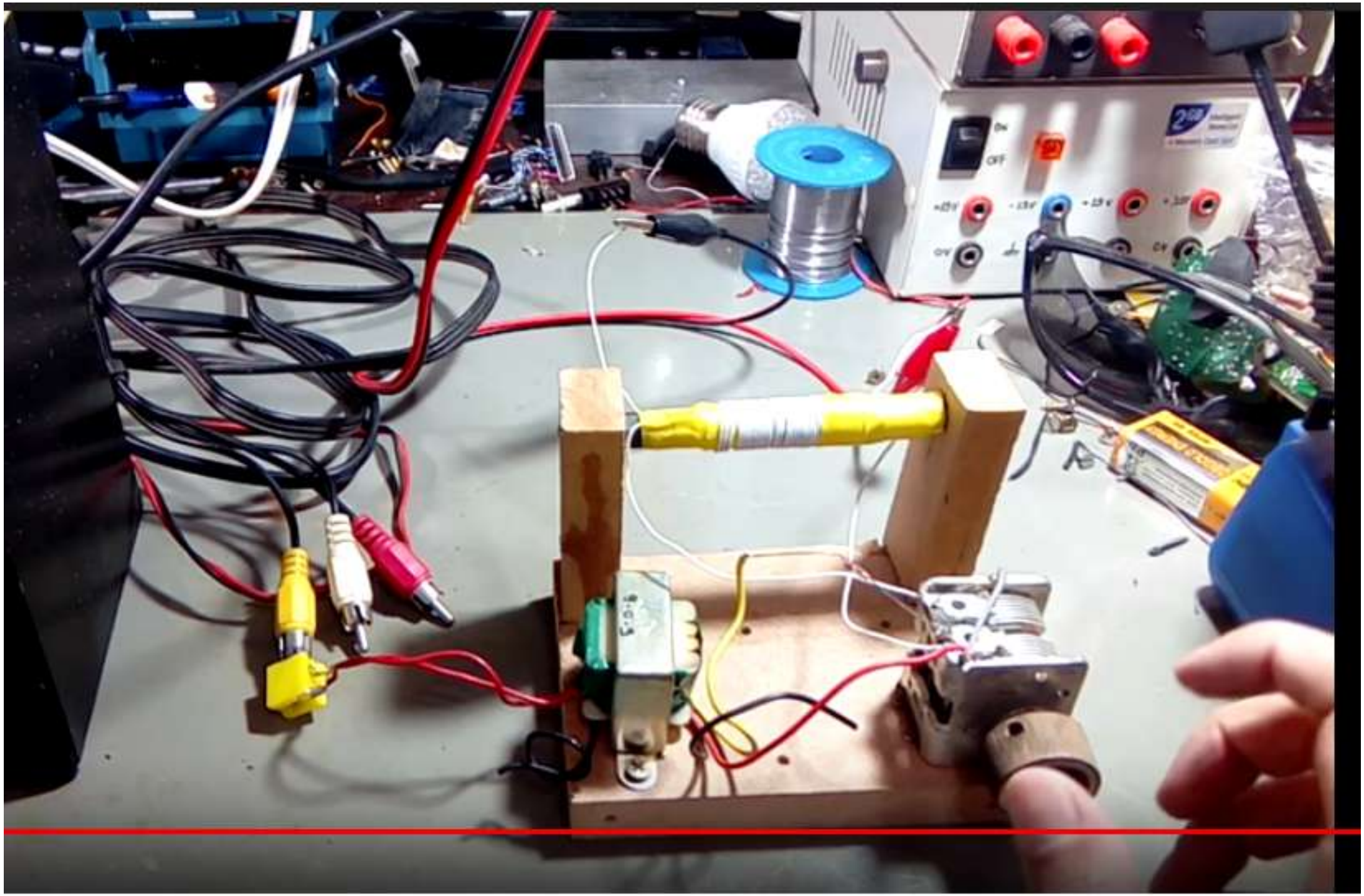

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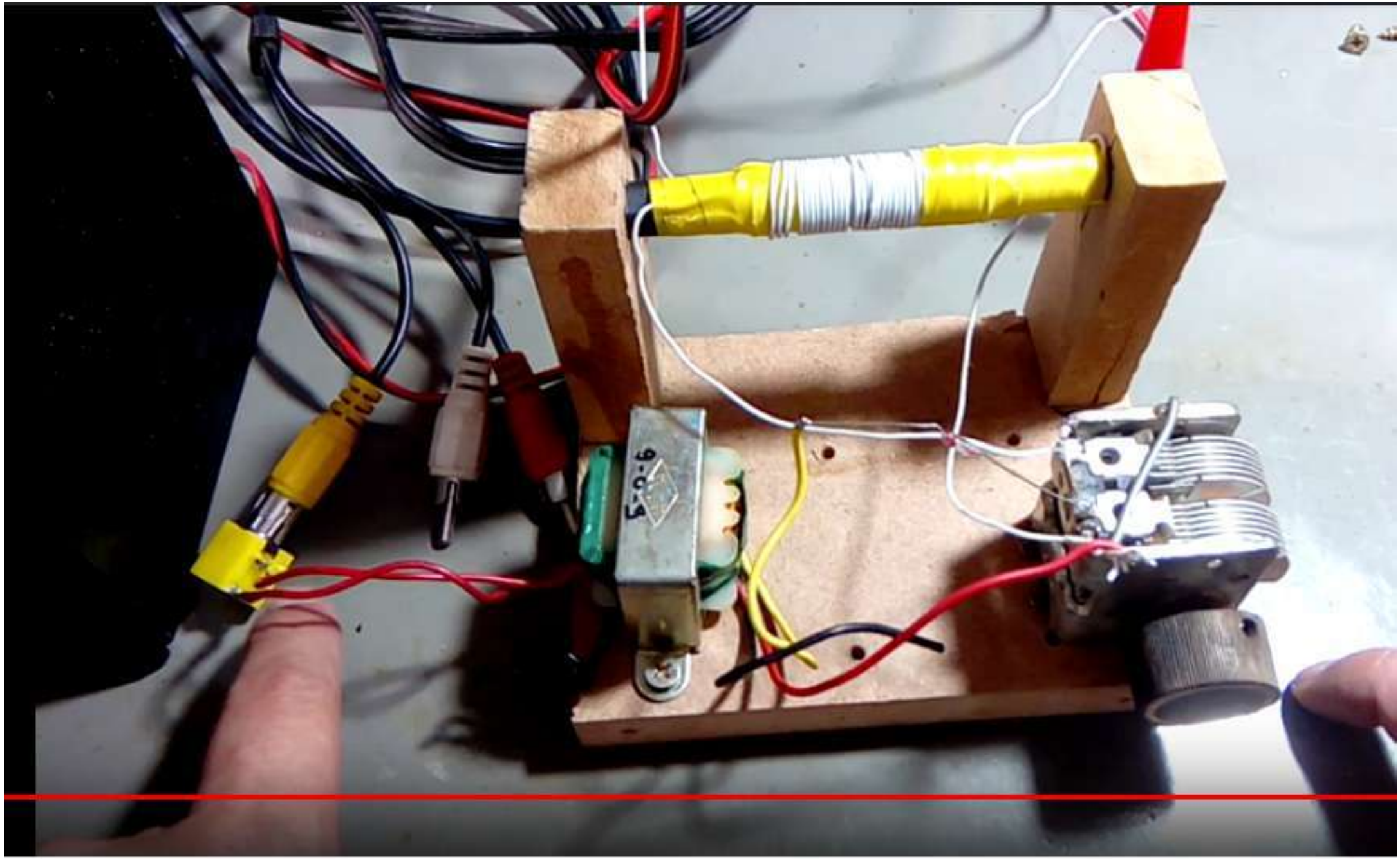

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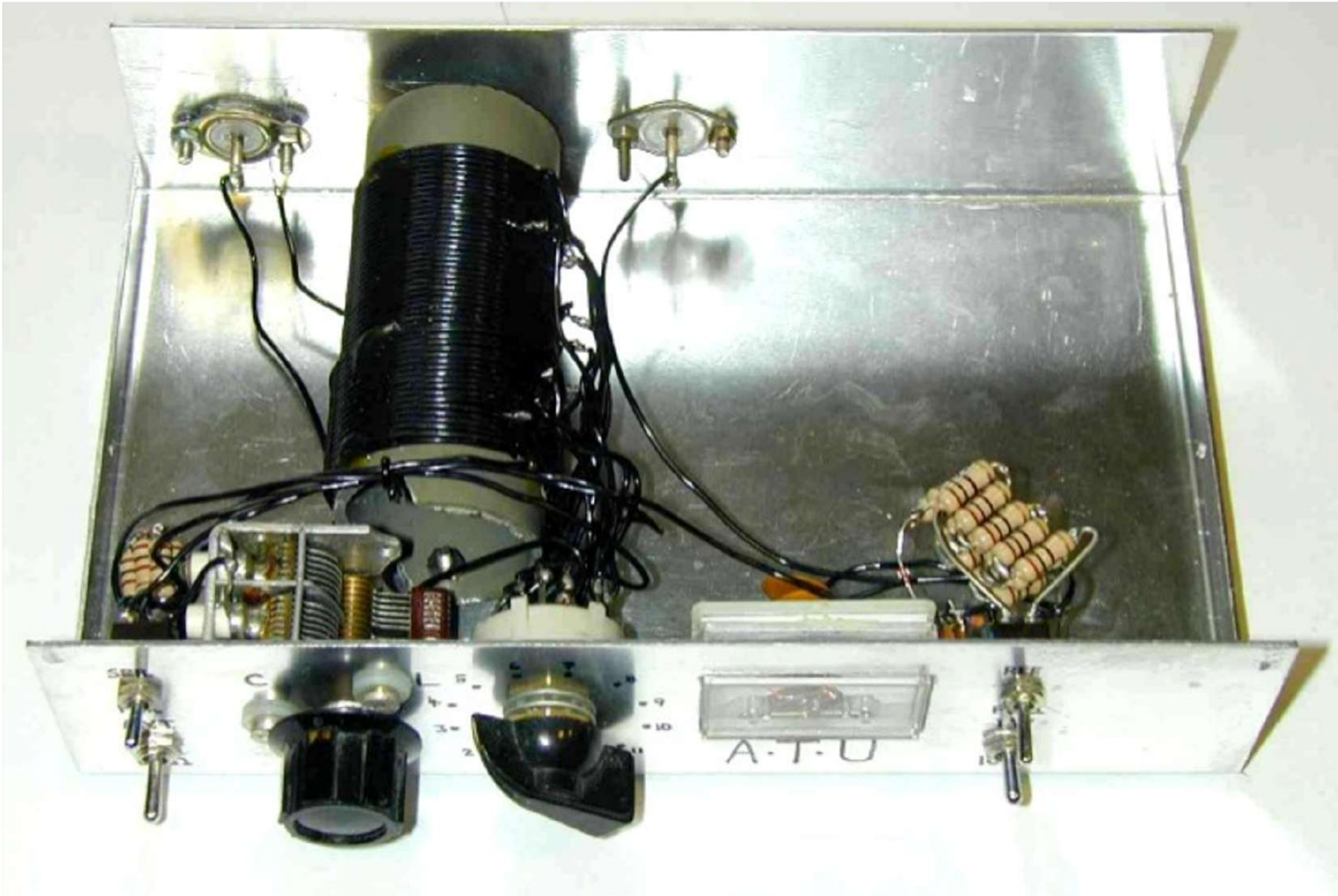
Germânio
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220
x 9V


220
x 9V






9-0-5


A·T·U

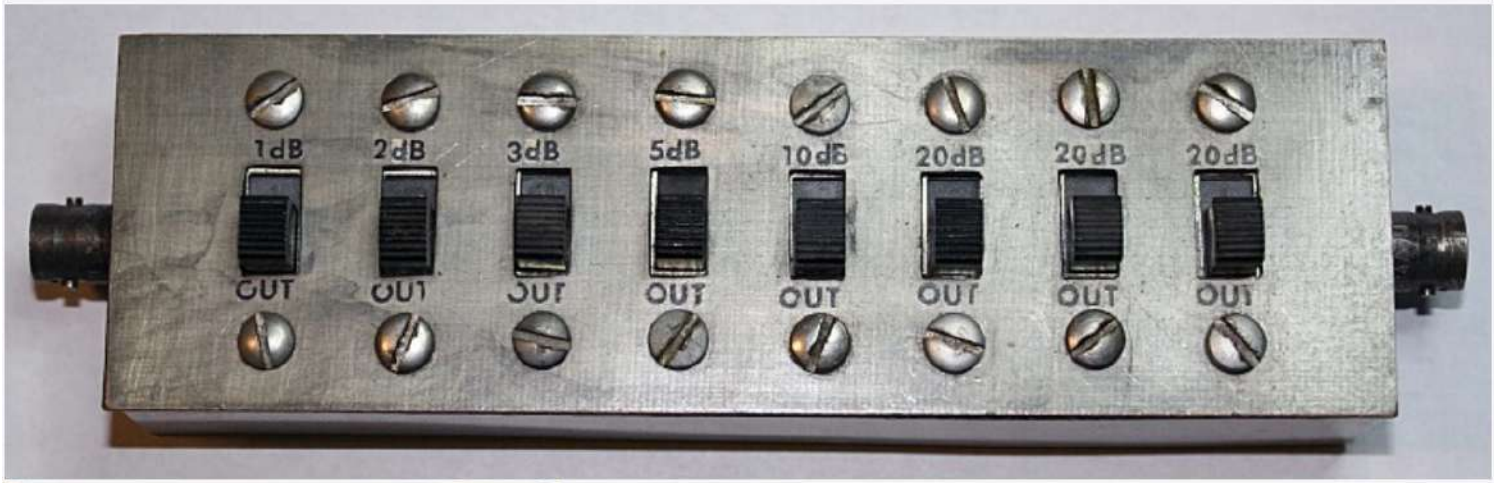
flickr Explore Create Photos, people, or groups Lo

Homebrew Step Attenuator

A homebrew step attenuator. A network analyzer showed it works well into the VHF spectrum.

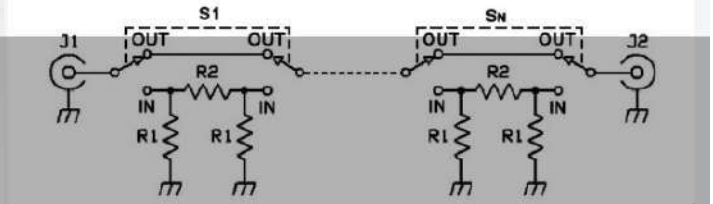
3 photos • 374 views

By: Bryan WA7PRC PRO

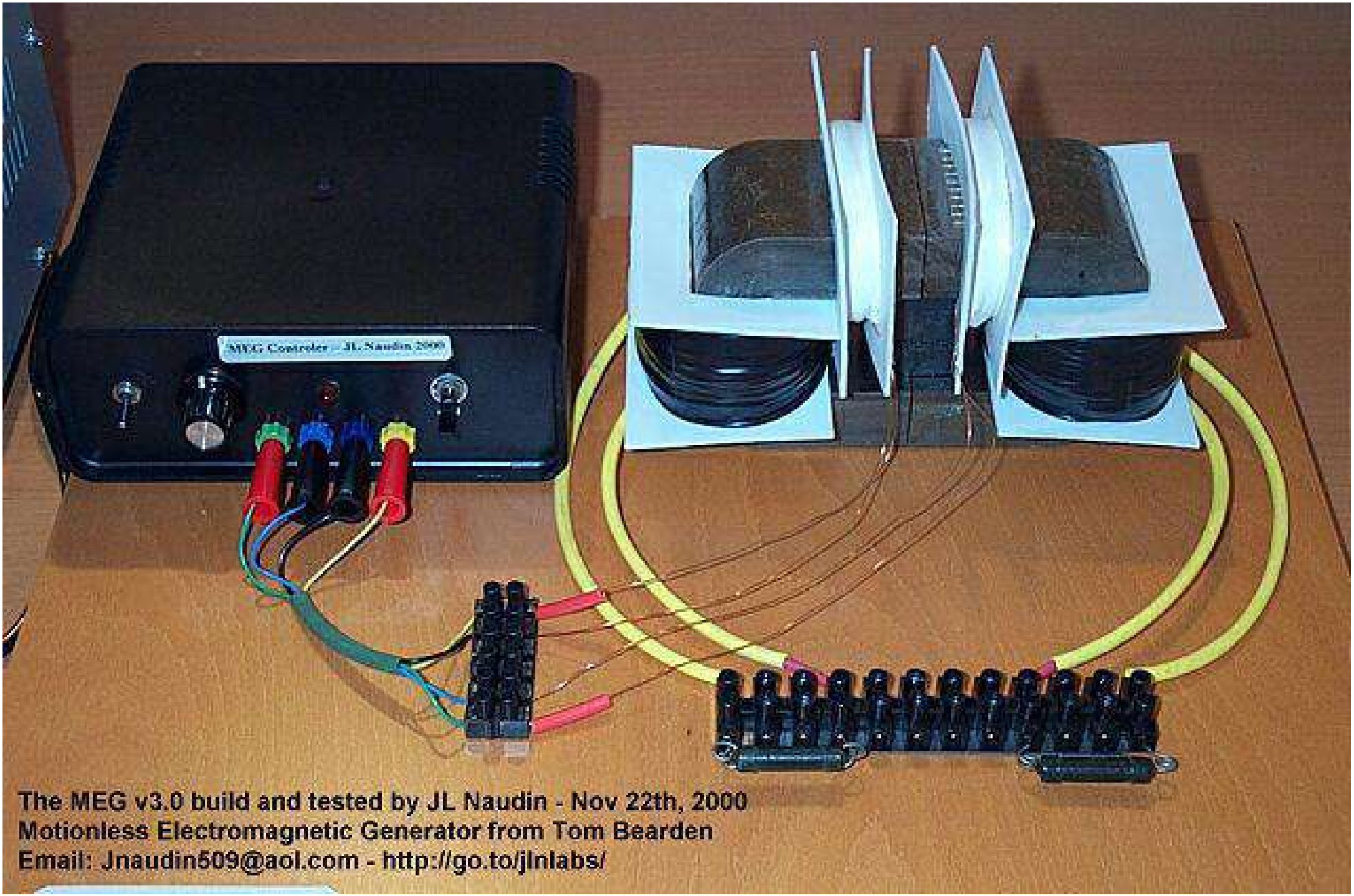




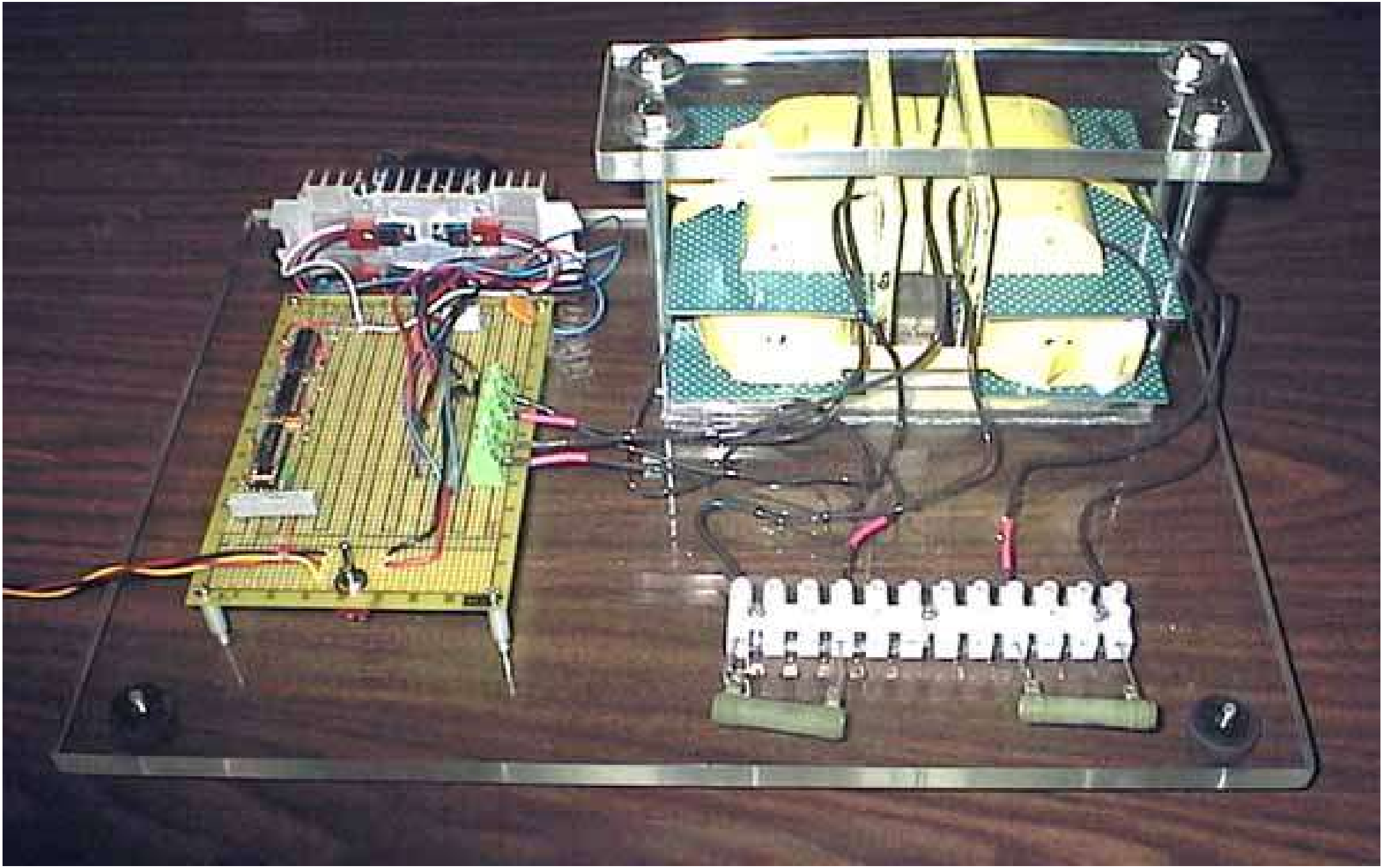
50-OHM STEP ATTENUATOR

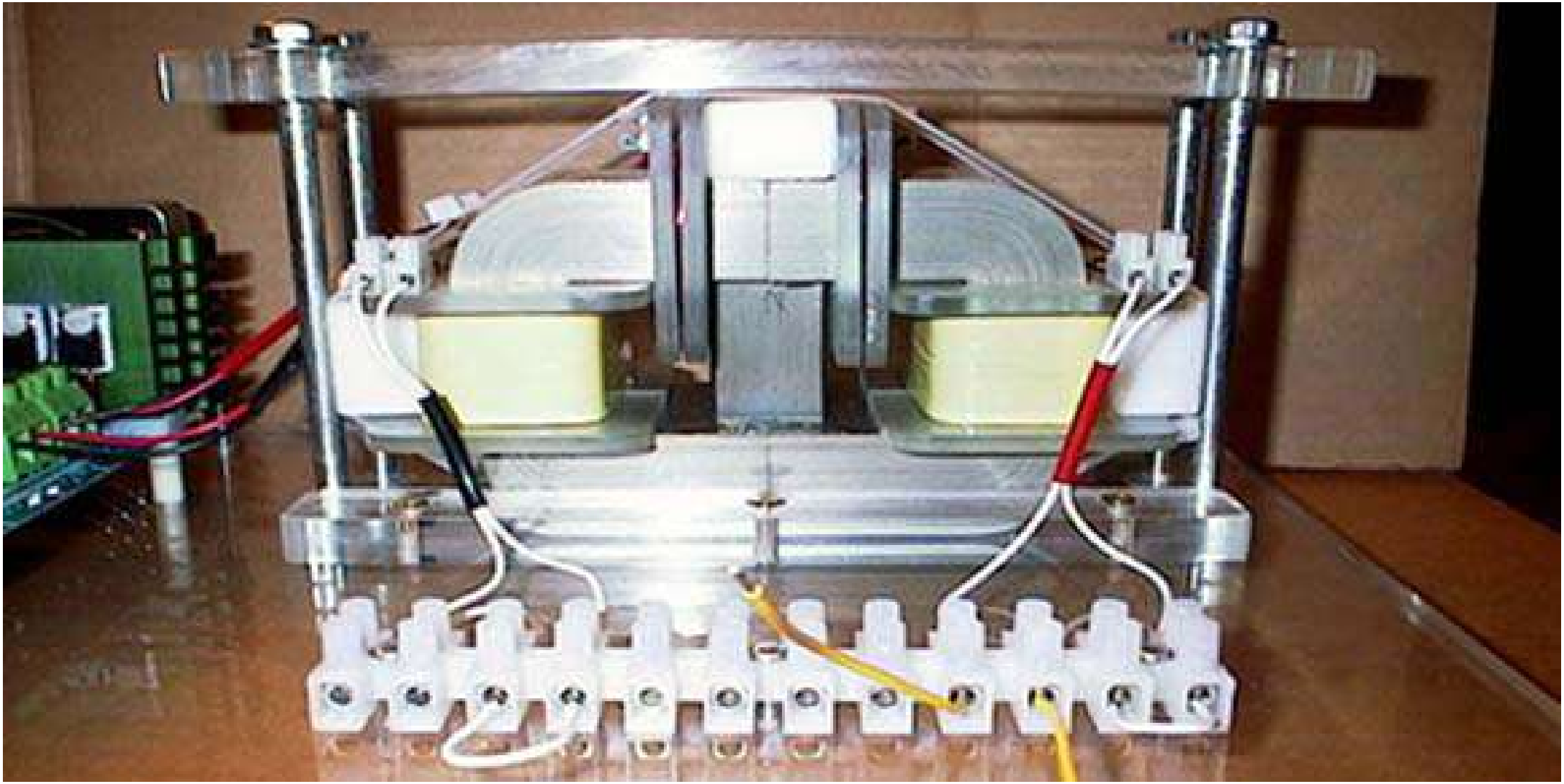


50Ω ATTEN	CALCULATED VALUES R1	R2	1% RESISTORS (E48) R1	R2	5% RESISTORS (E24) R1	R2
1dB	869Ω	5.8Ω	887Ω	5.6Ω	910Ω	5.6Ω
2dB	436Ω	12Ω	453Ω	12.0Ω	470Ω	12Ω
3dB	294Ω	18Ω	294Ω	18.0Ω	300Ω	18Ω
5dB	178Ω	30Ω	178Ω	30.1Ω	200Ω	33Ω
10dB	96Ω	71Ω	95.3Ω	71.5Ω	100Ω	75Ω
20dB	61Ω	248Ω	61.9Ω	249Ω	62Ω	270Ω

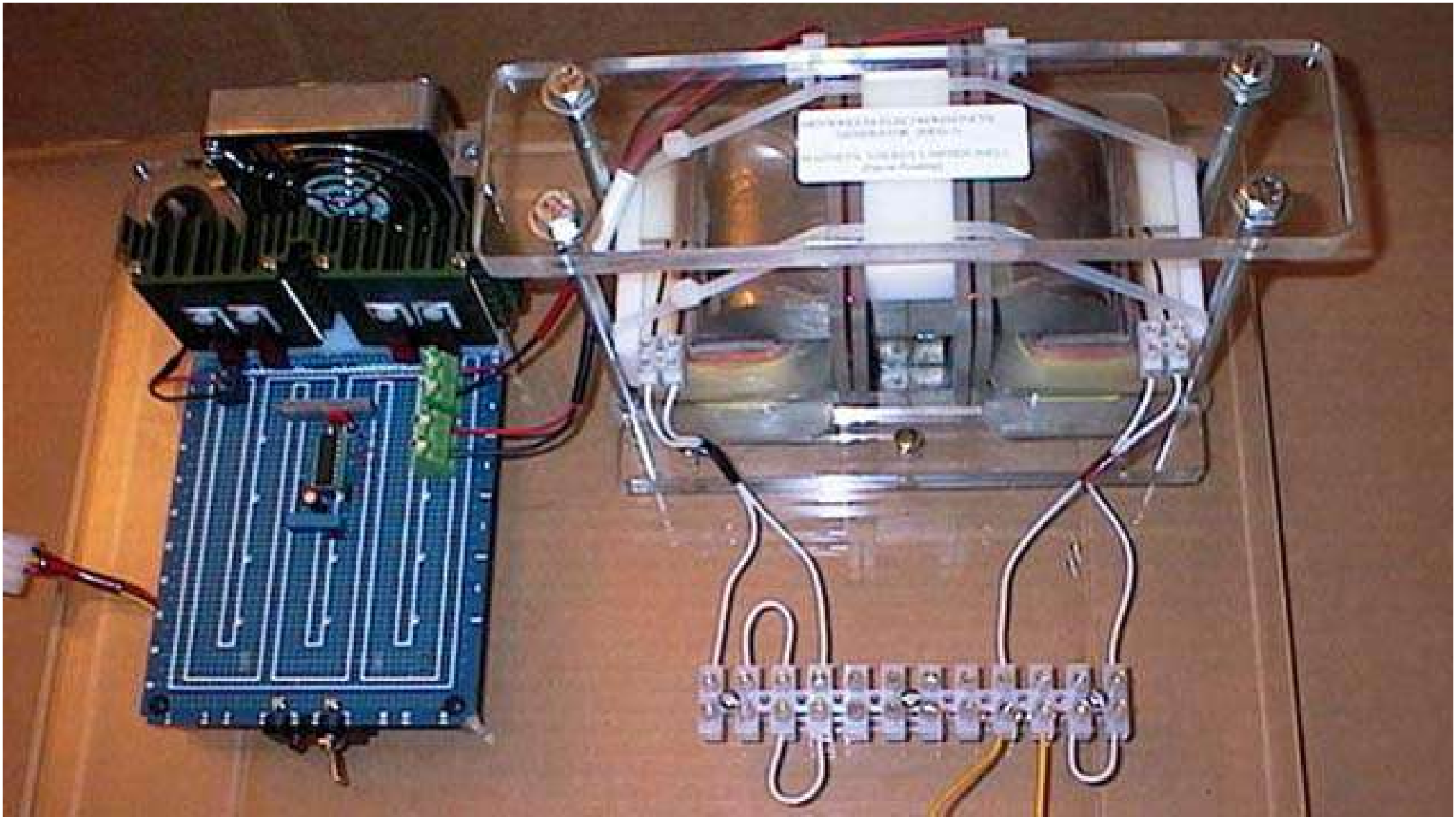


The MEG v3.0 build and tested by JL Naudin - Nov 22th, 2000
Motionless Electromagnetic Generator from Tom Bearden
Email: Jnaudin509@aol.com - http://go.to/jlnlabs/





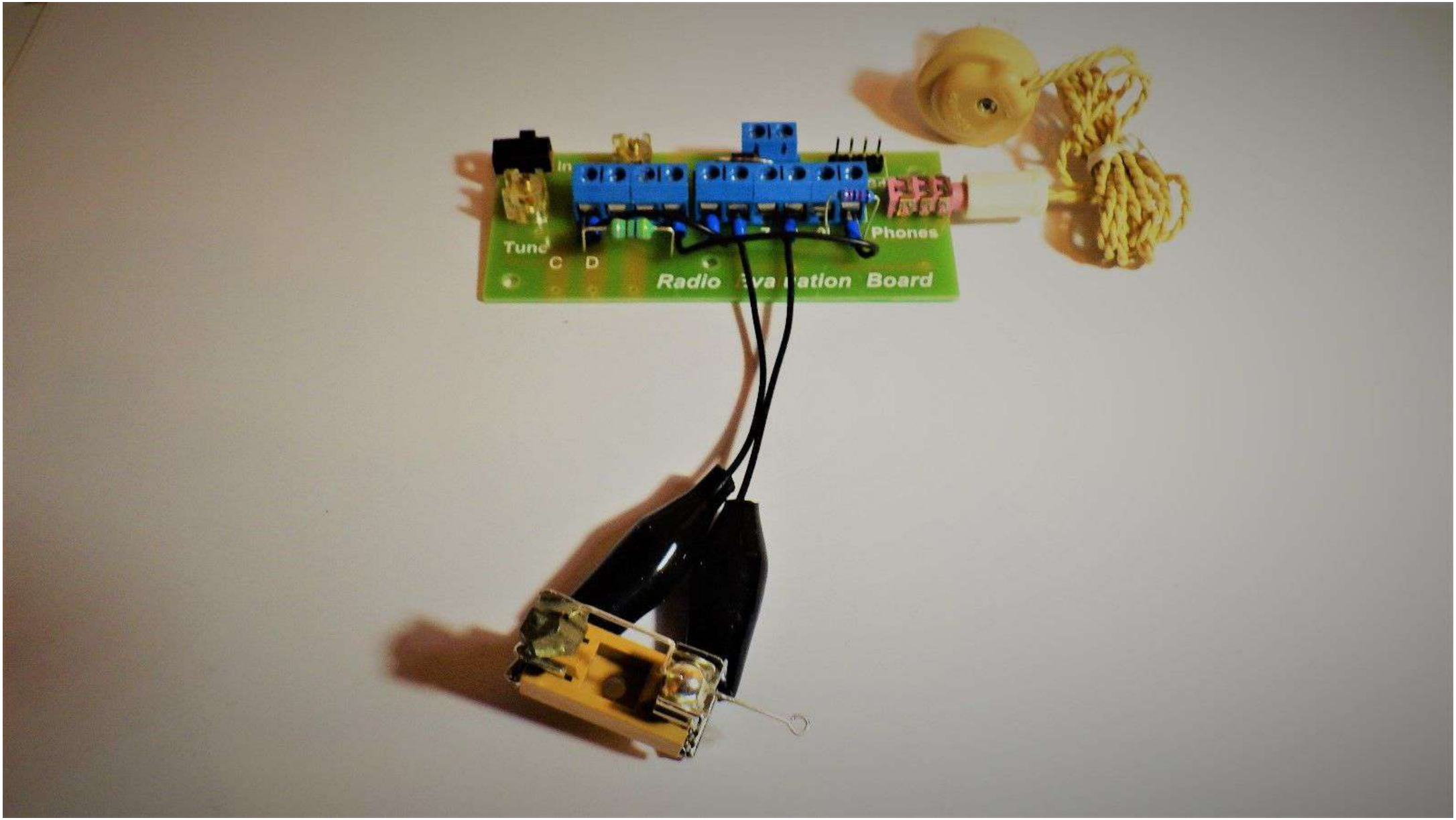


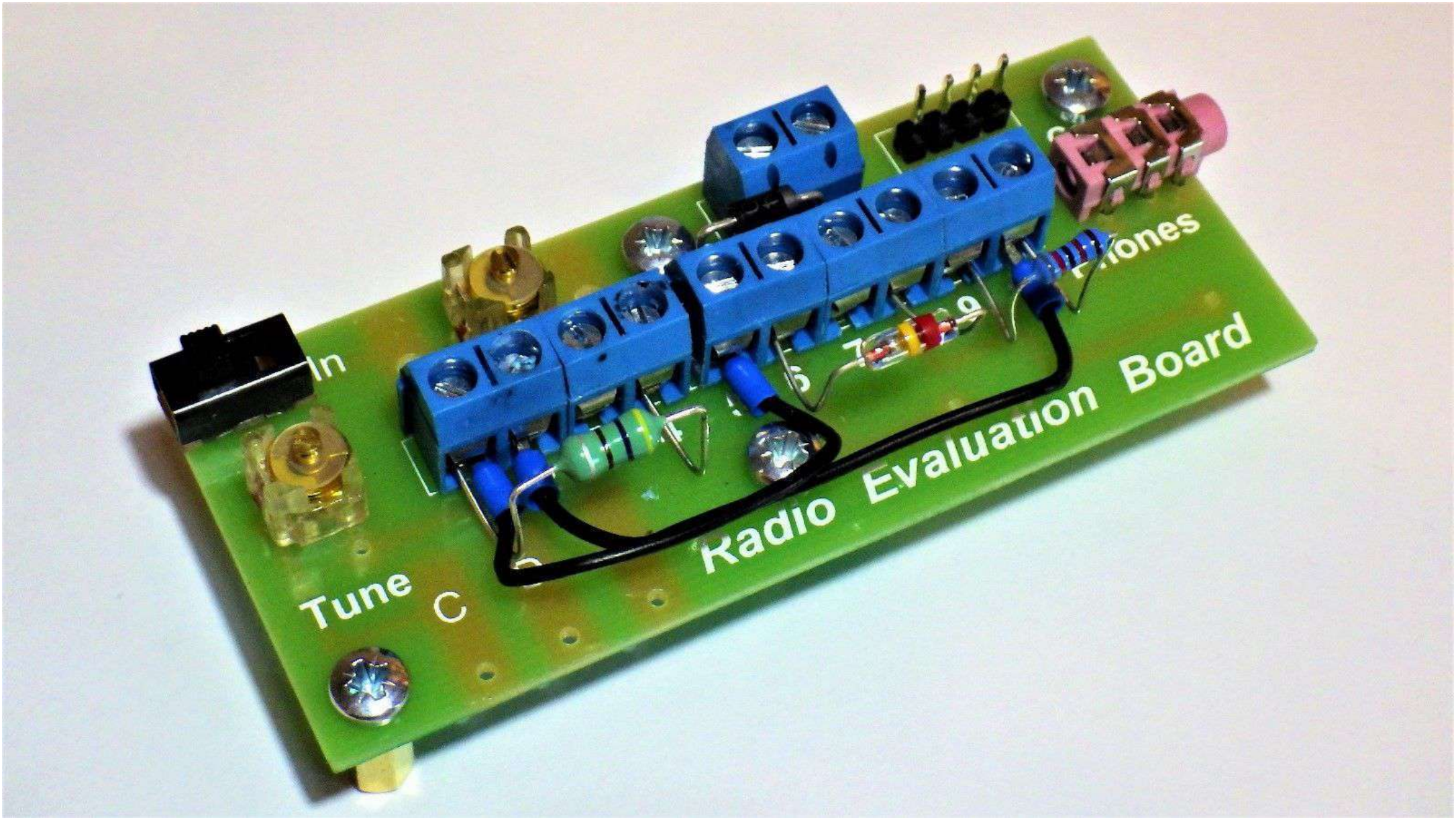


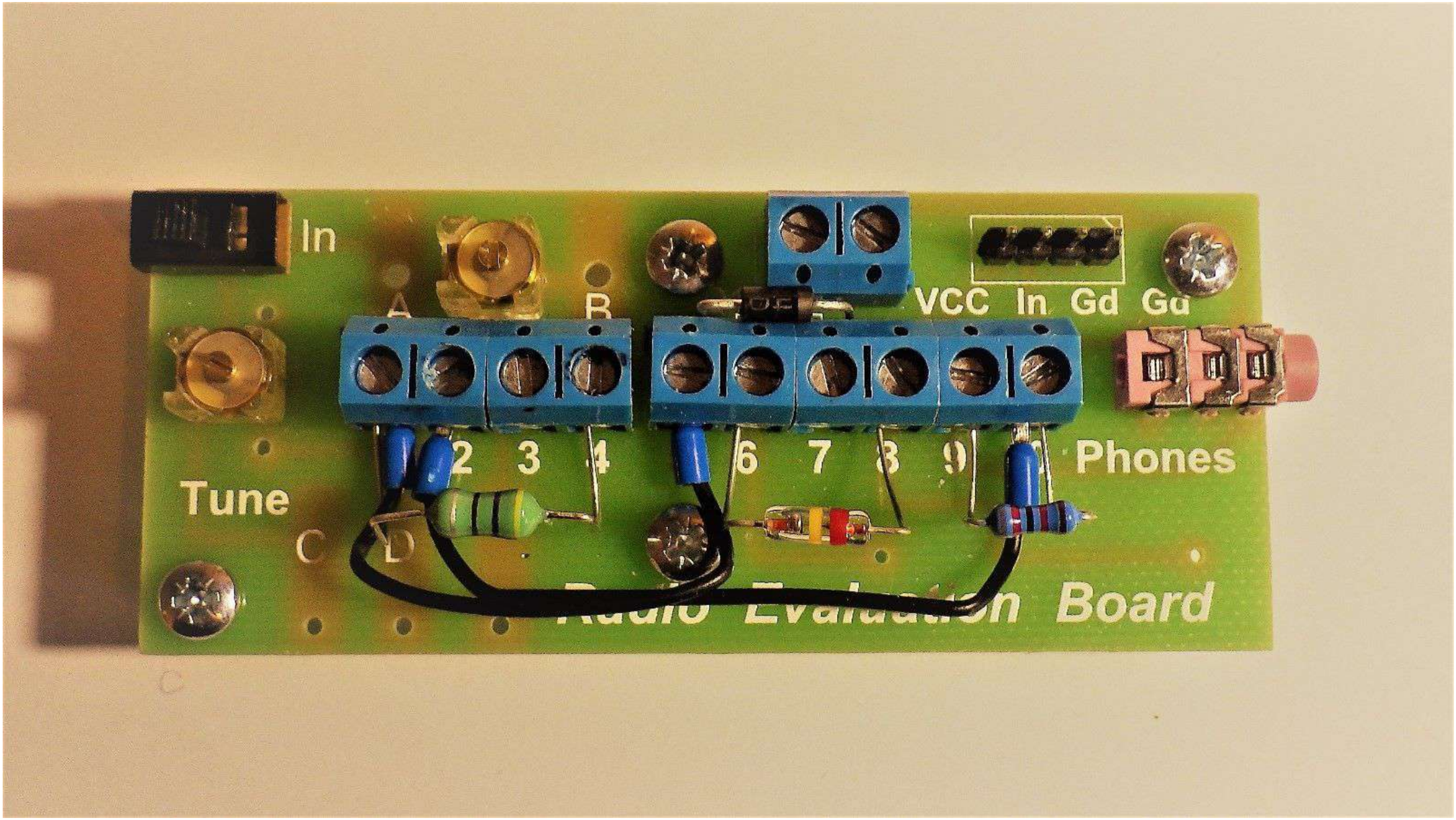

In
VCC In Gd Gd
1 2 3 4 5 6 7 8 9 10 Phones
Tune
C D
Radio Evaluation Board

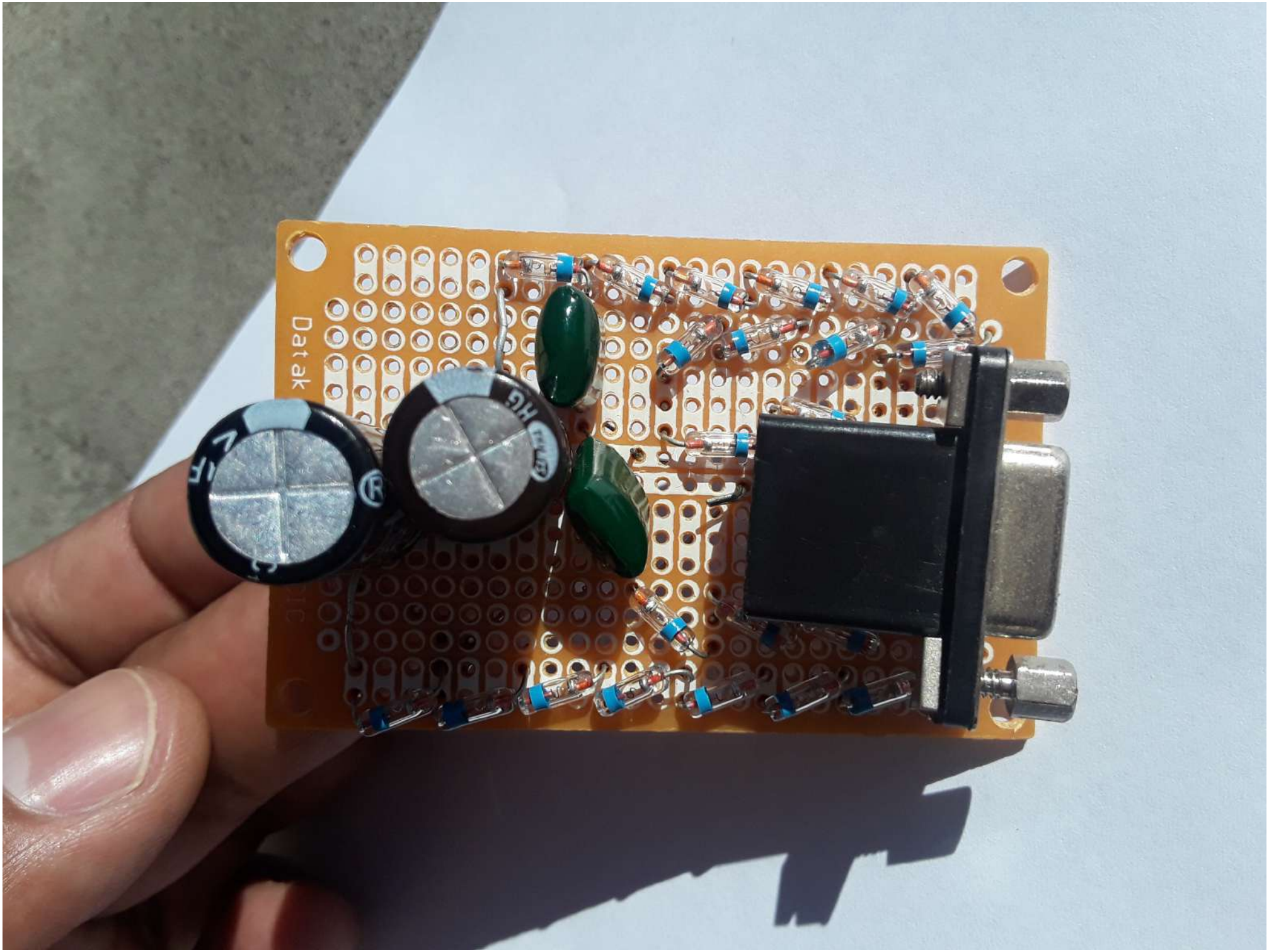

In
1 2 3 4 5 6 7 8 9 10 Phones
Tune
C D
Radio Evaluation Board

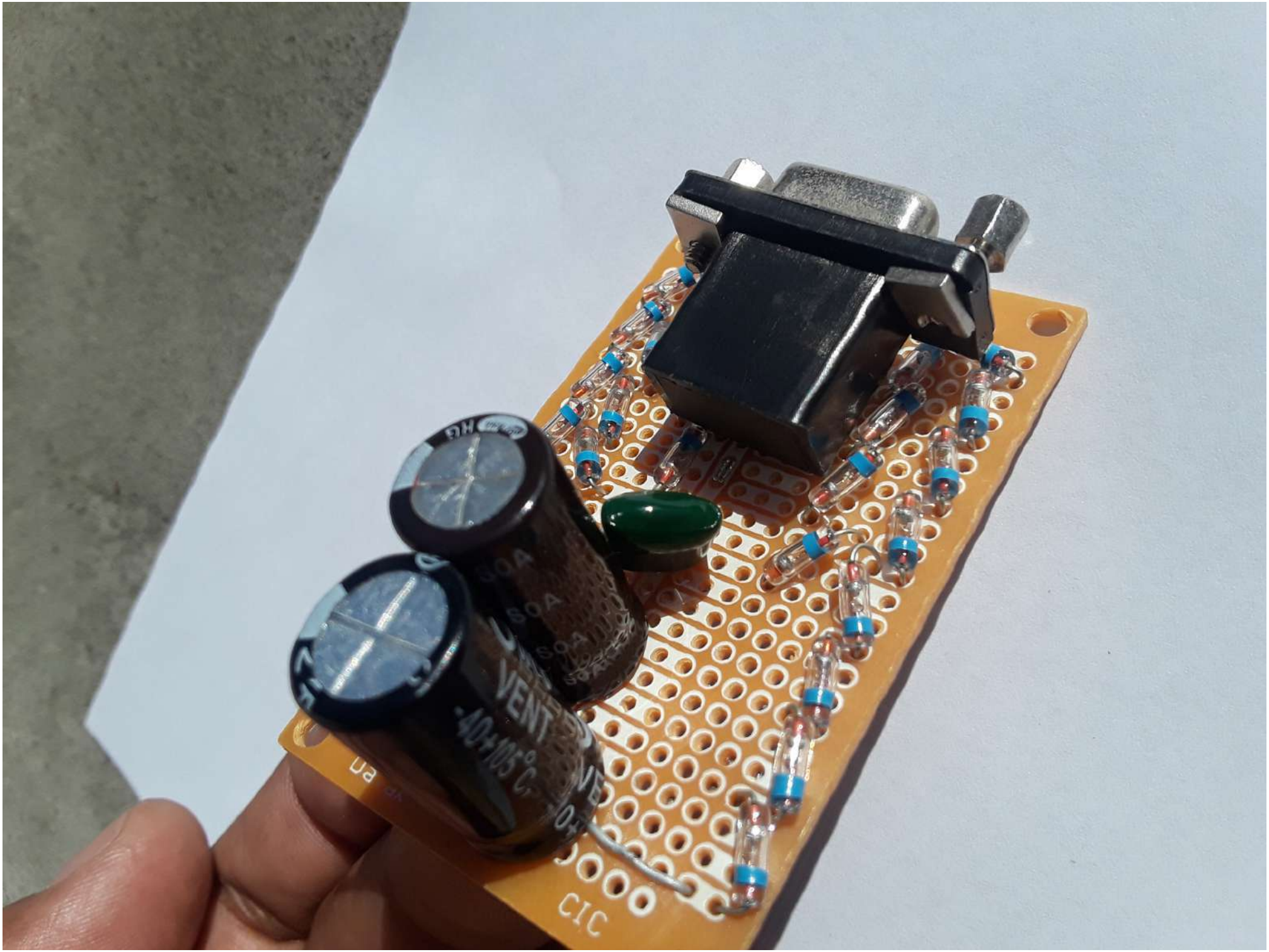

In
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Radio Evaluation Board

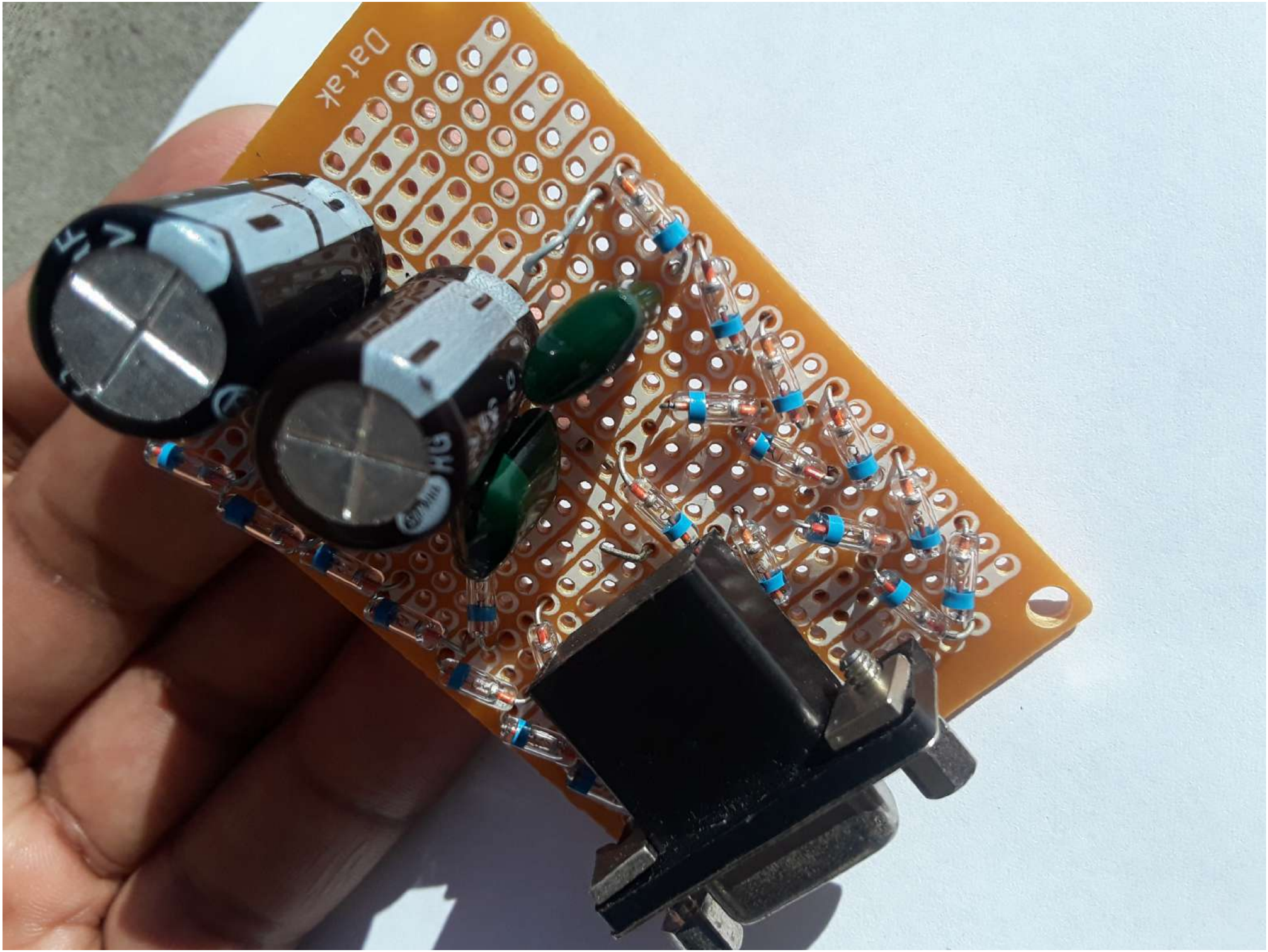

Phones
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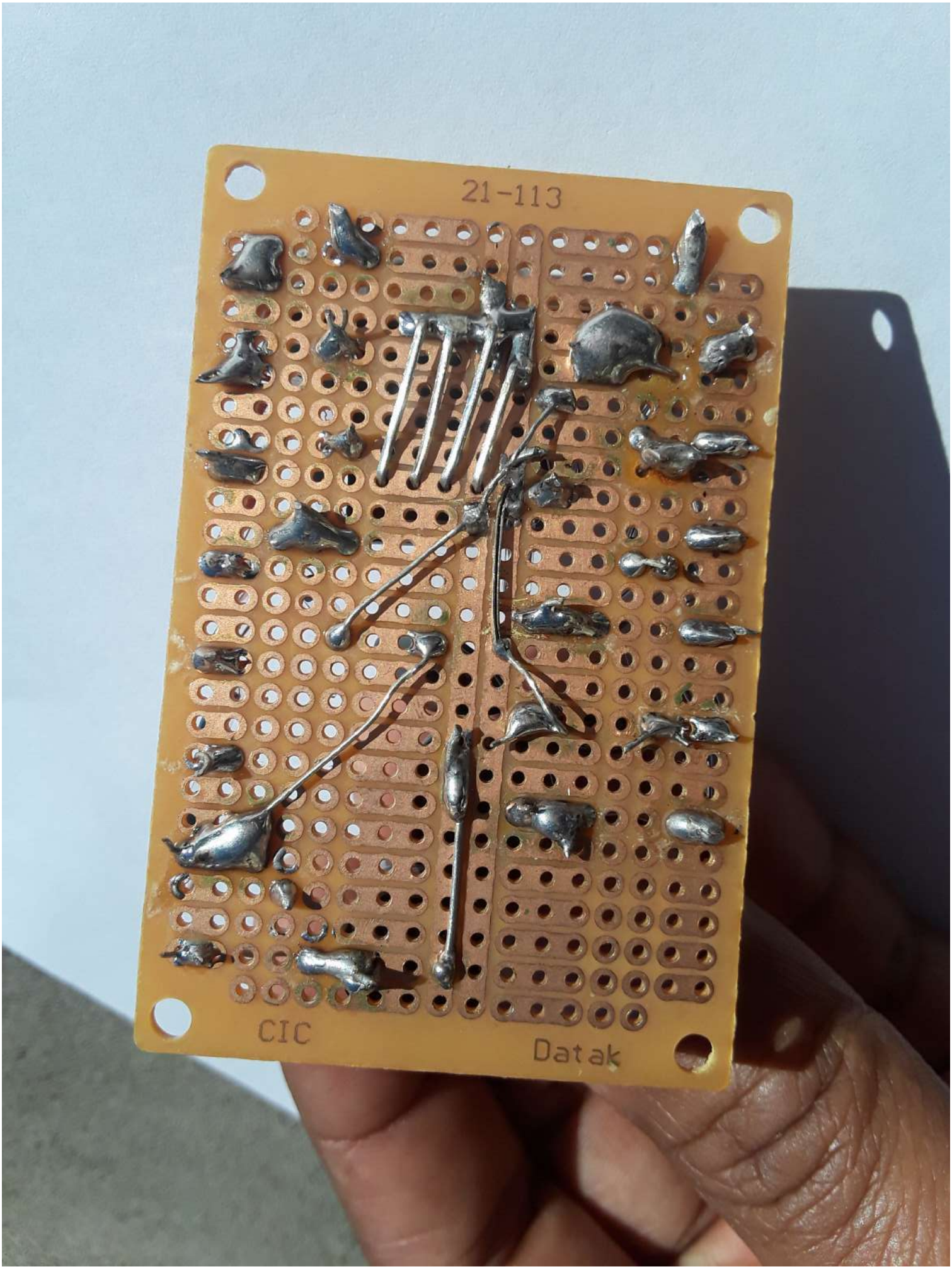

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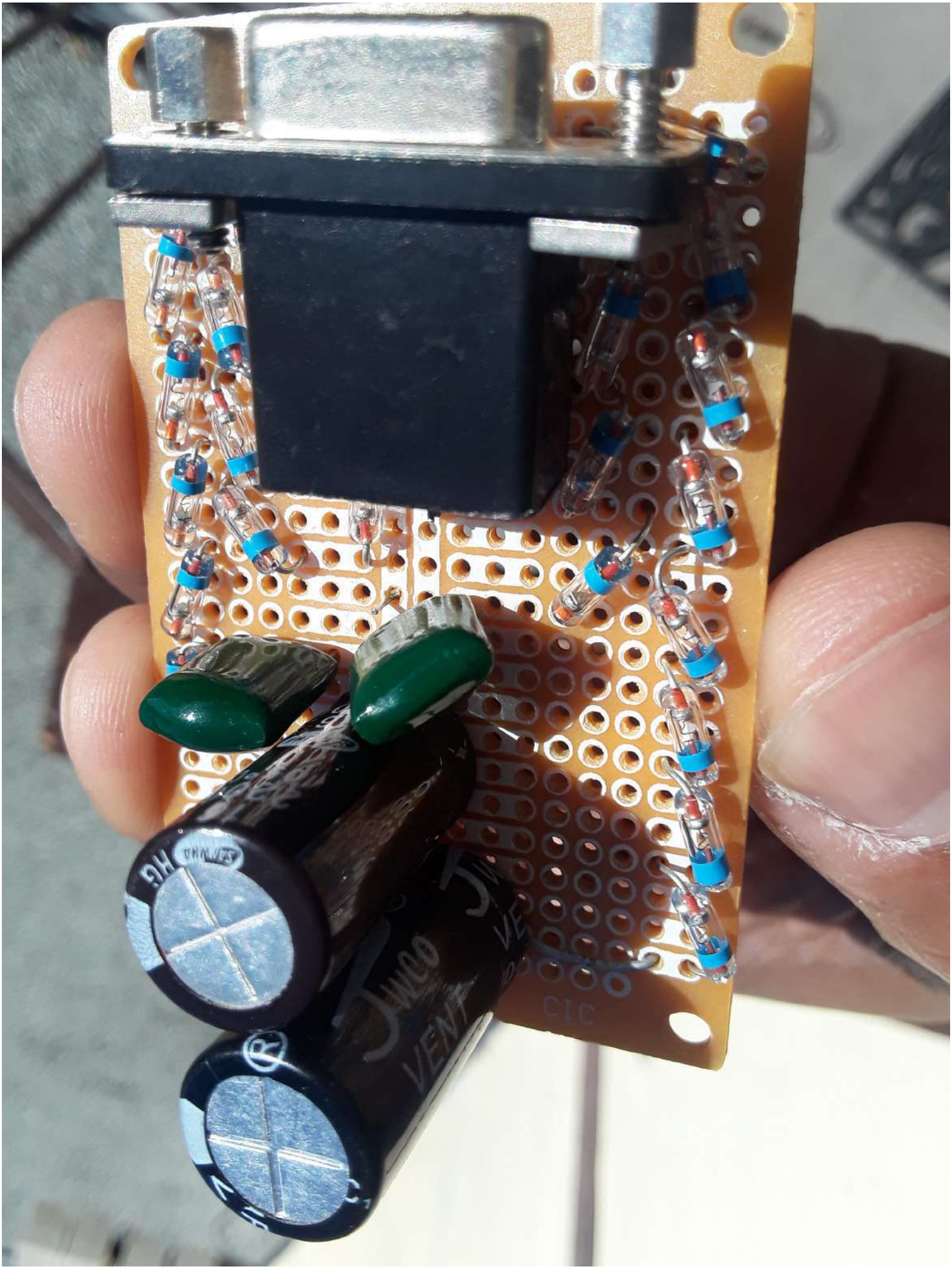

In
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2 3 4
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Phones
Tune
C D
Radio Evaluation Board

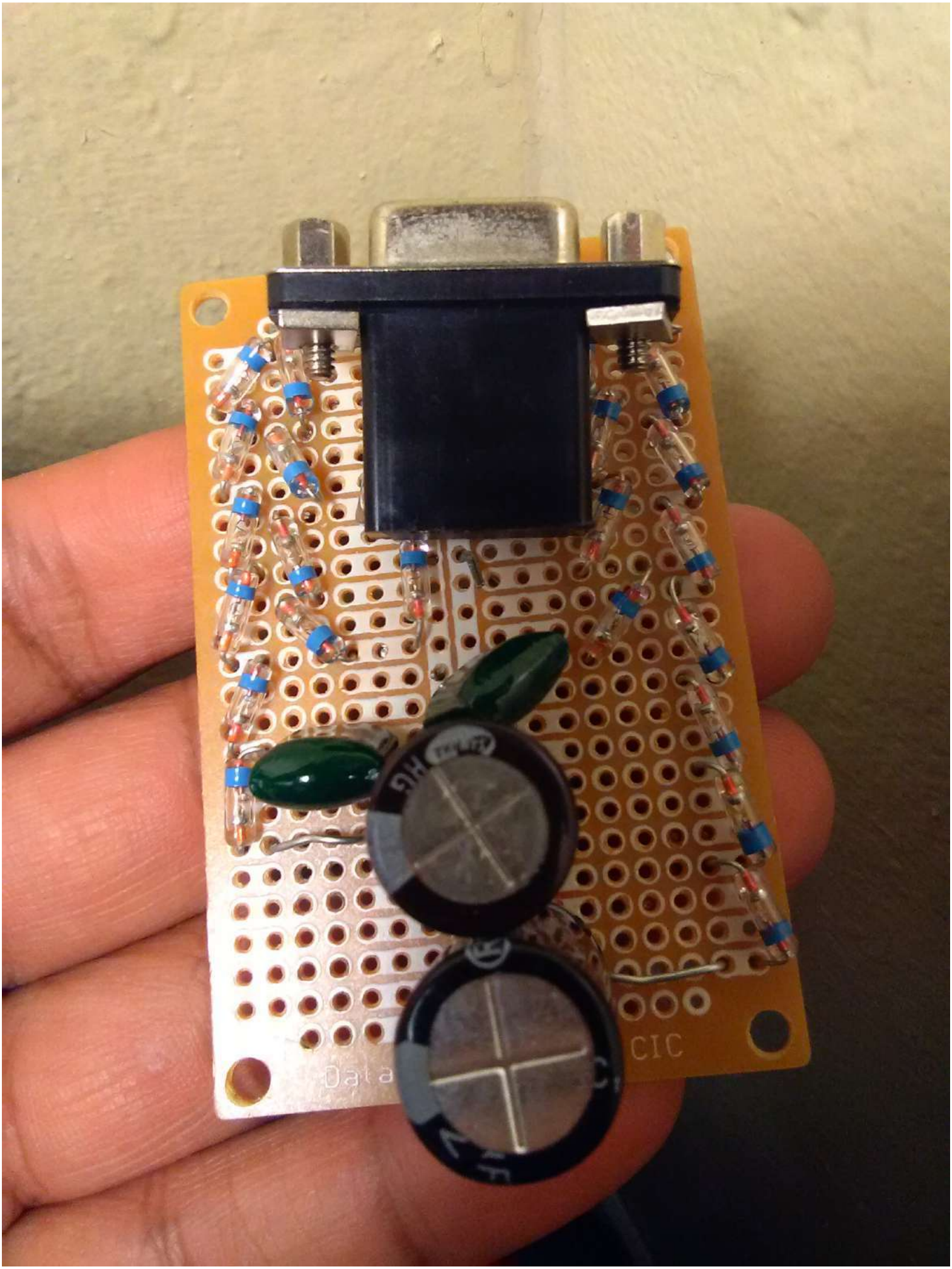


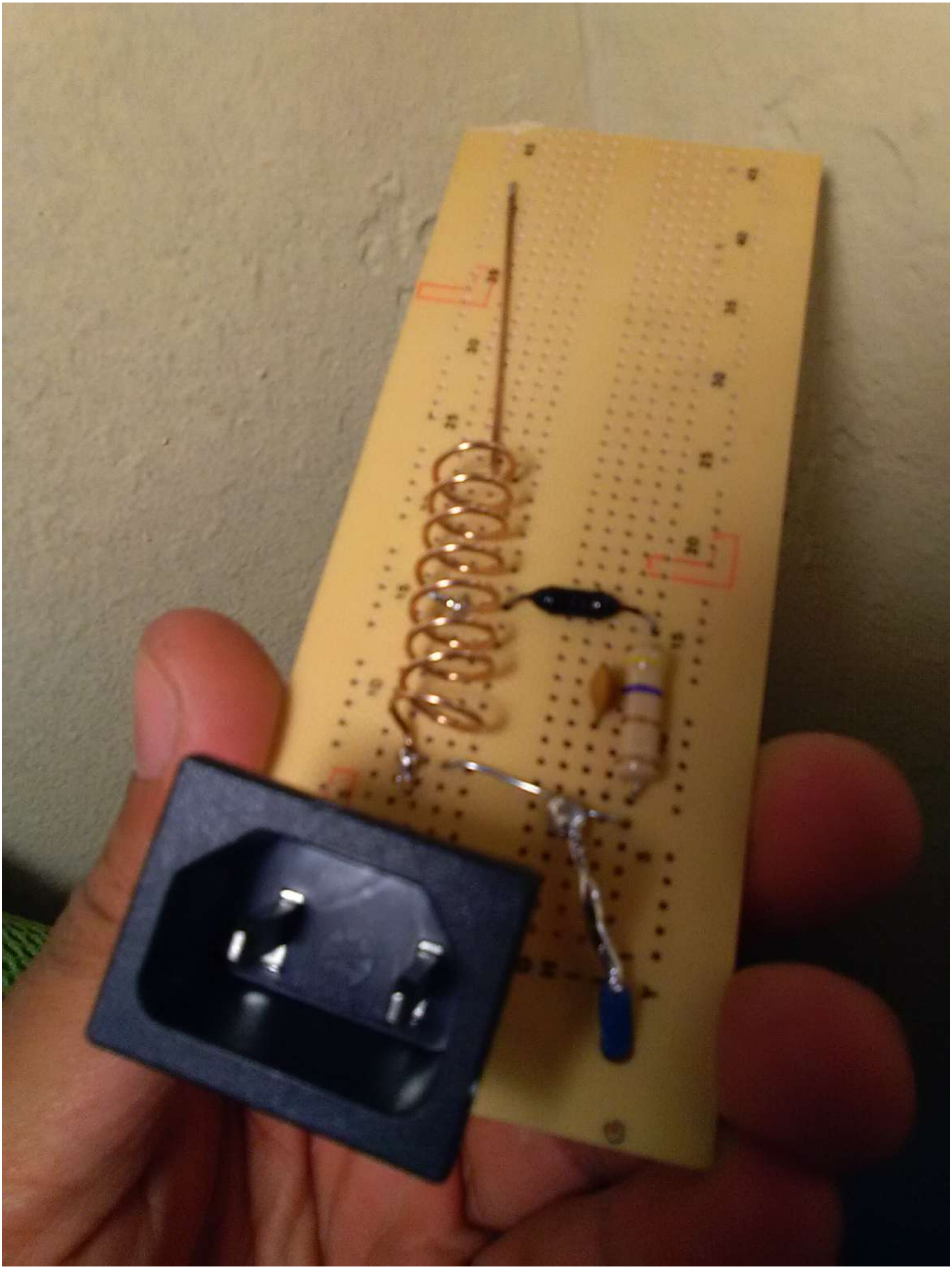

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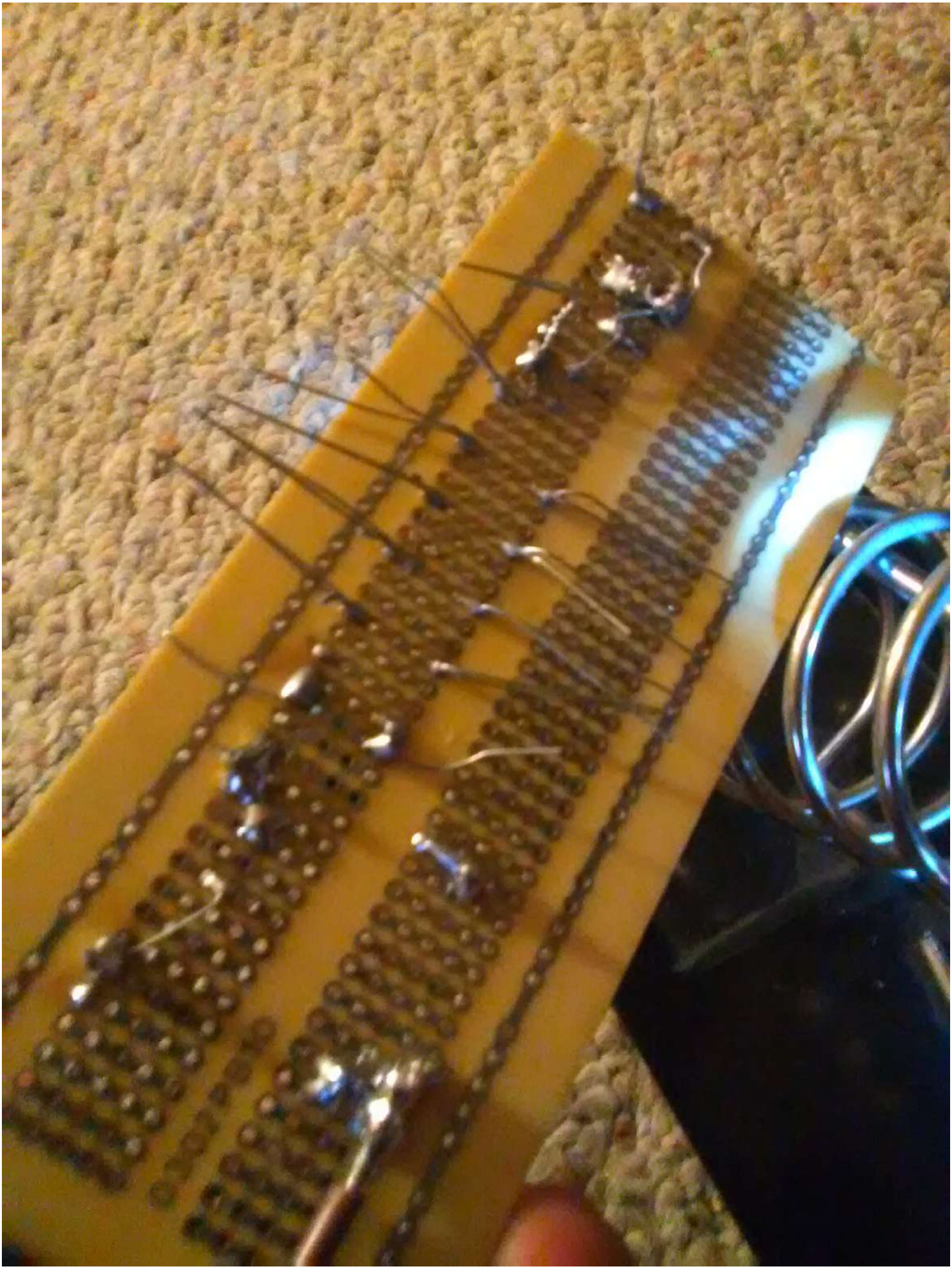

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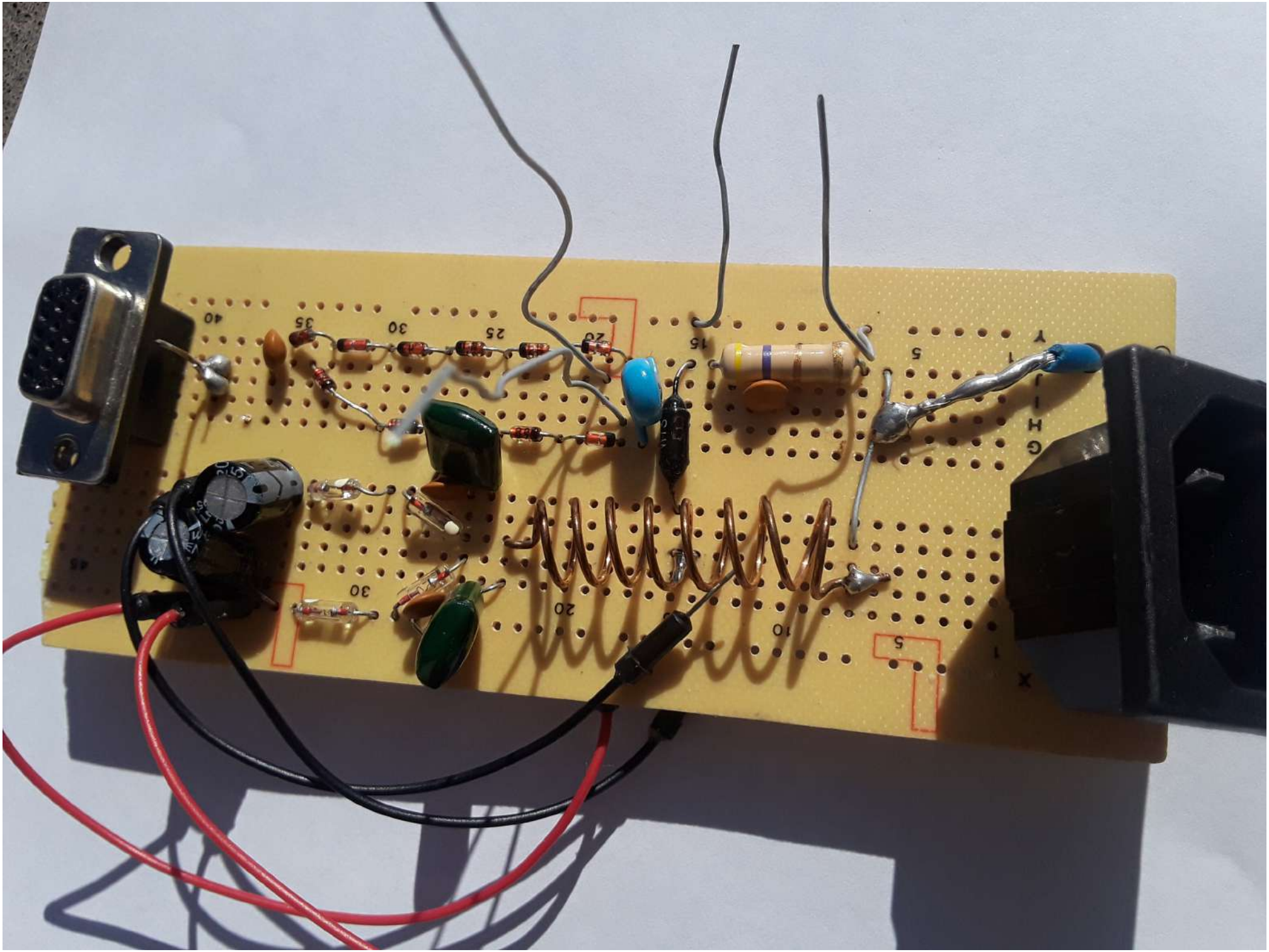

21-113
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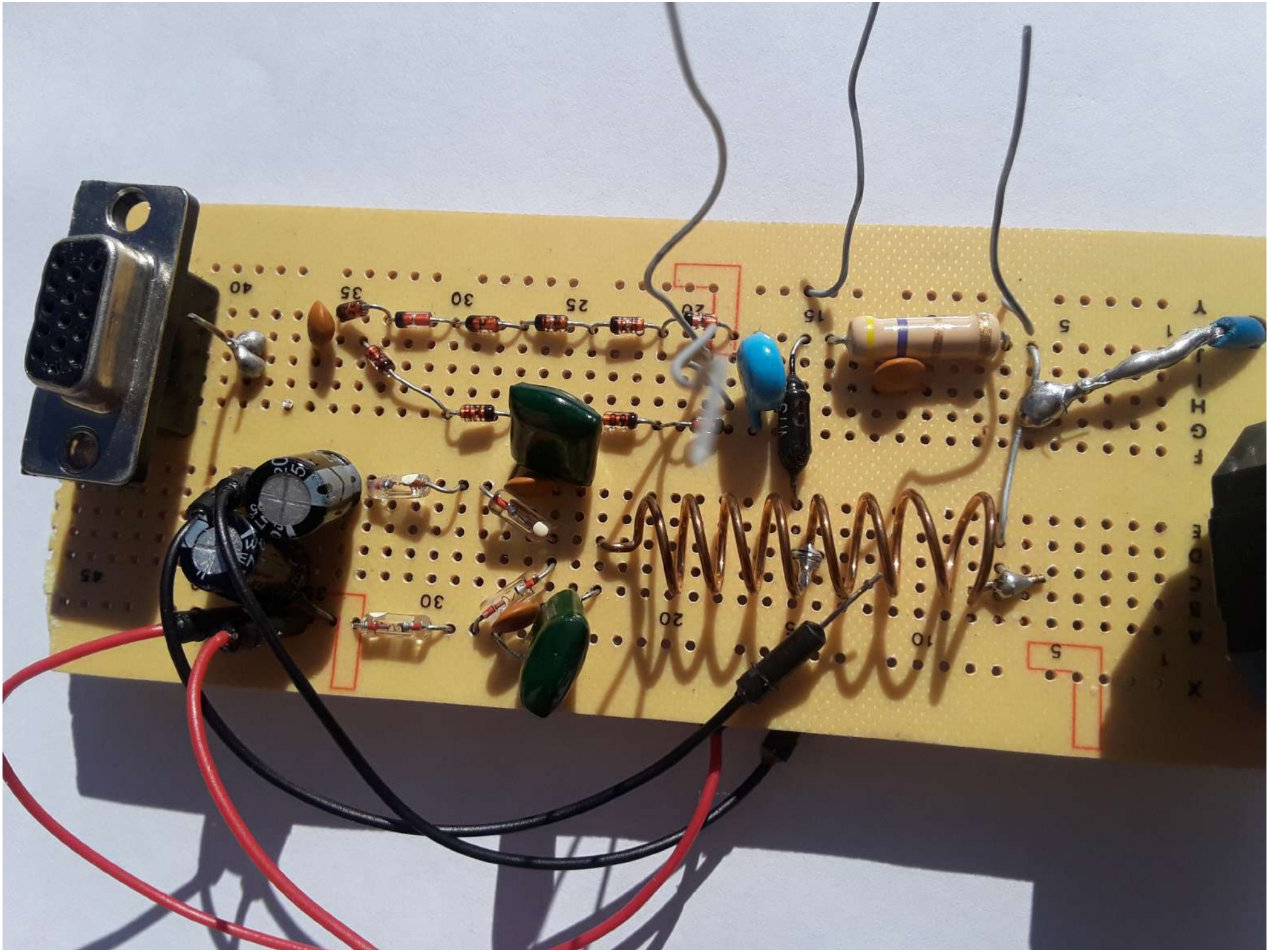


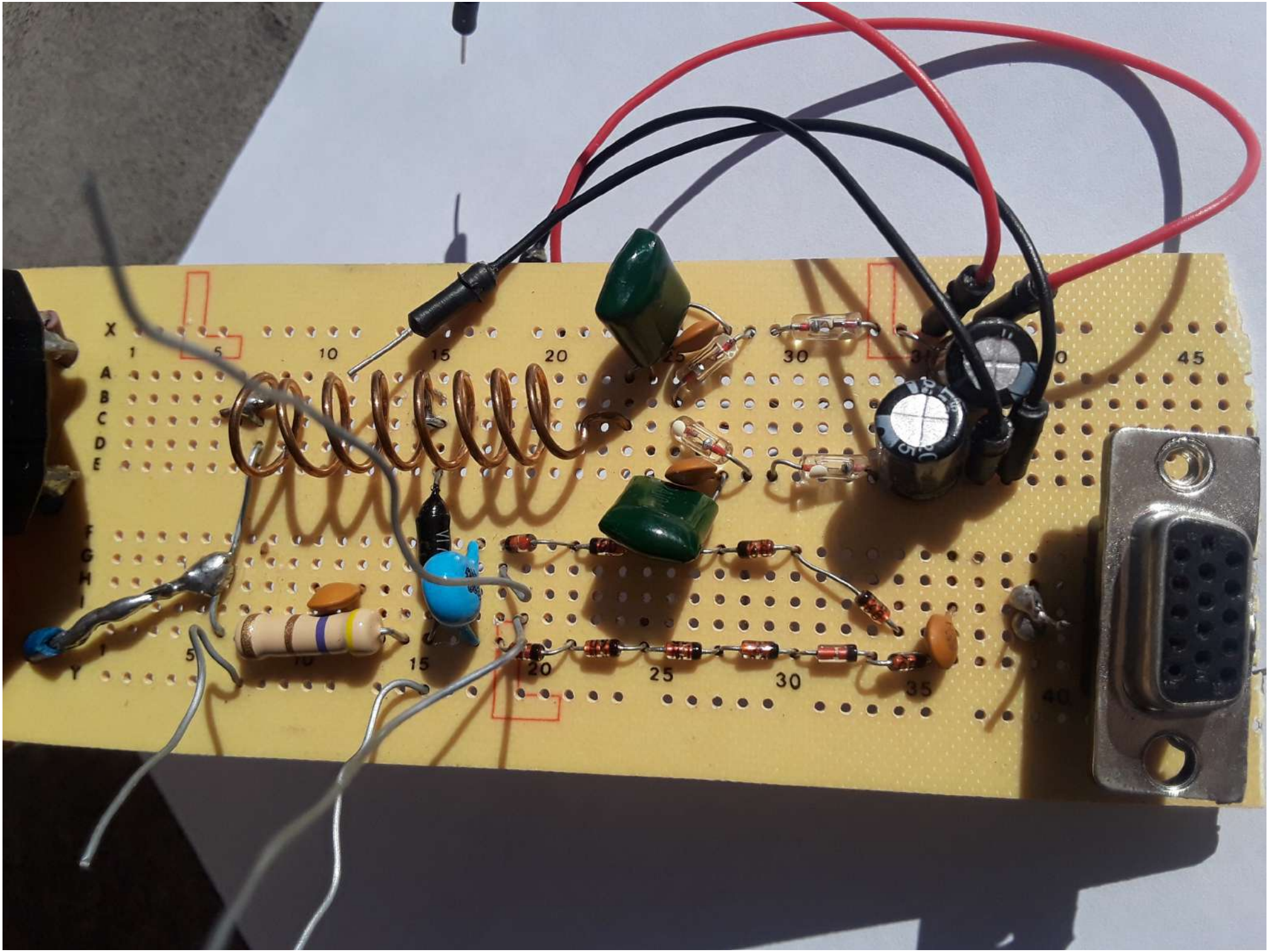

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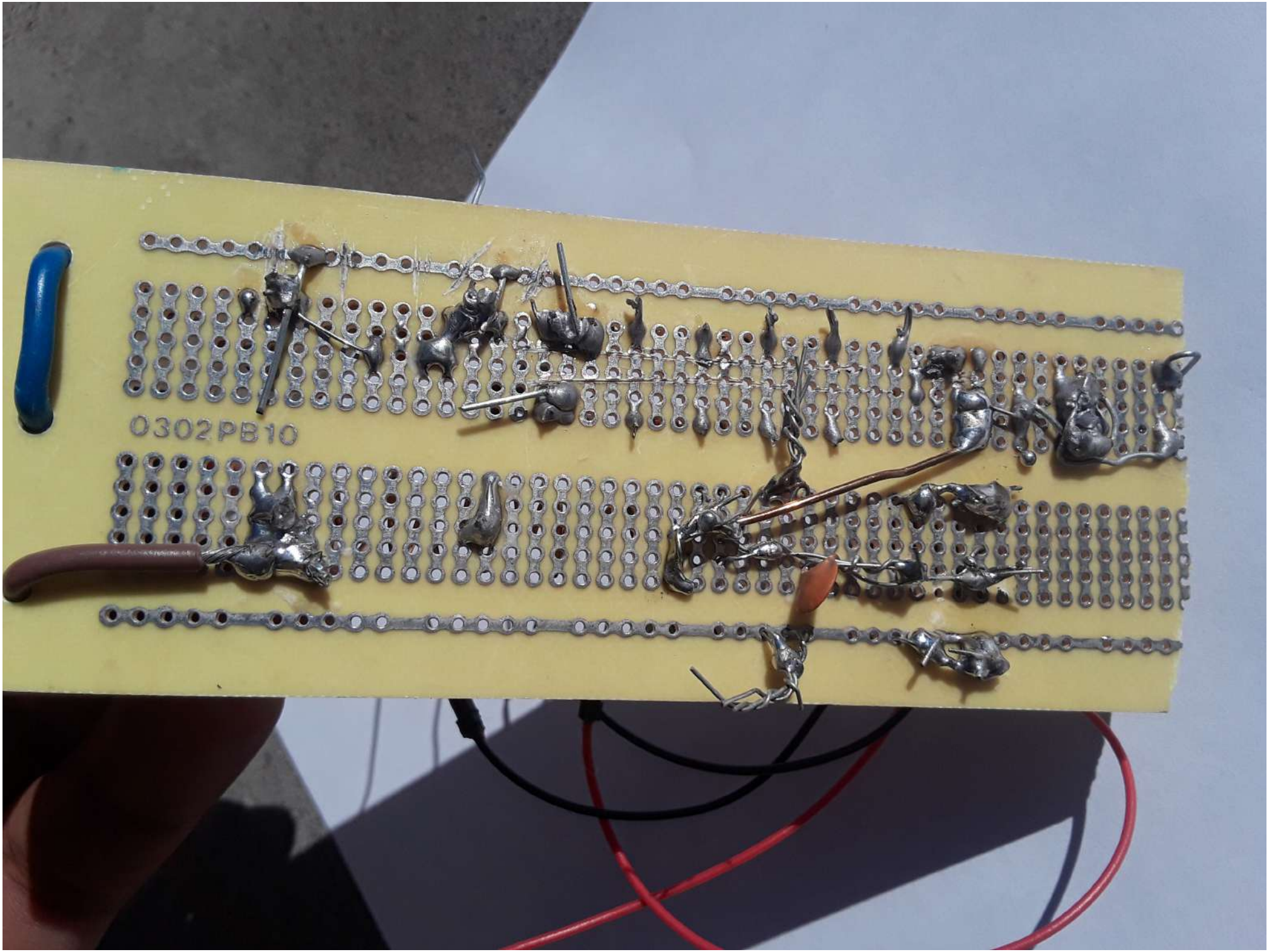


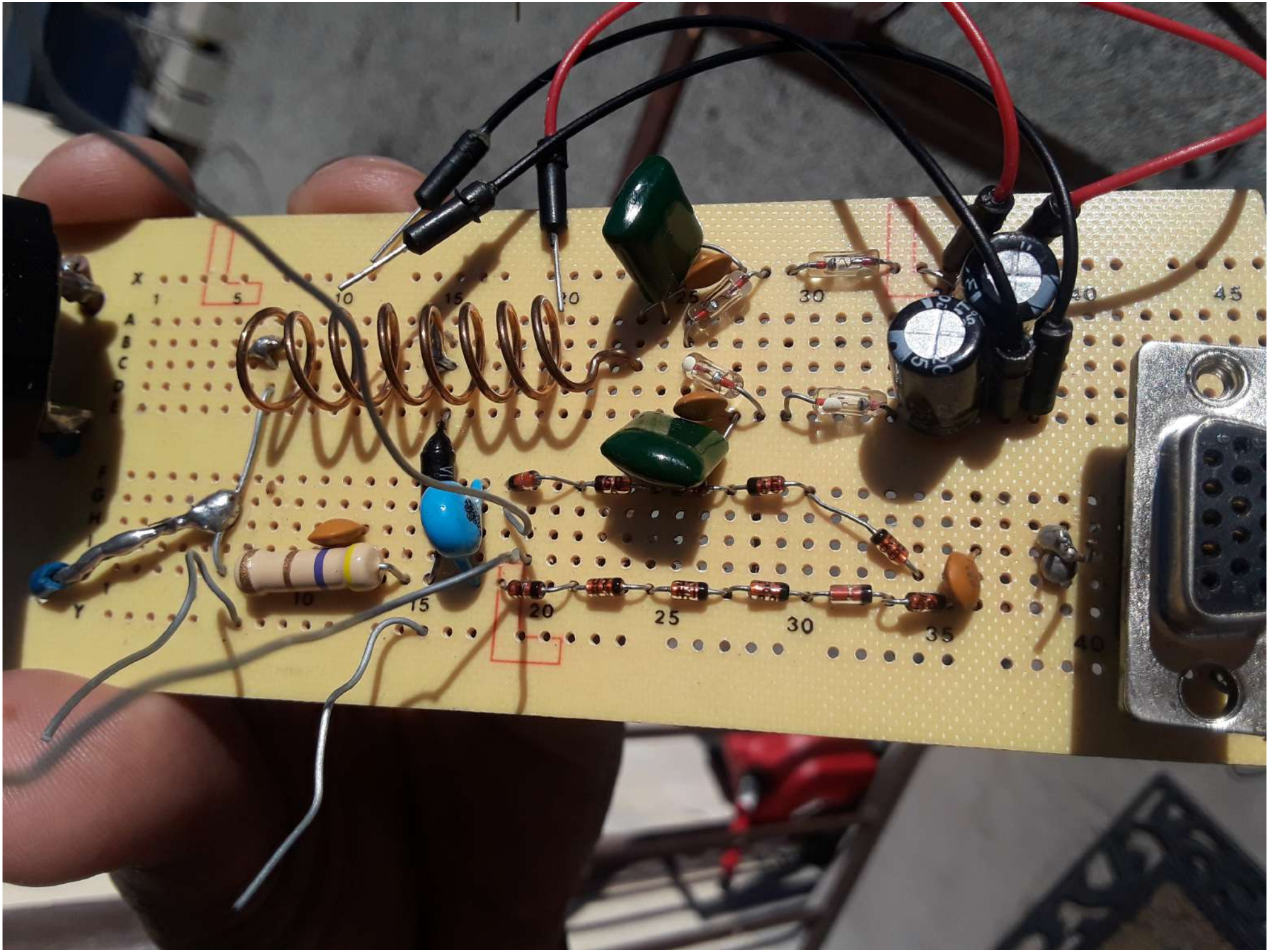


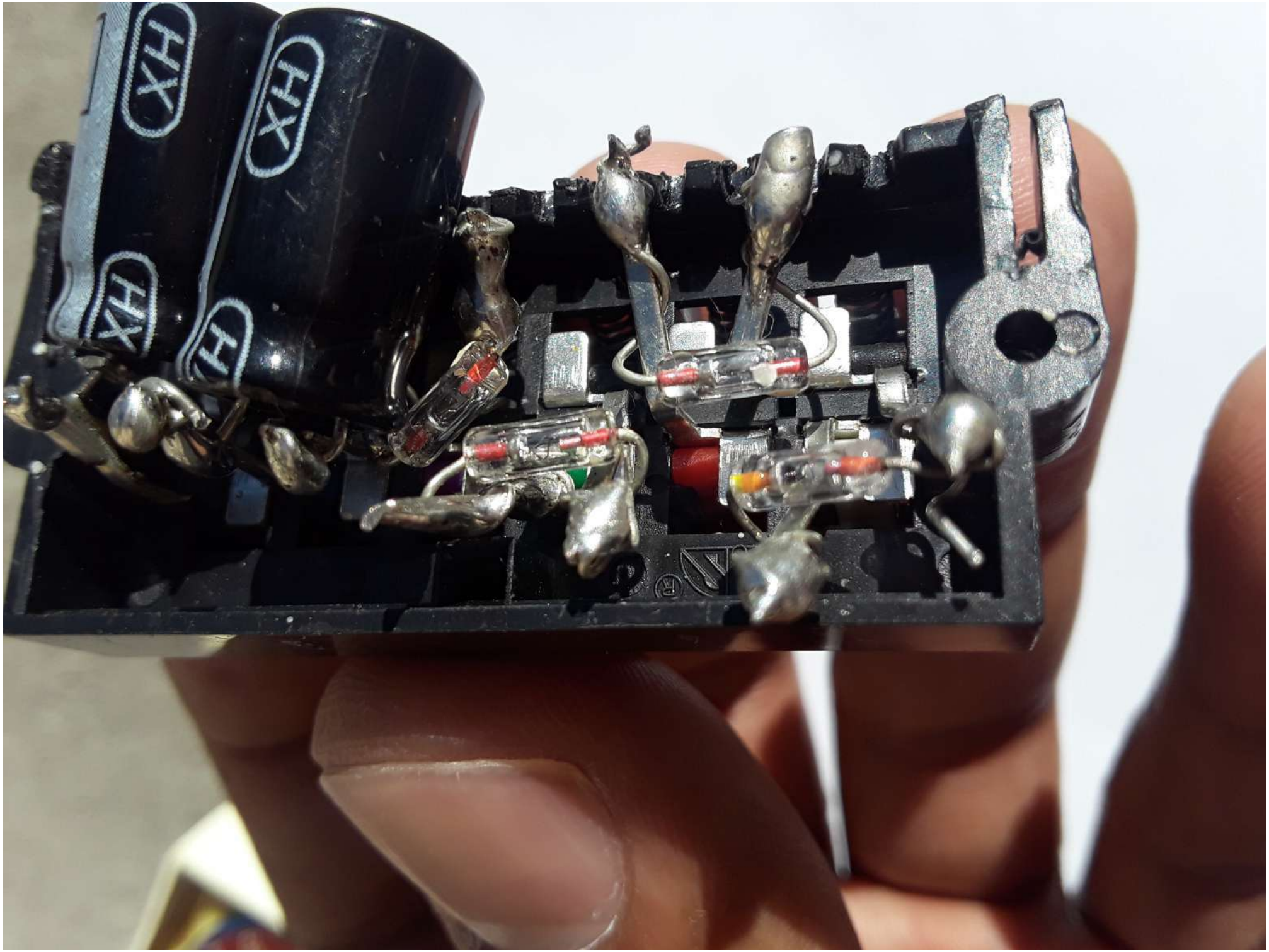





X
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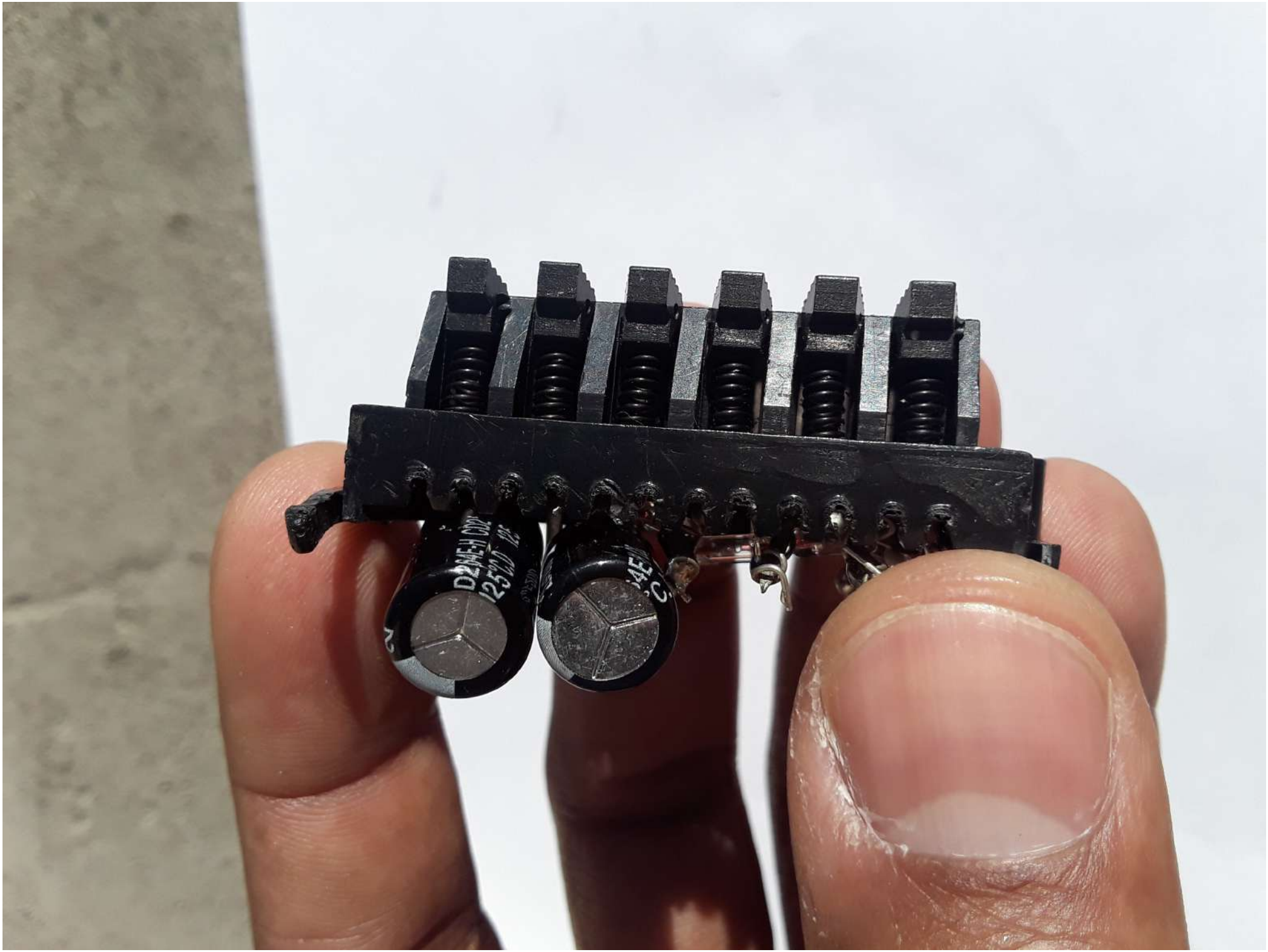

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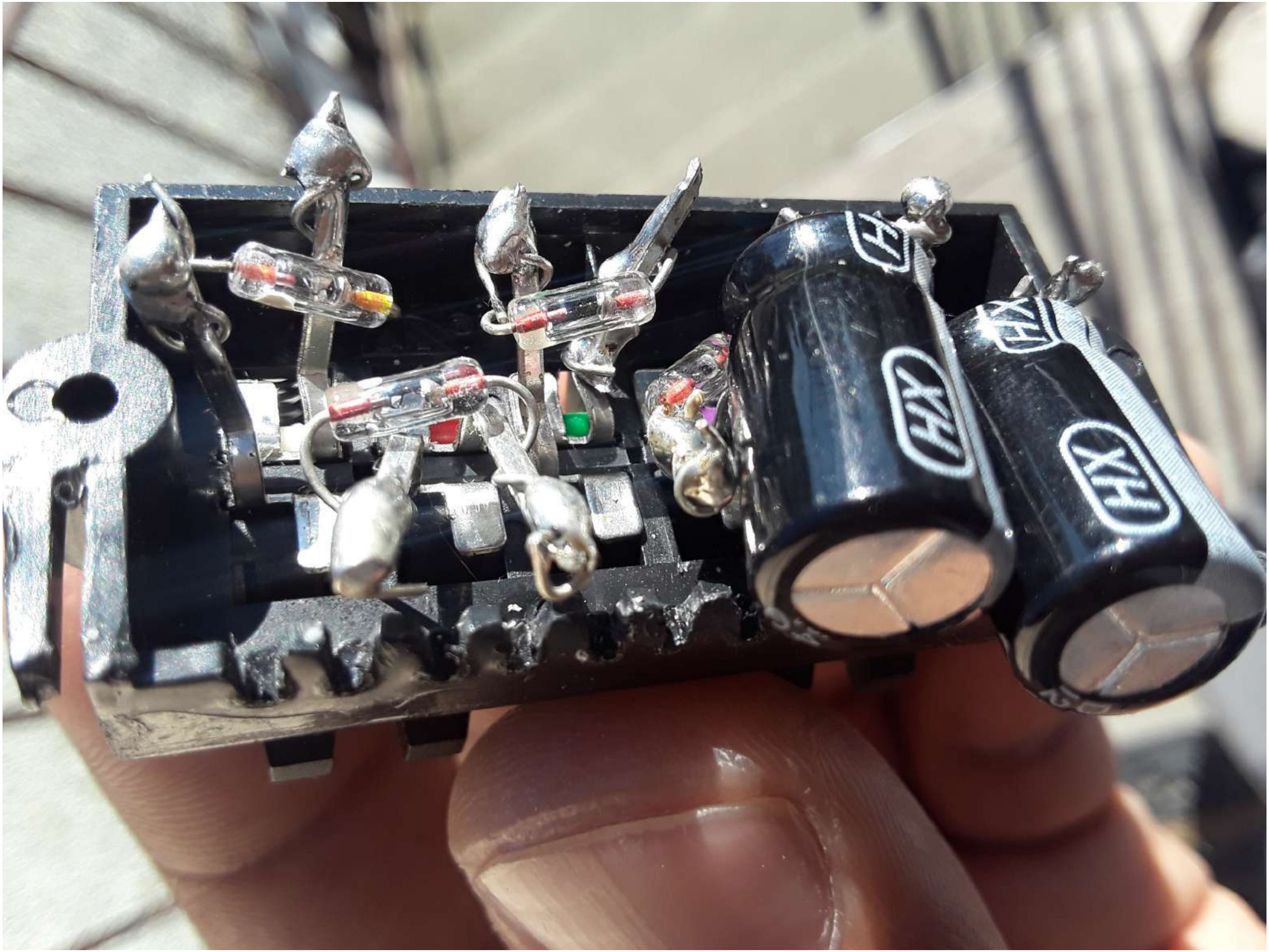


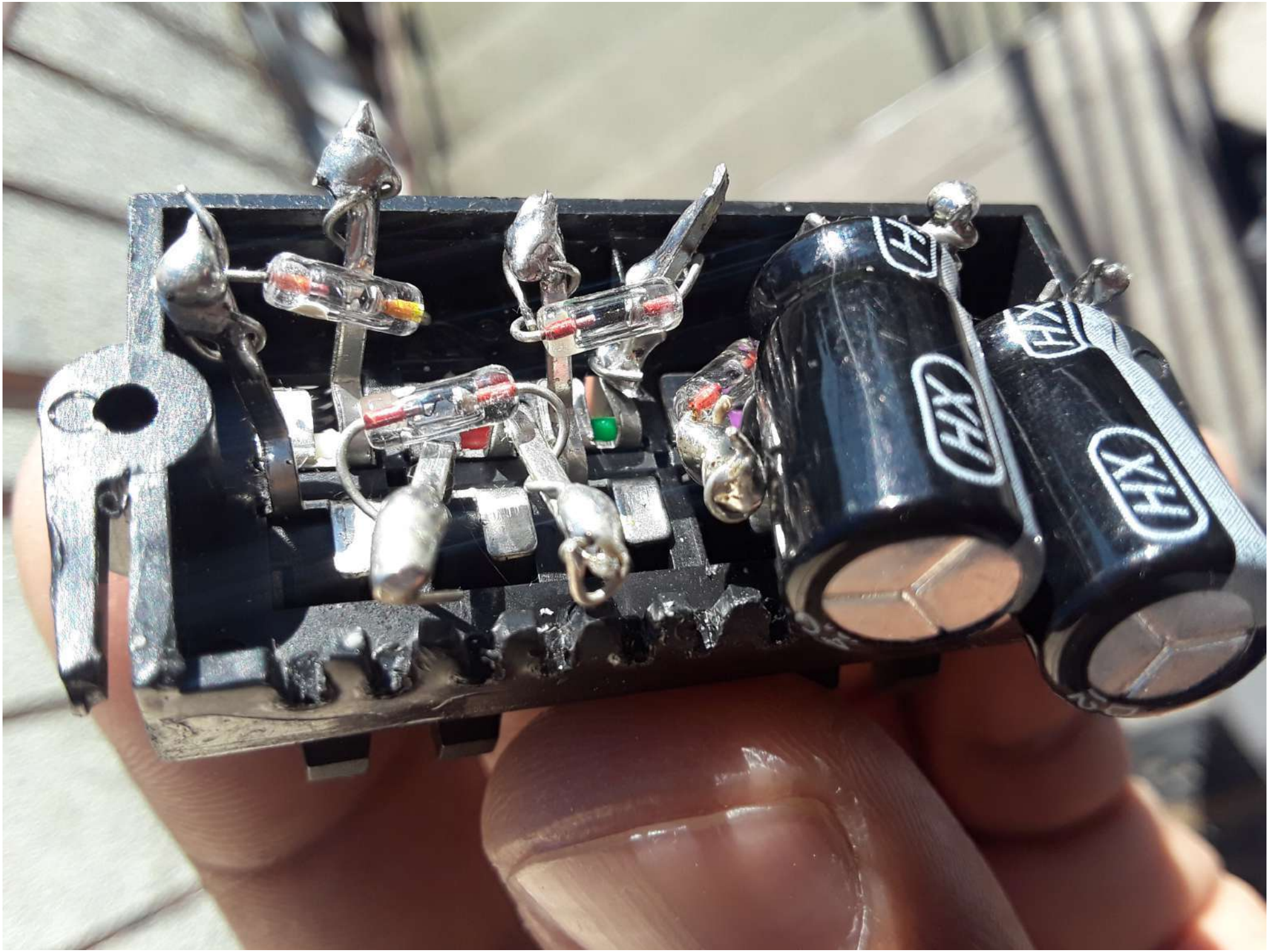

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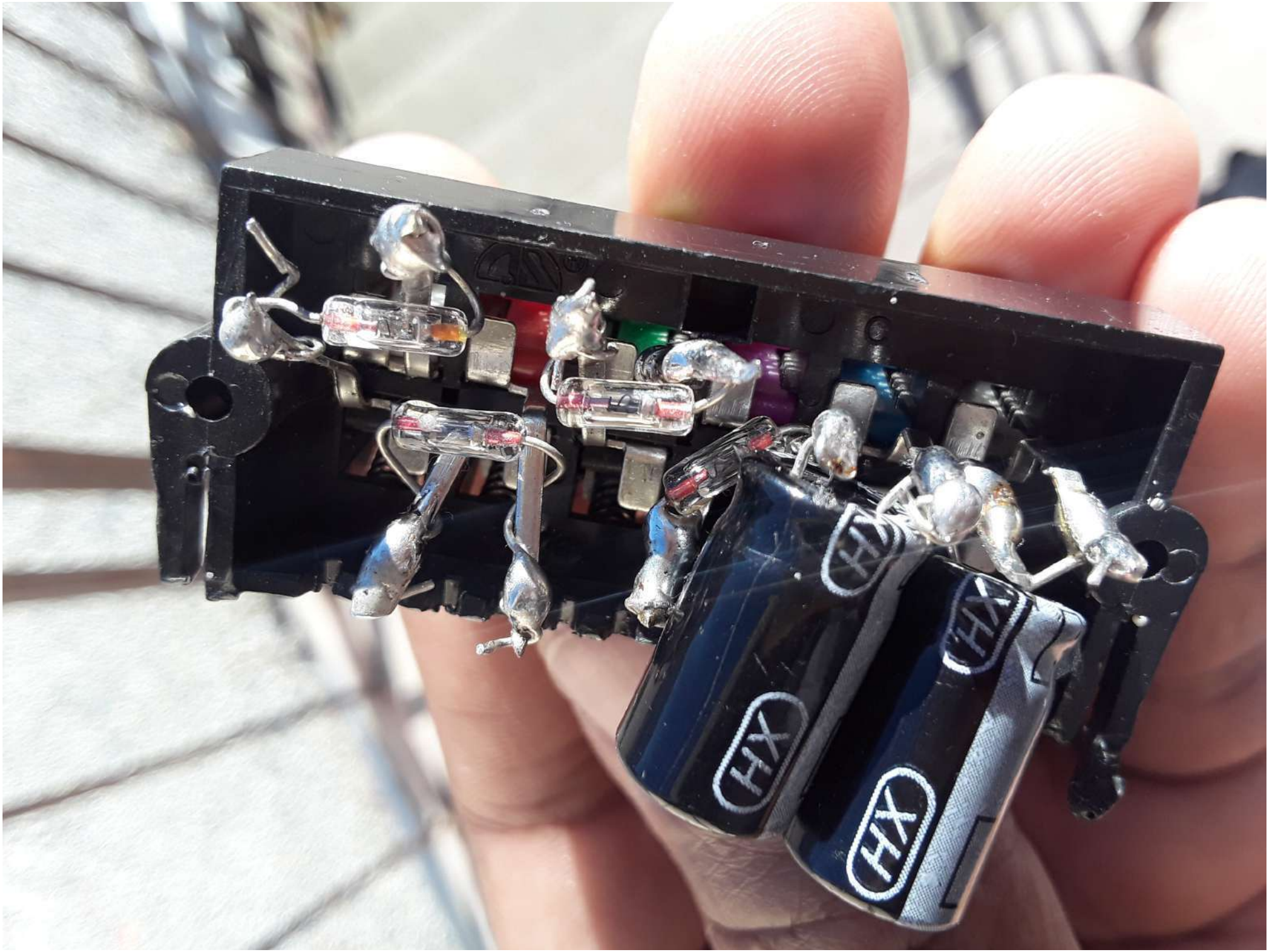


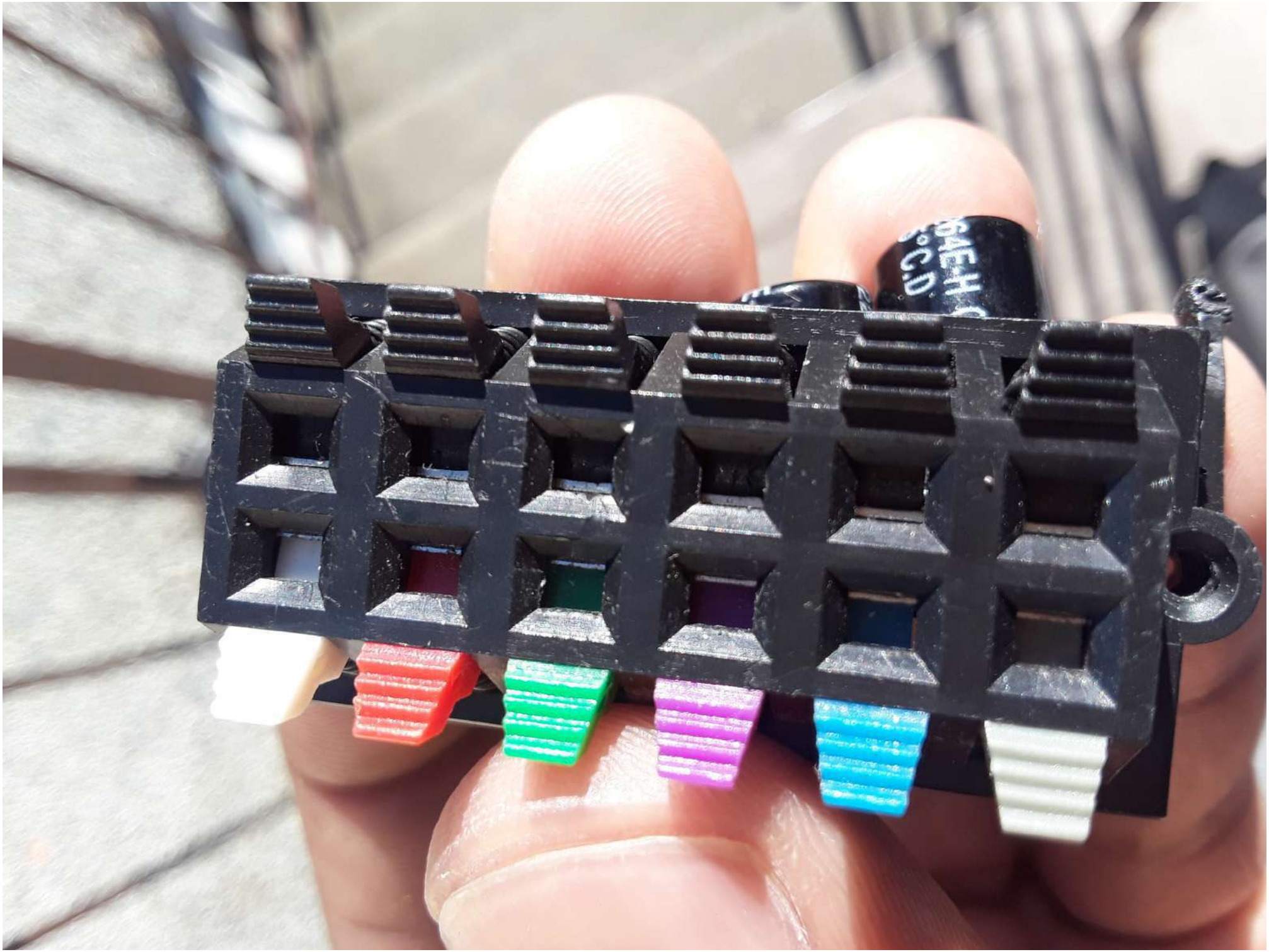
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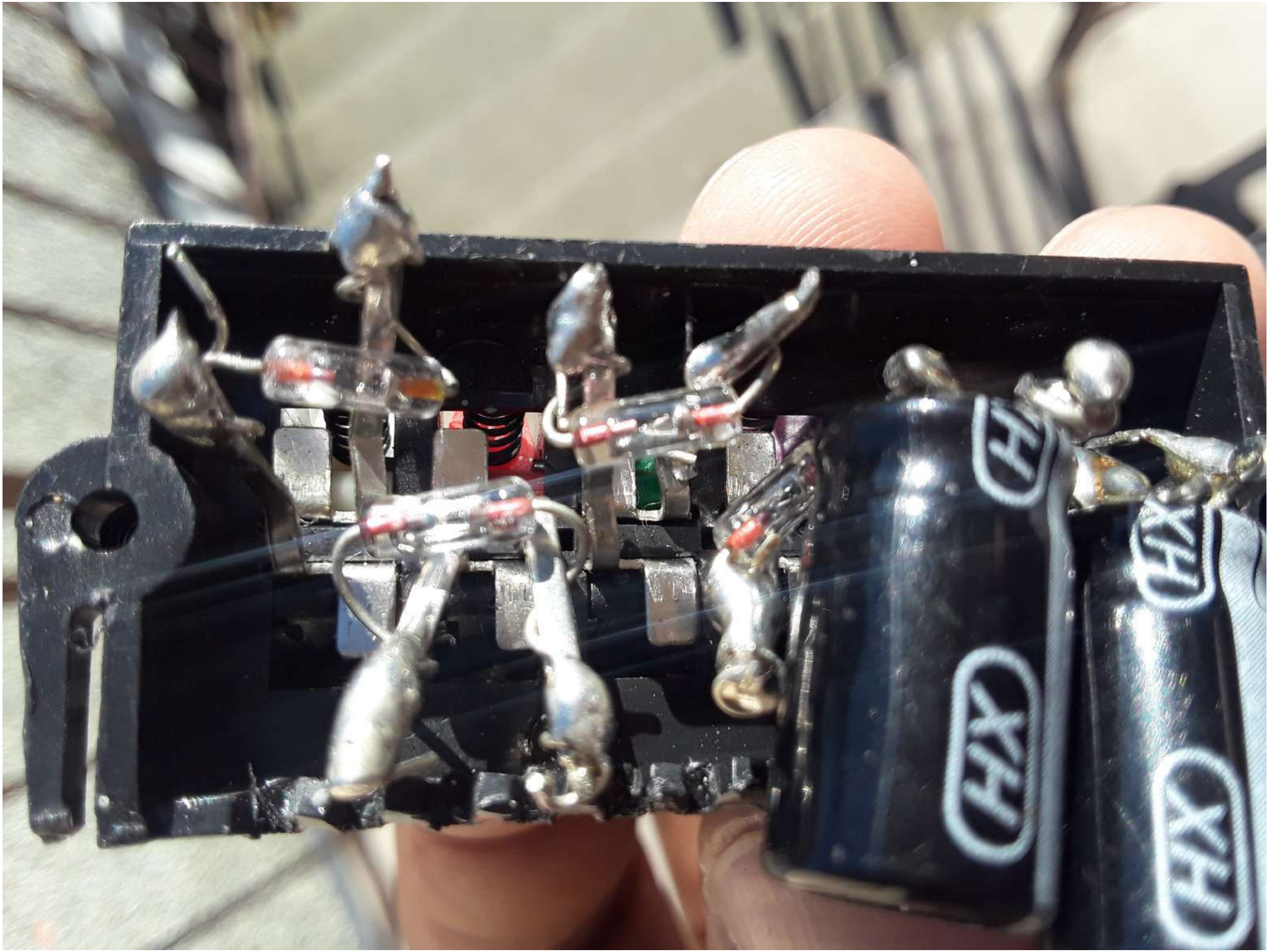


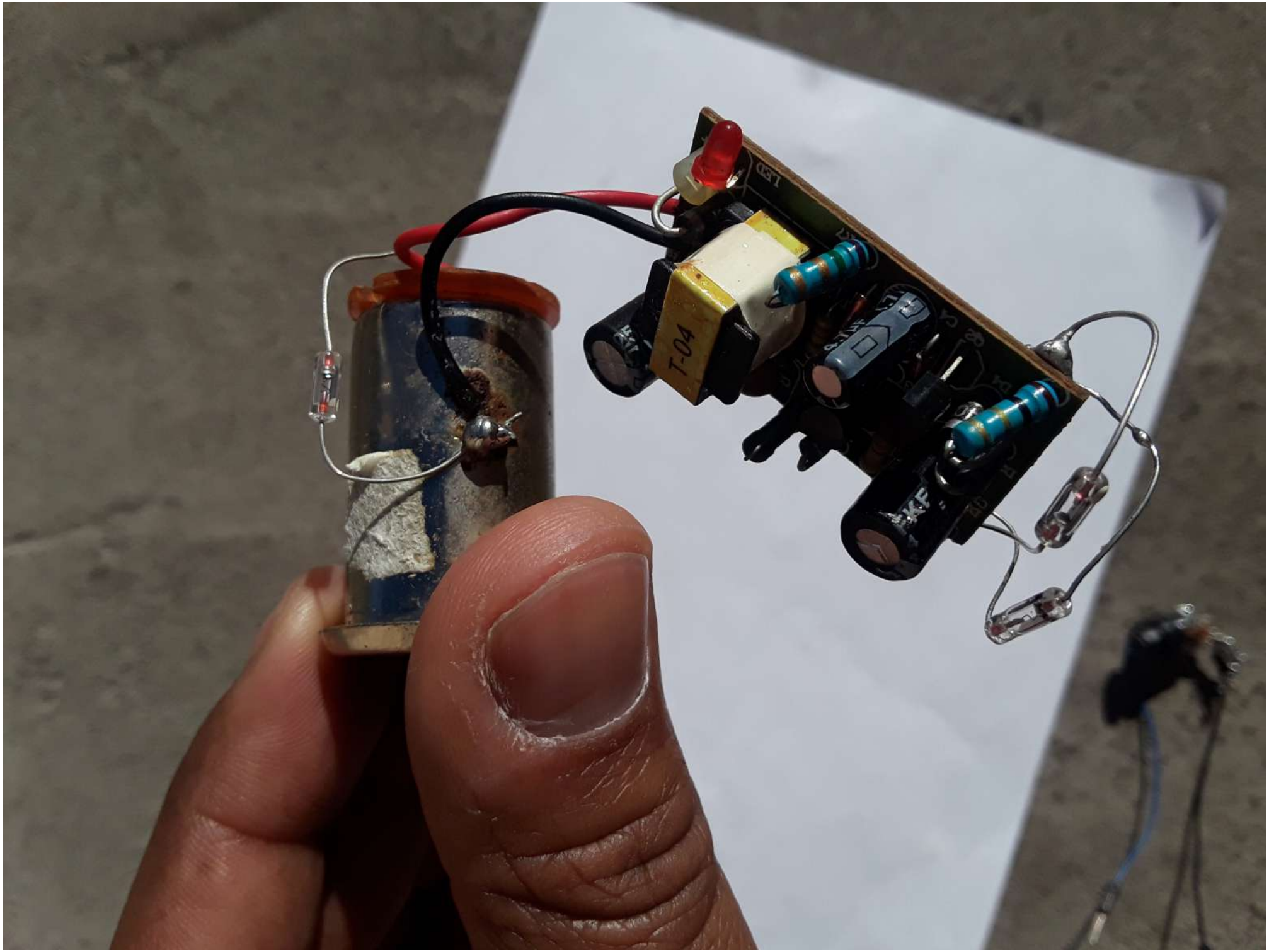


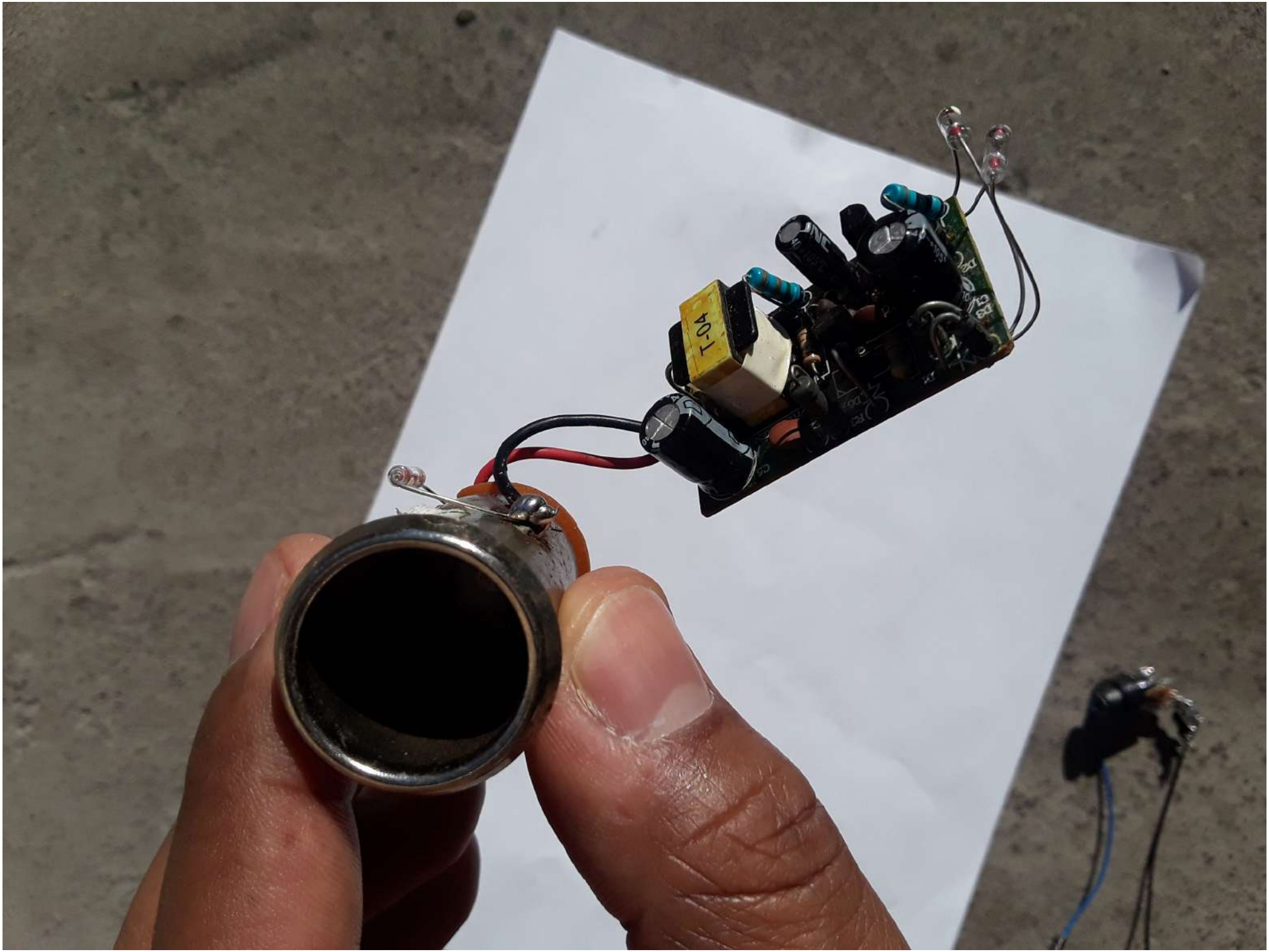

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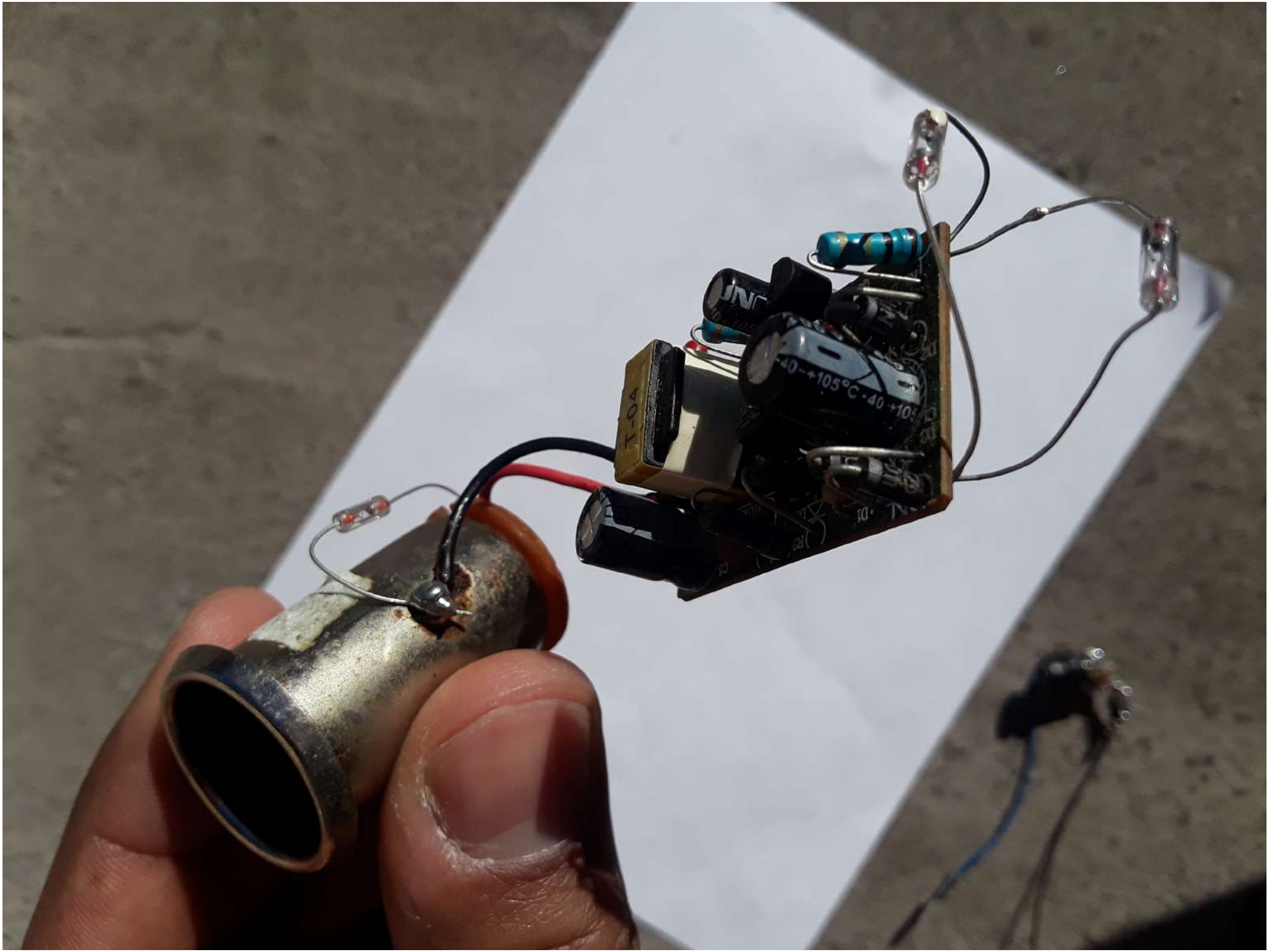

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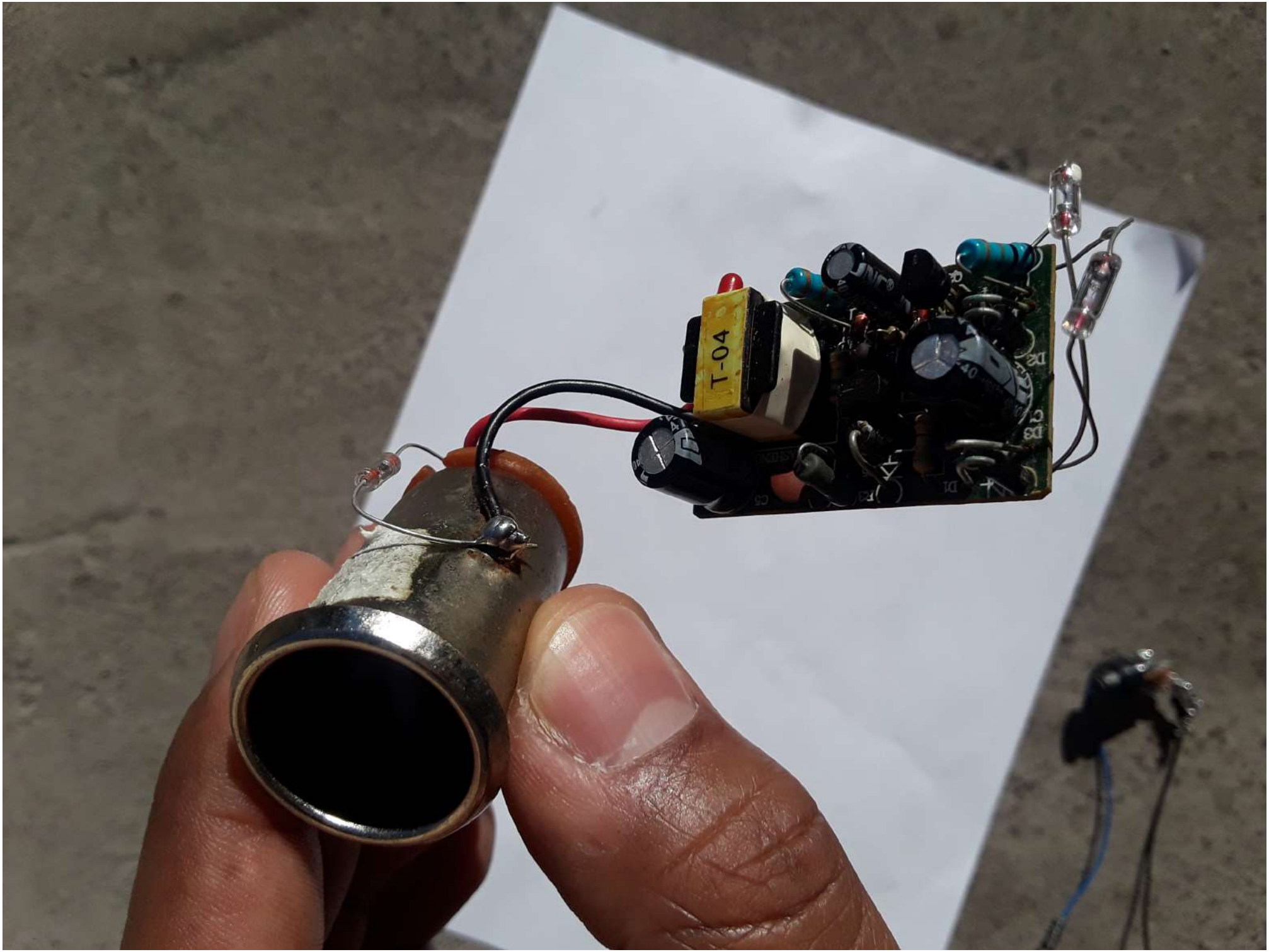


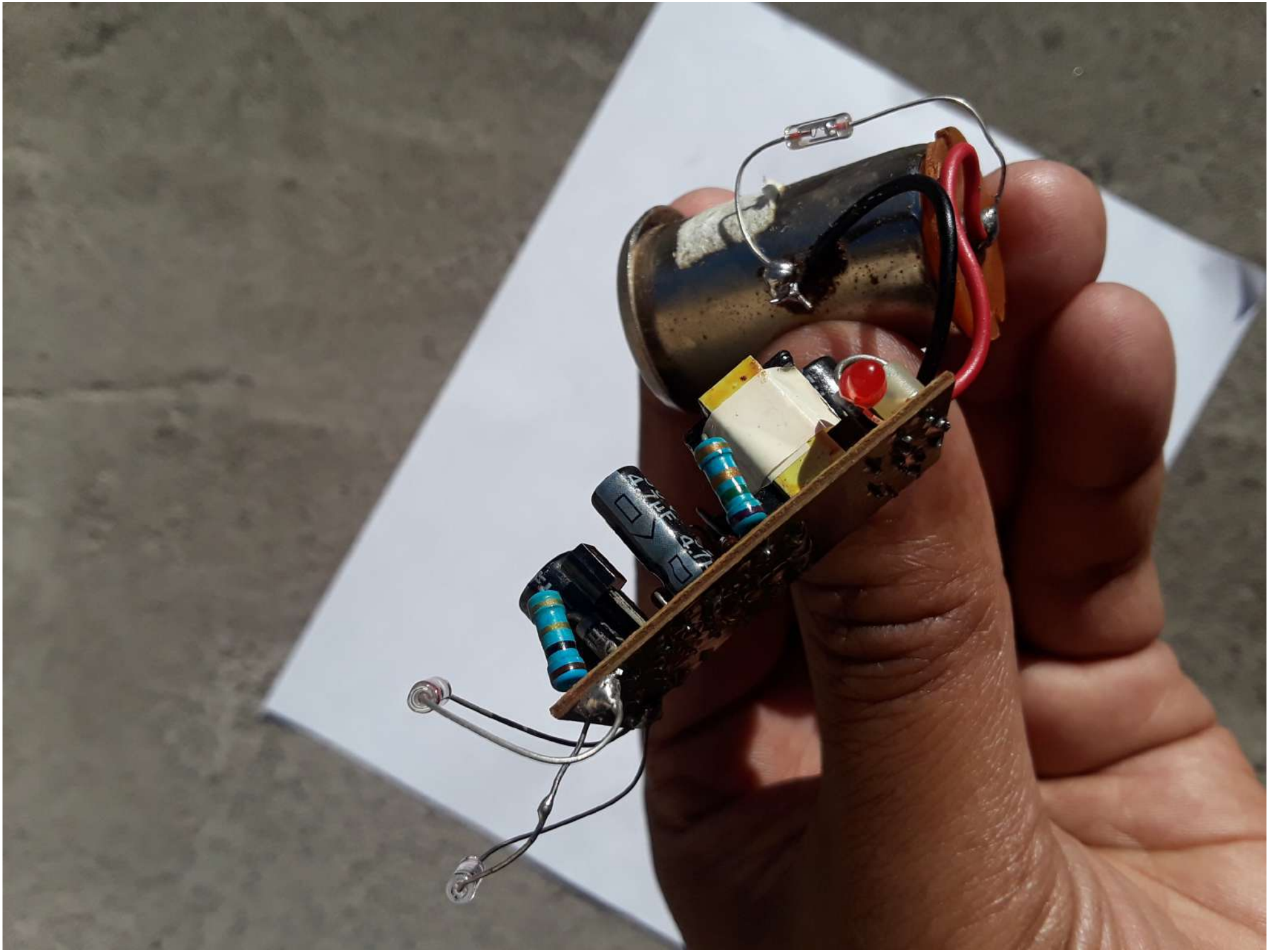


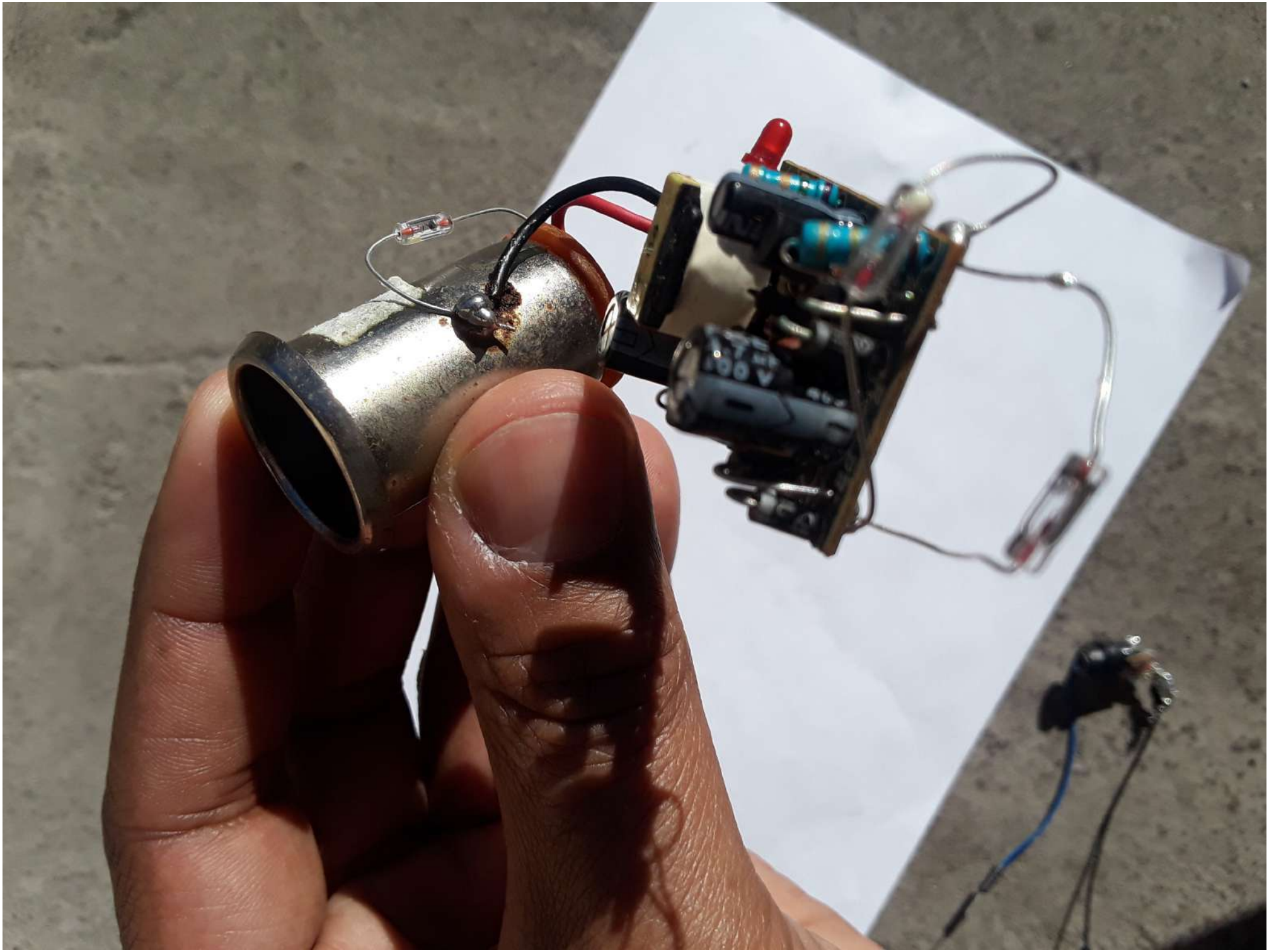

LED
T-04

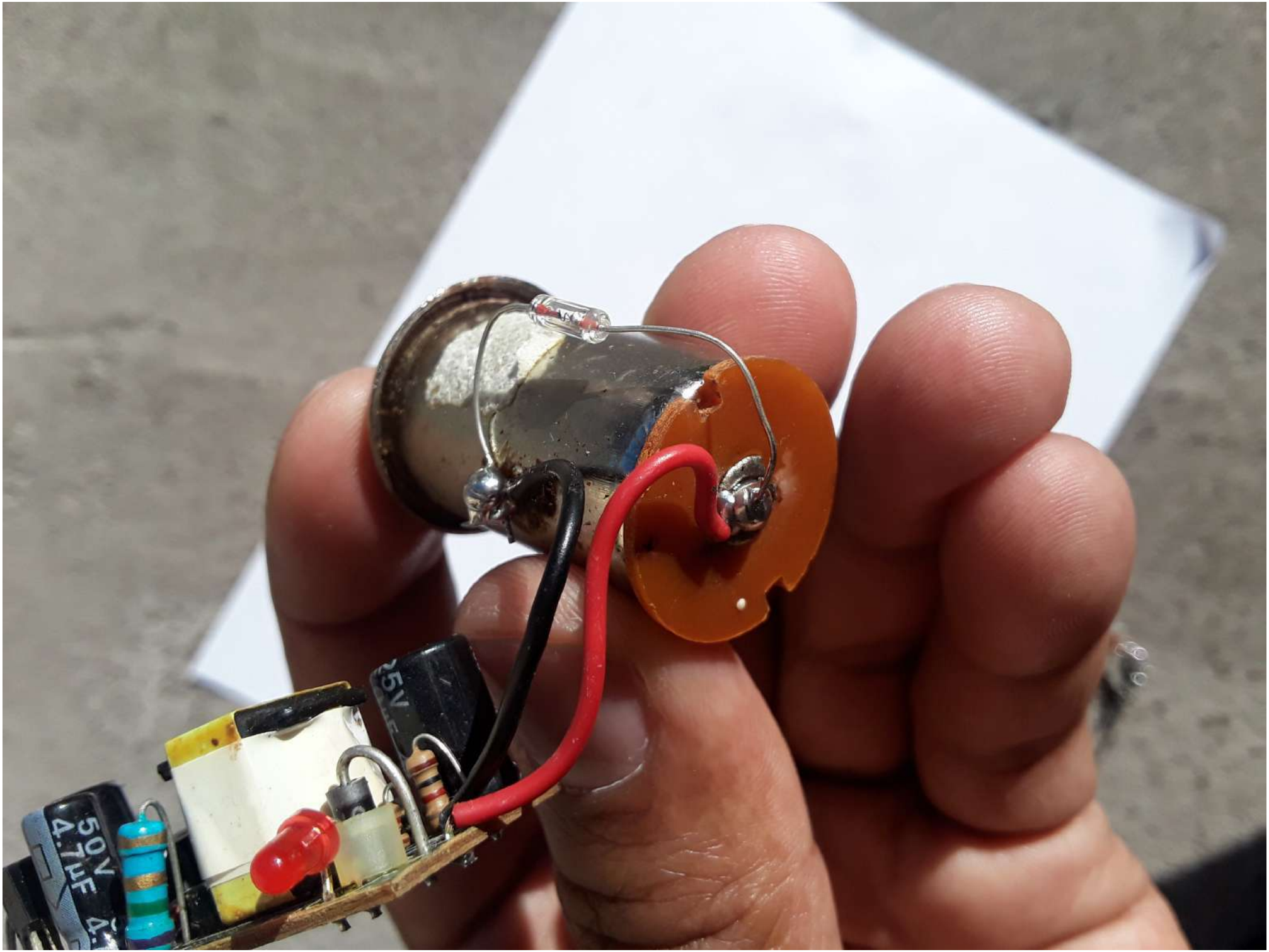

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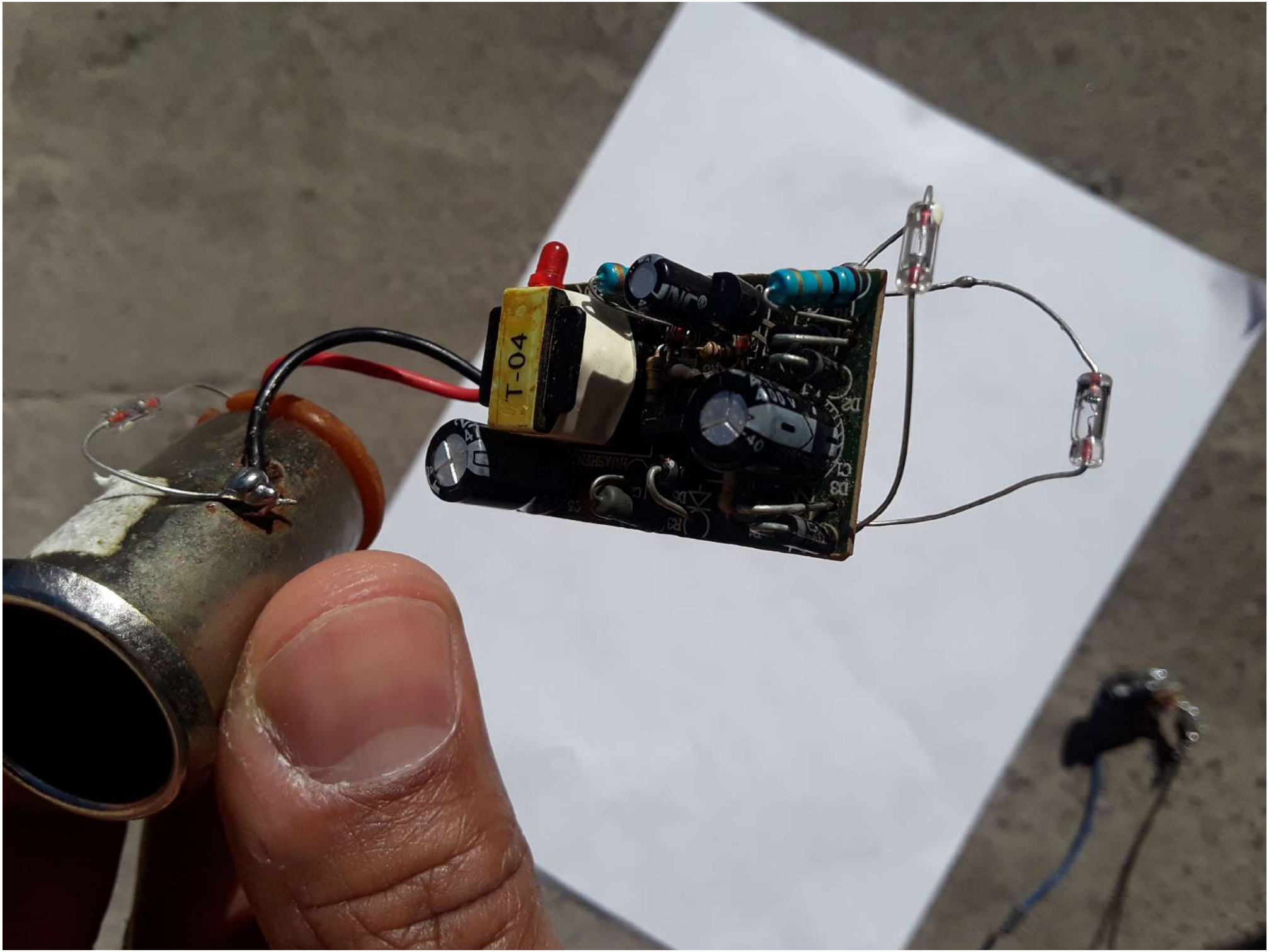

T-04
-40~+105°C -40 +105

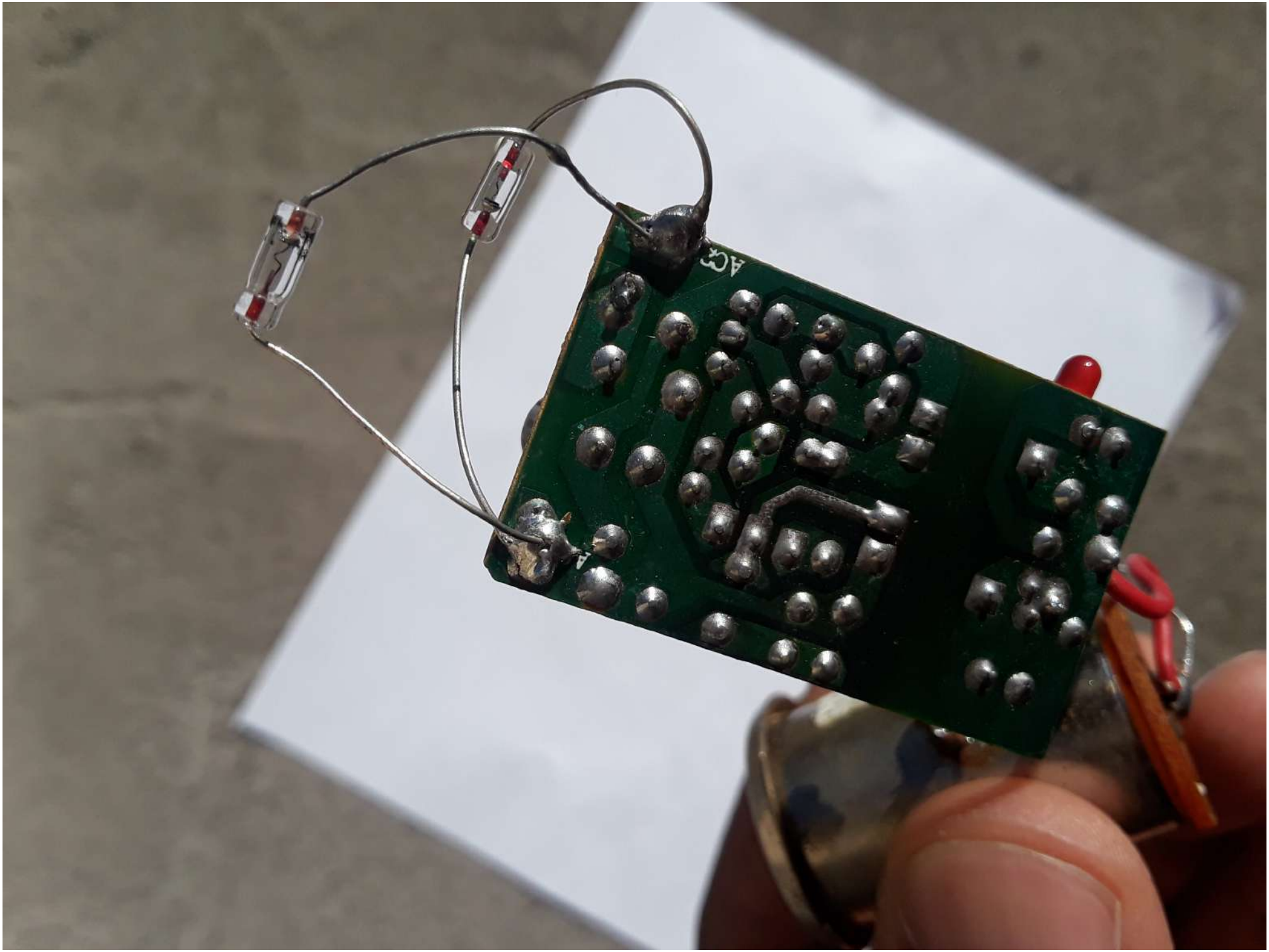

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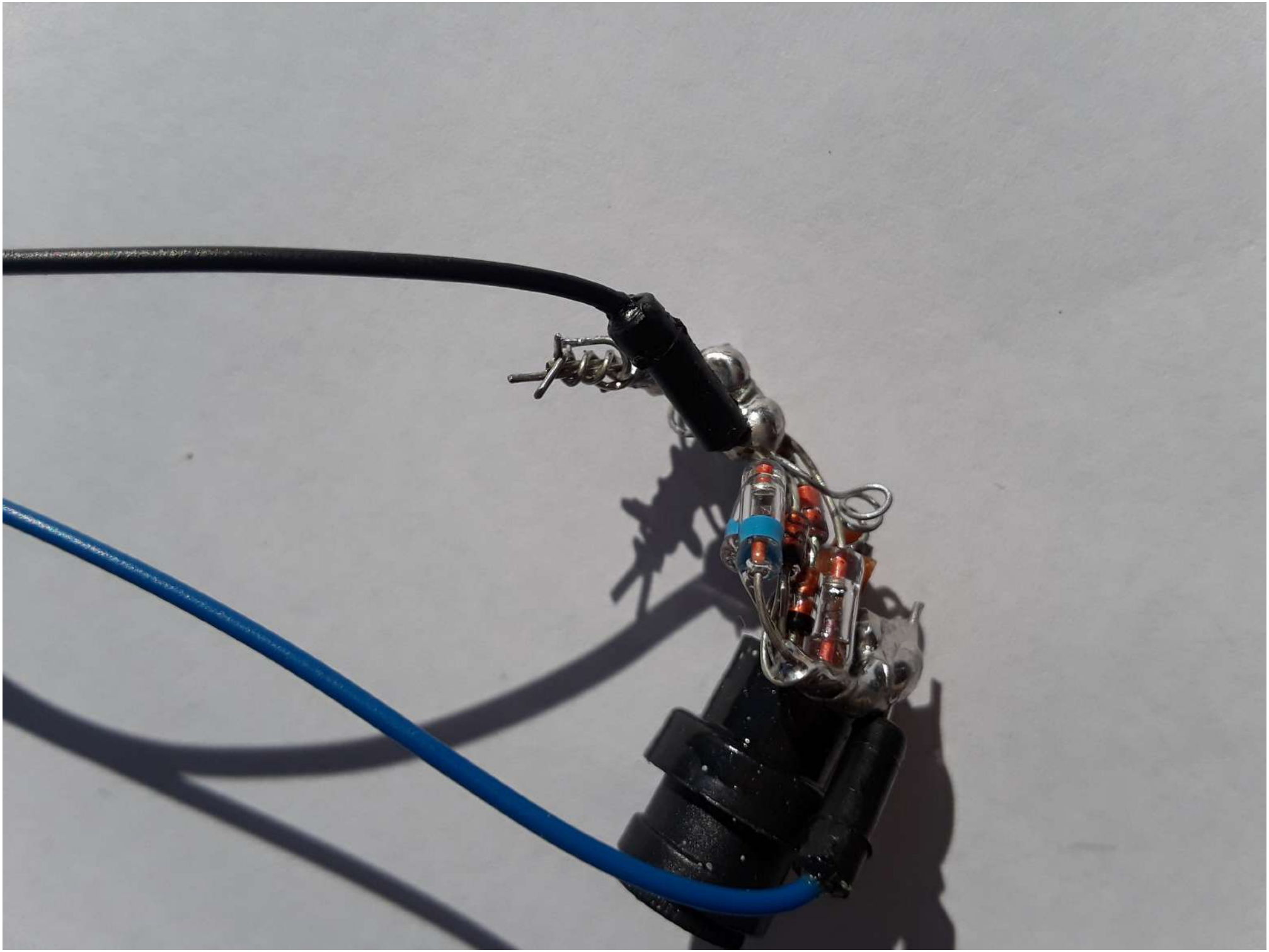


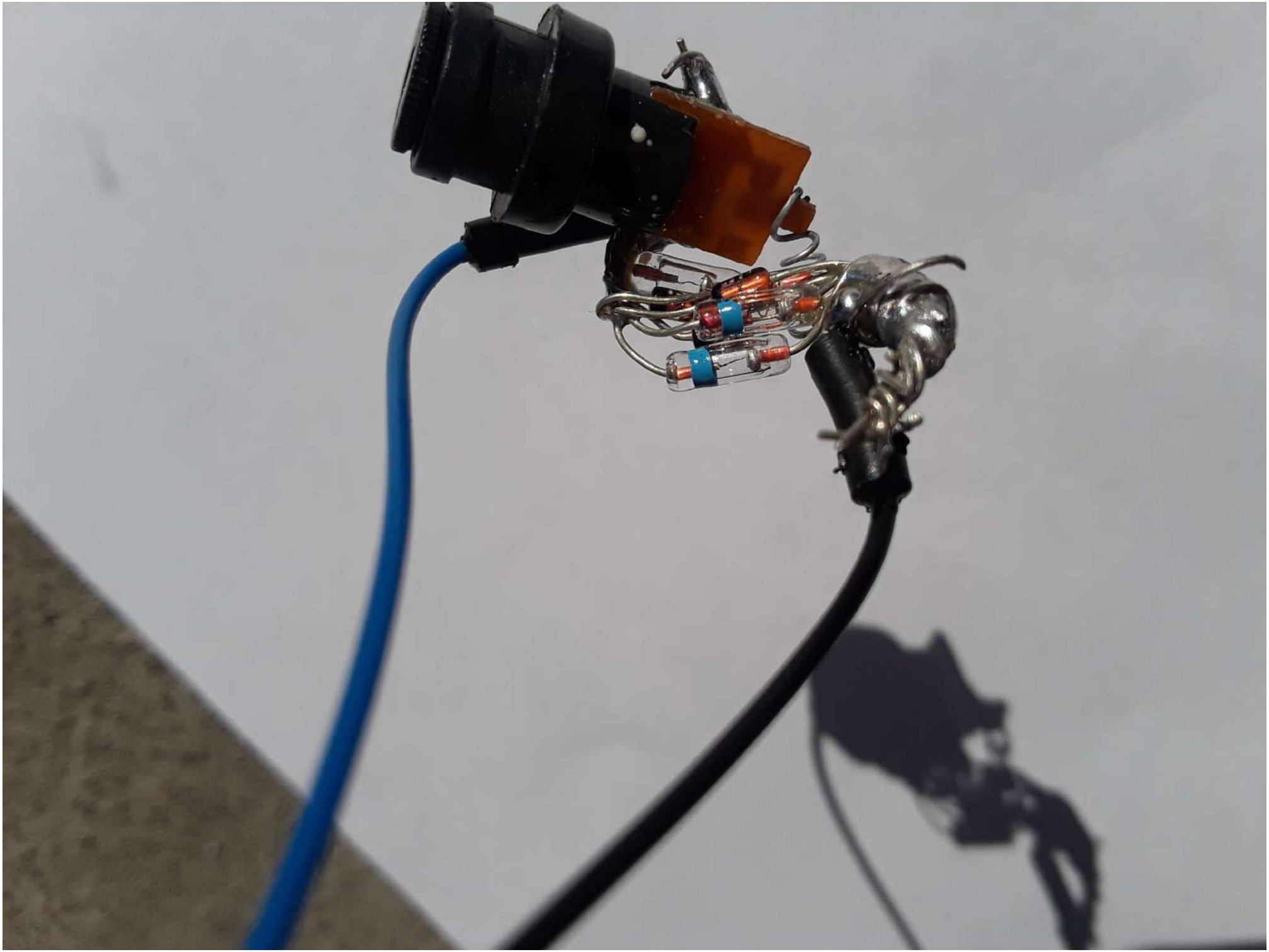



50V
4.7μF

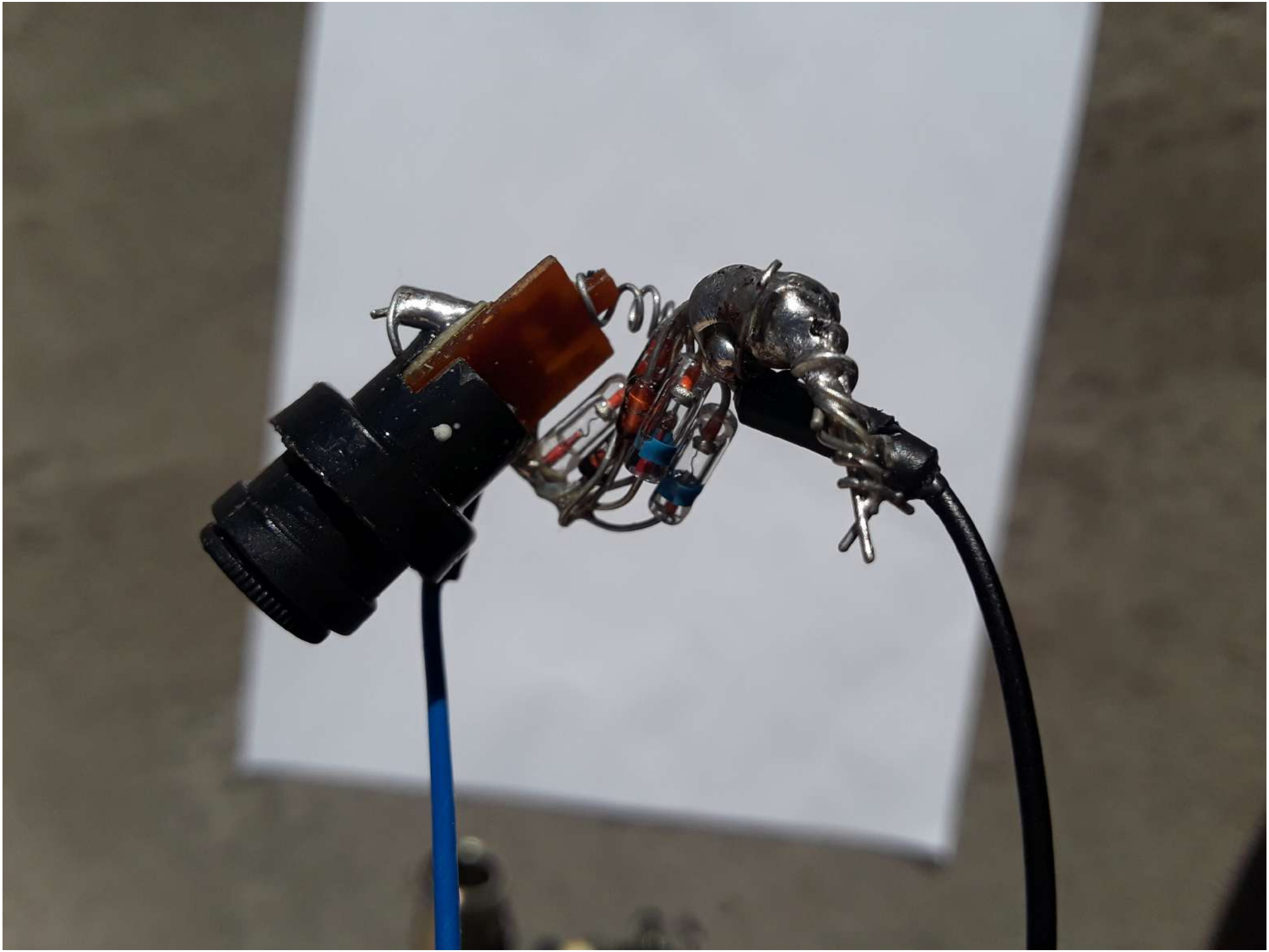

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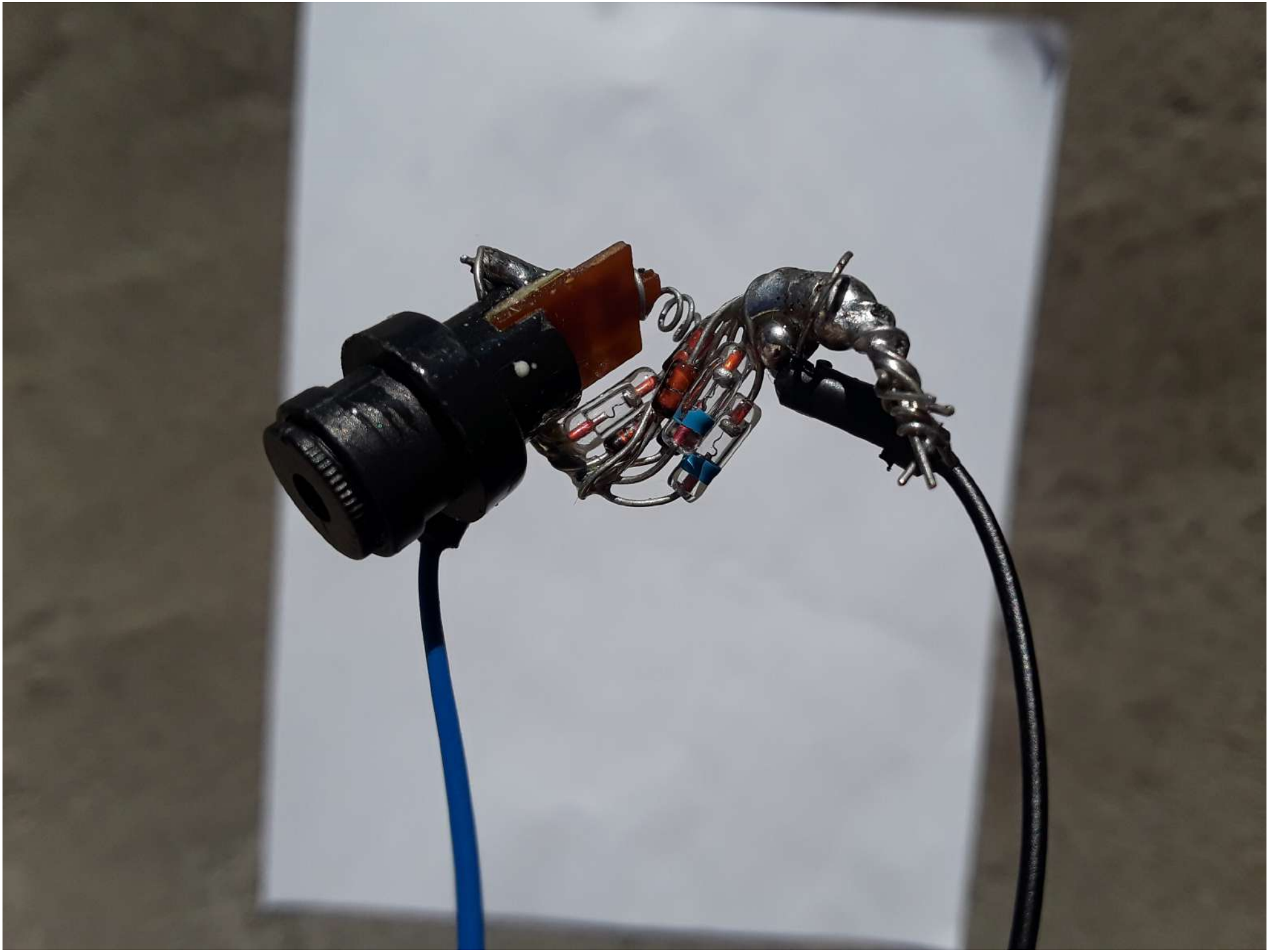


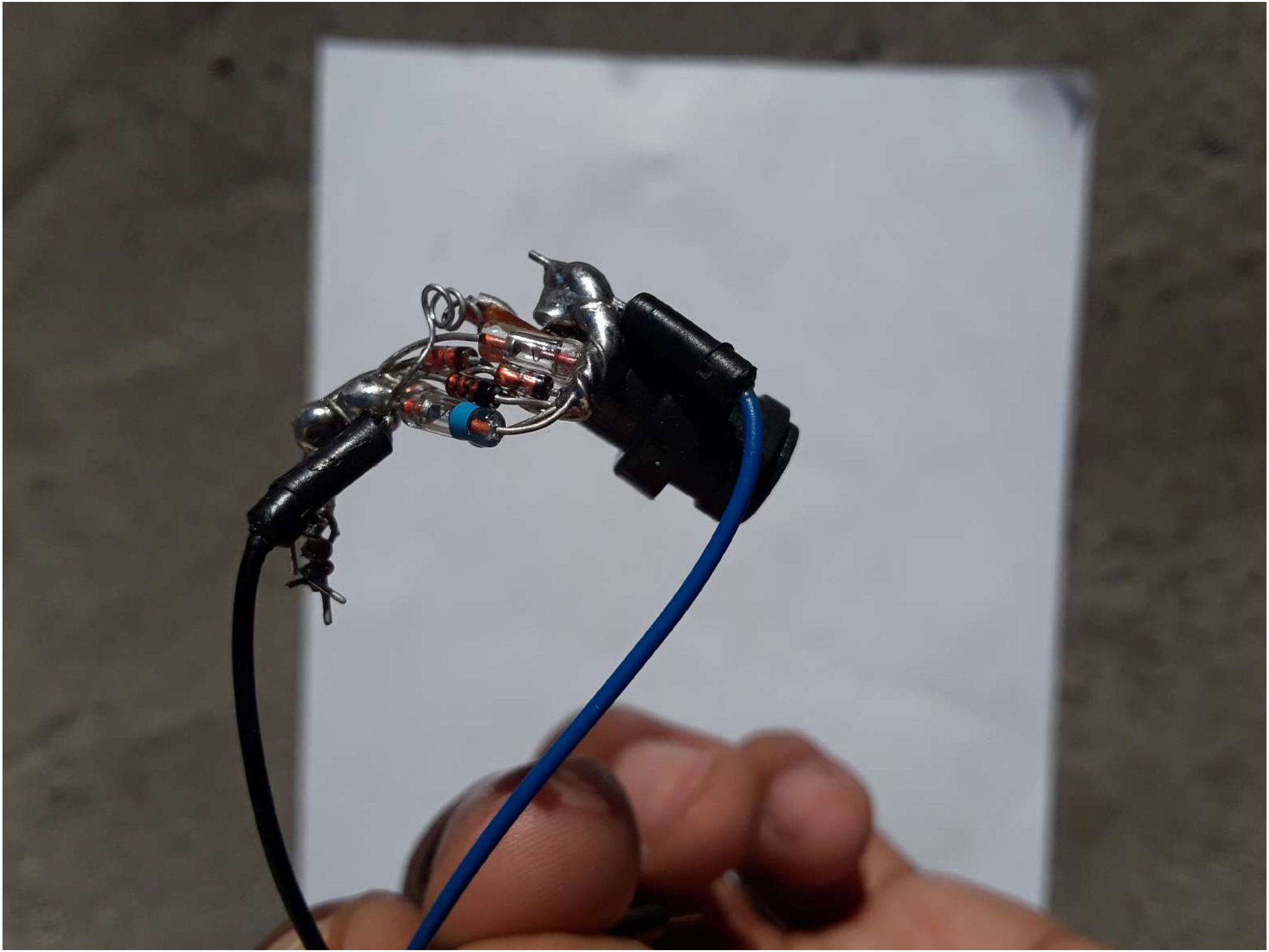


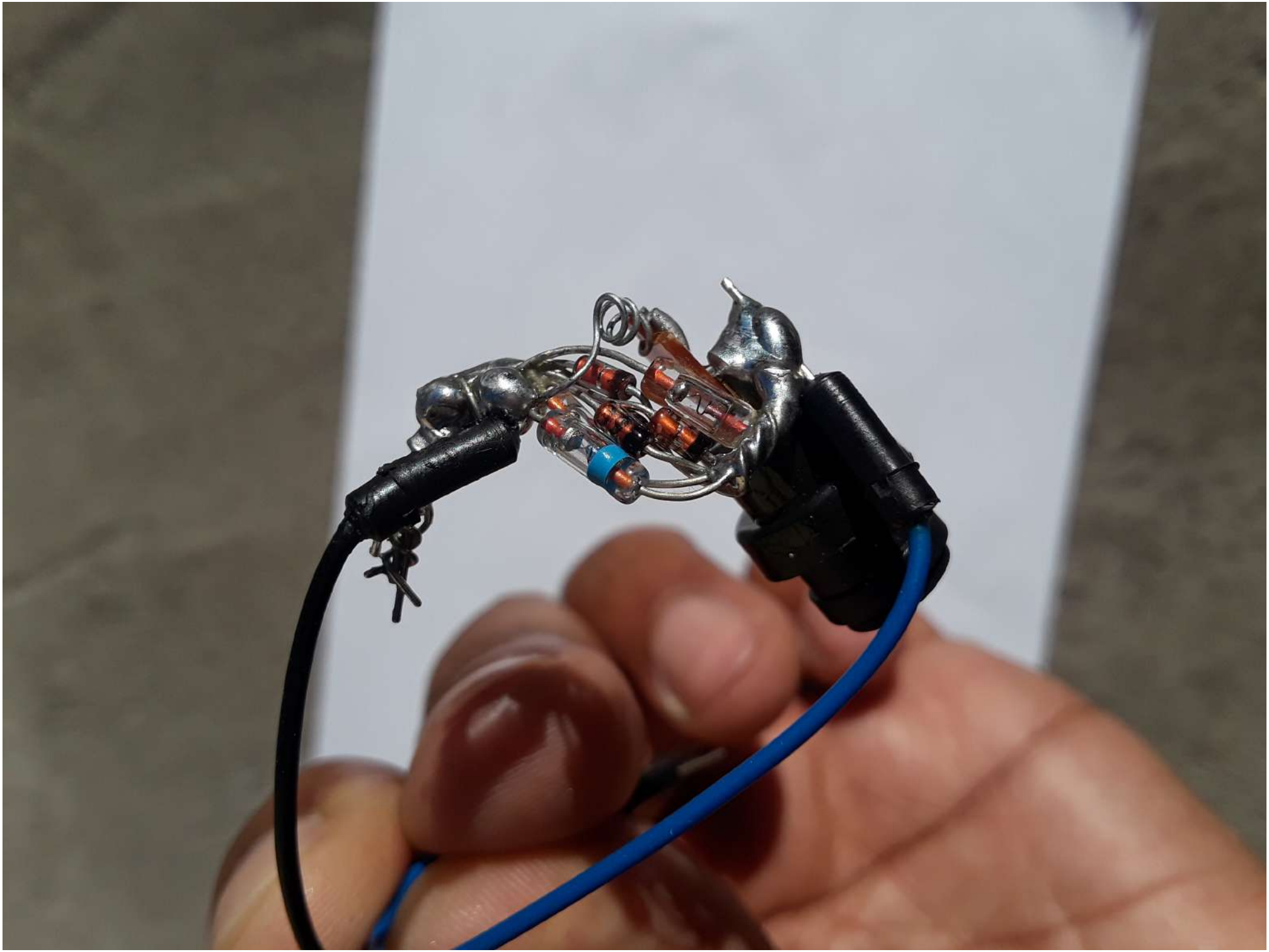


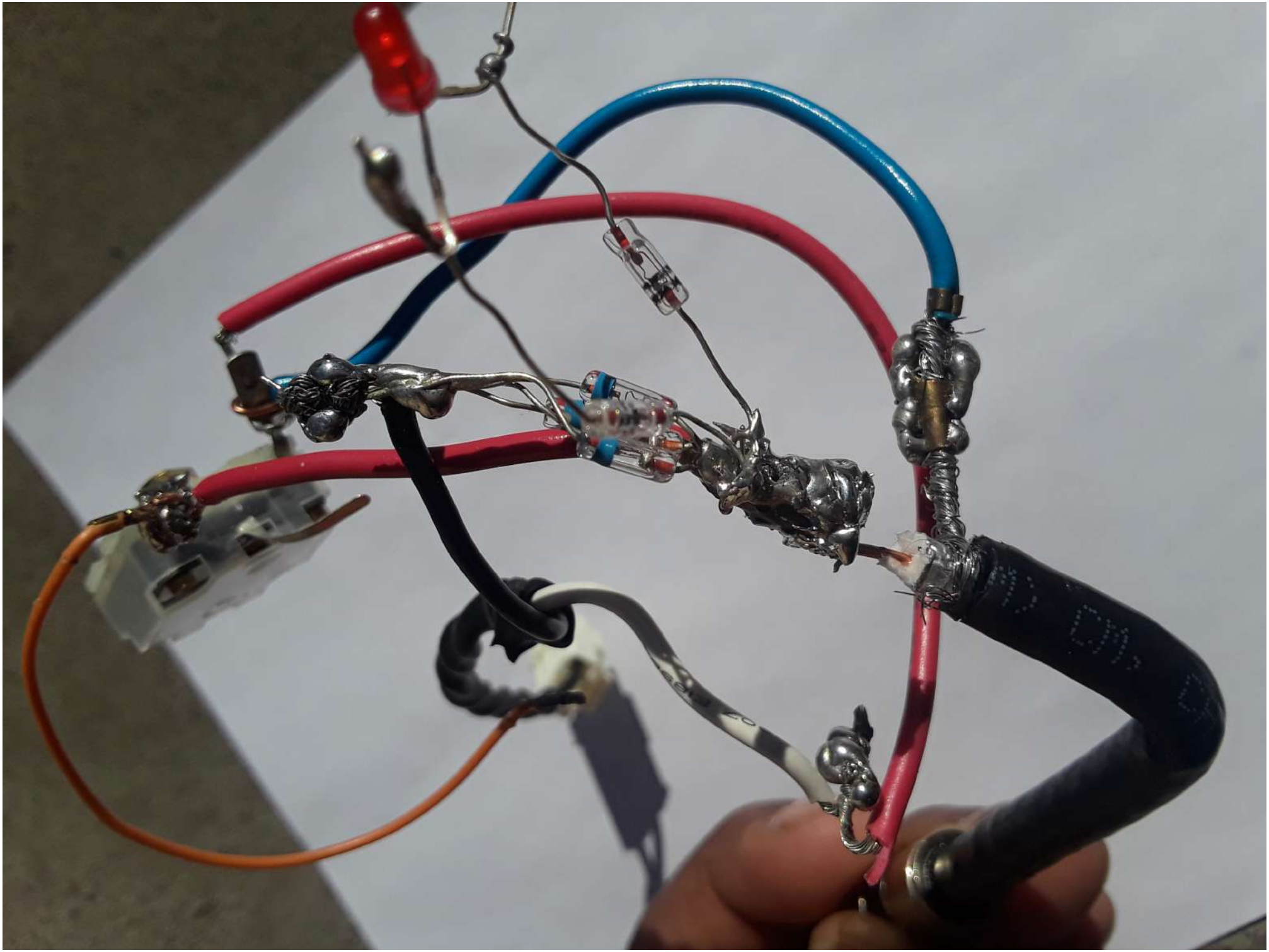


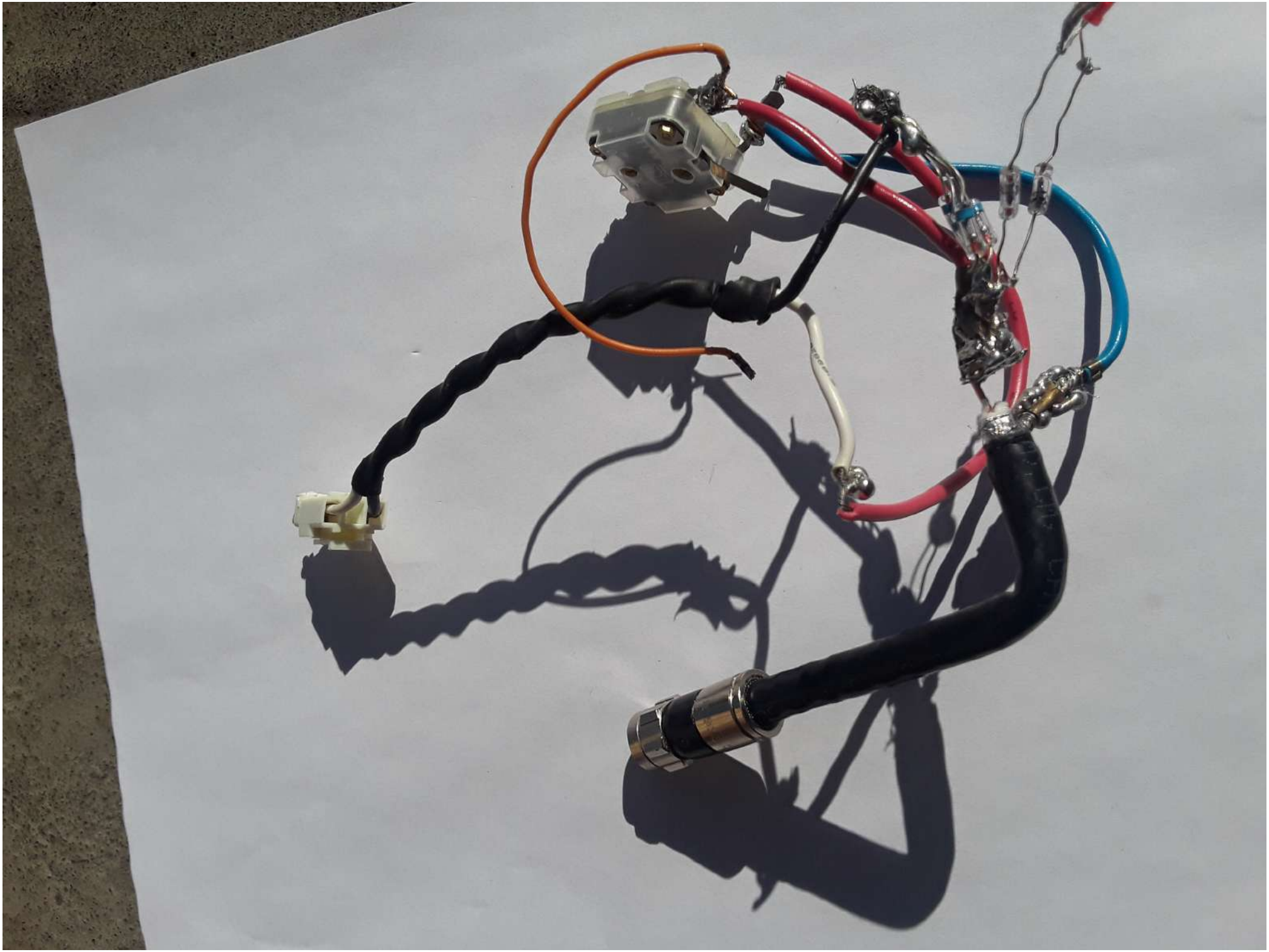


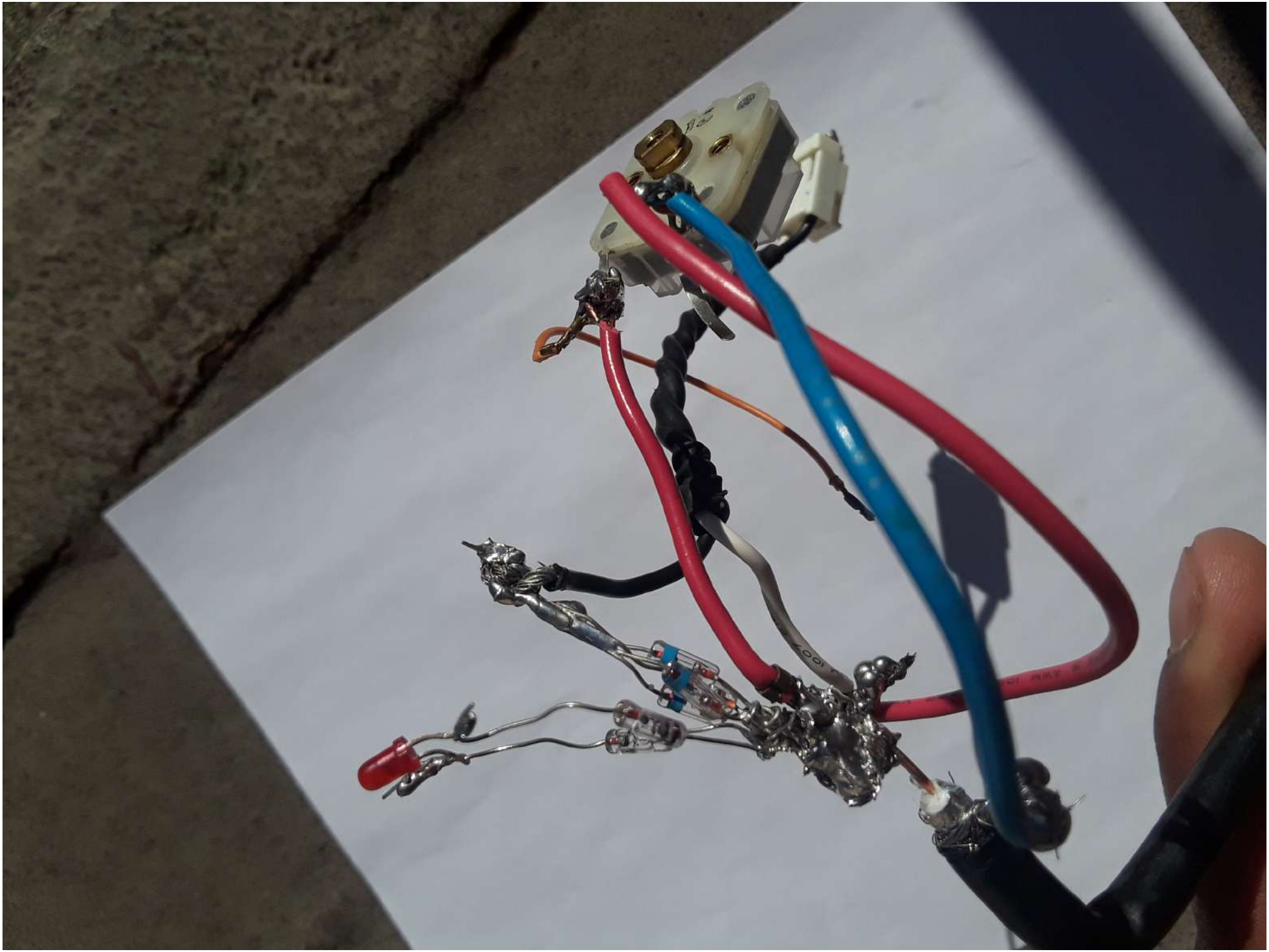


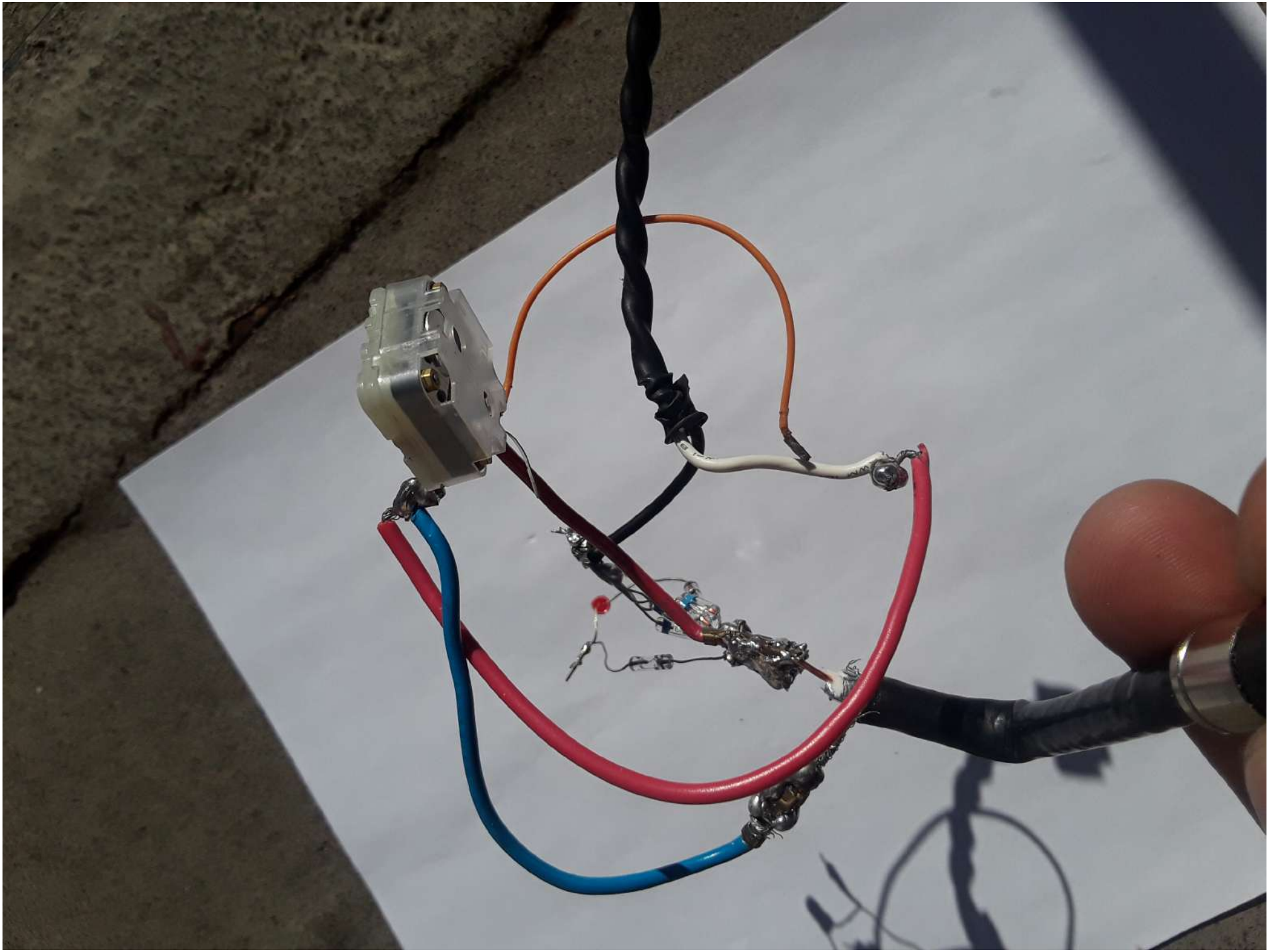


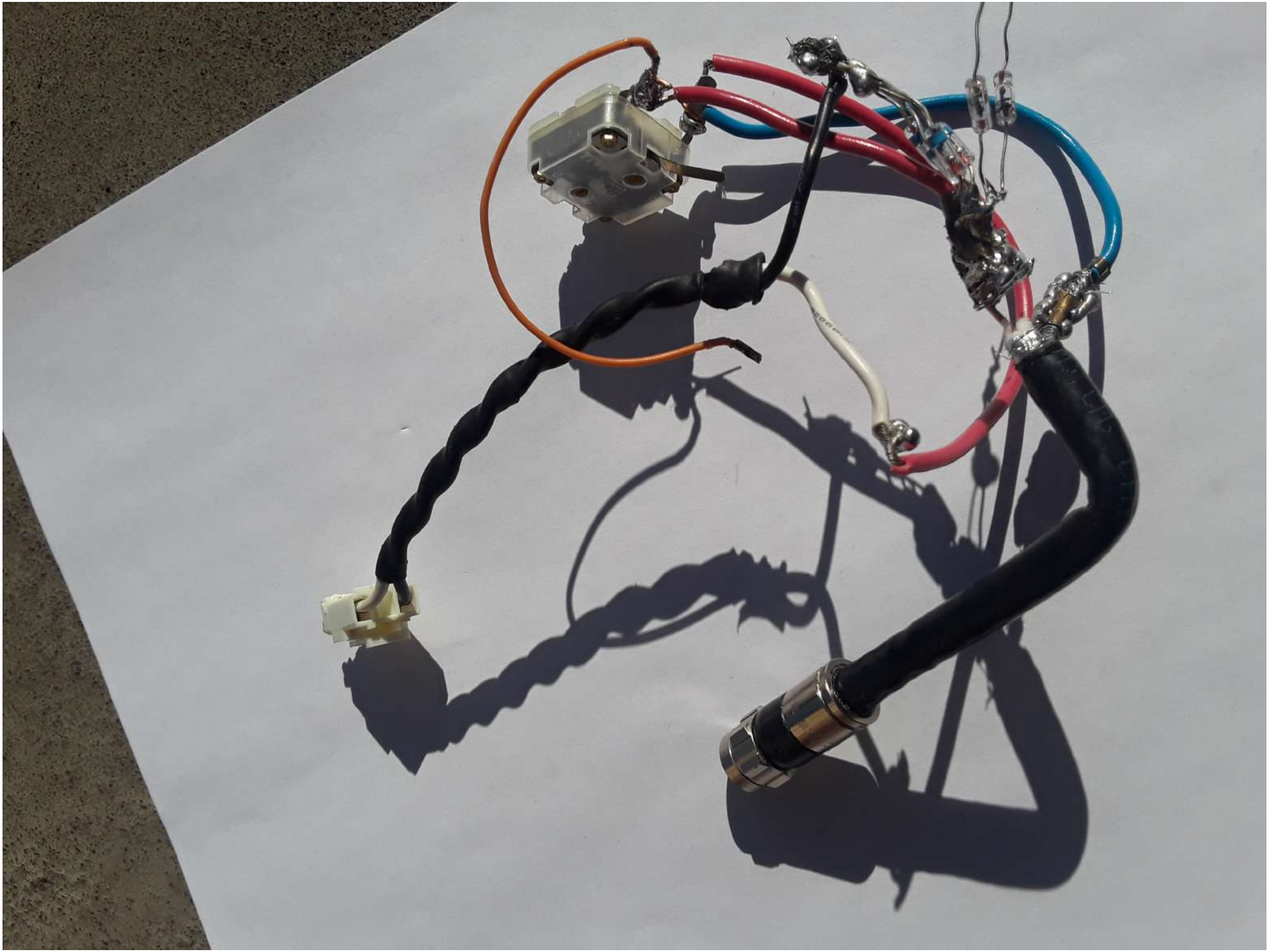


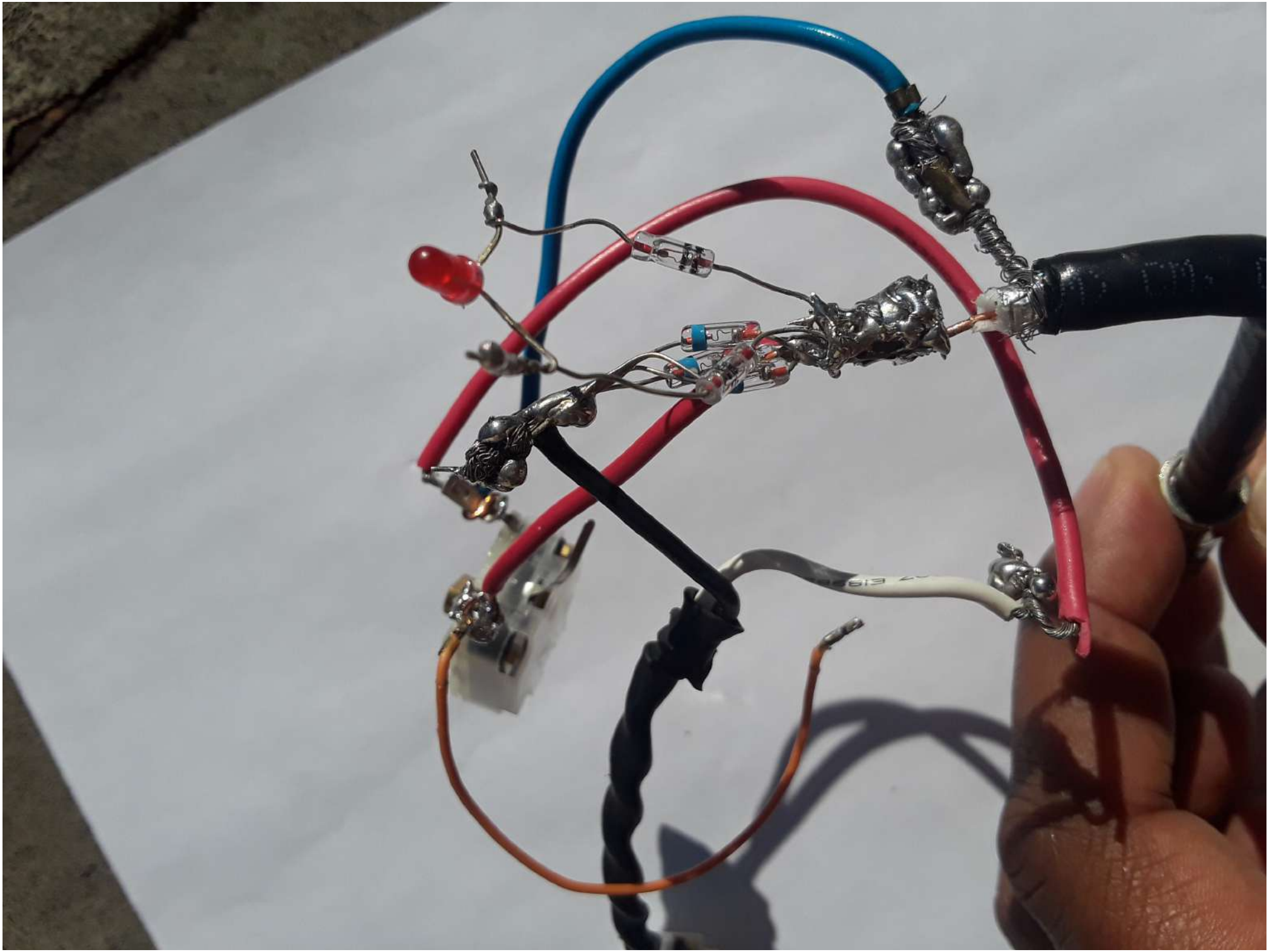













On
Off
AC POWER SUPPLY
12.6
Volts
AC

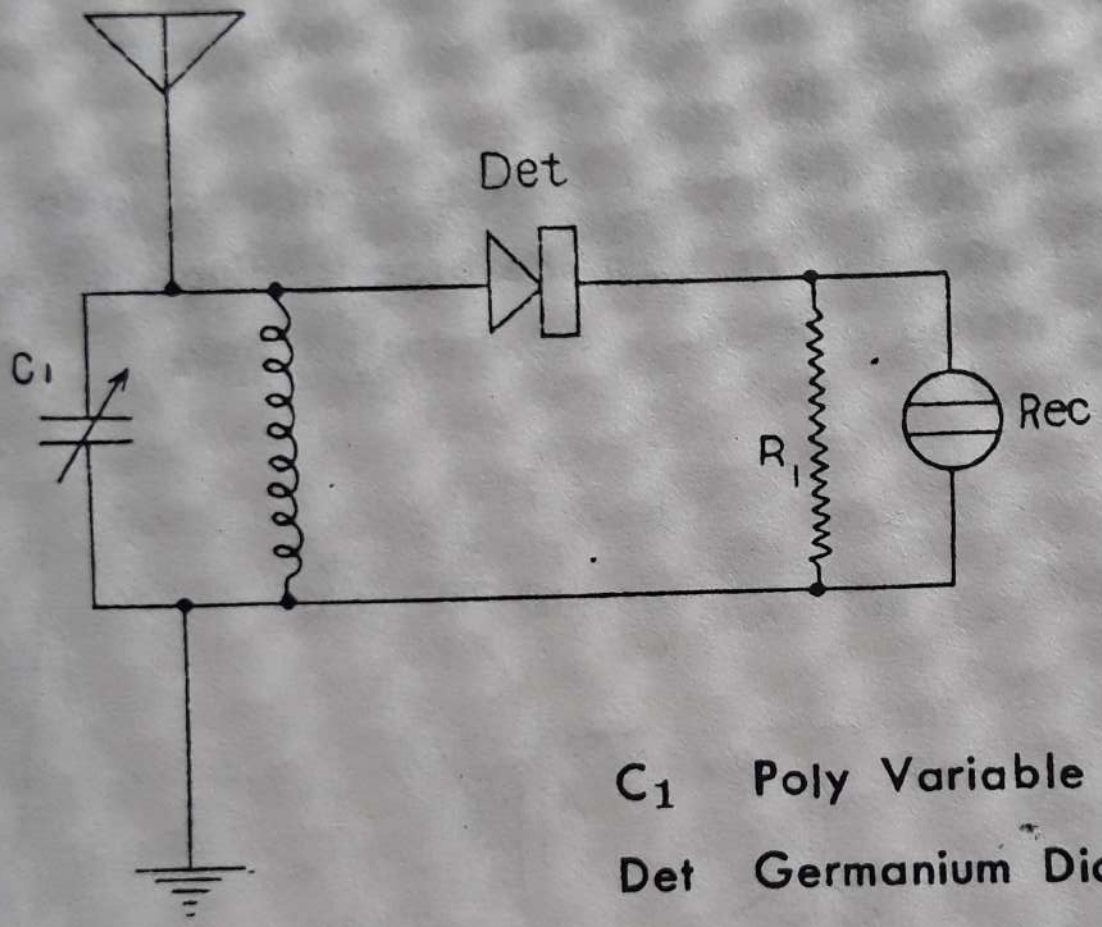



AC


On
Off
AC POWER SUPPLY
12.6
Volts
AC


12 1 2 9 8 7 6
53
Astra Lark

DIAGRAM



C_1	Poly Variable Condenser
Det	Germanium Diode
R_1	500 Kohm ~ 1 Megohm
Rec	Crystal Eearphone

Printe

LARK PT-8
NON BATTERY GERMANIUM RADIO

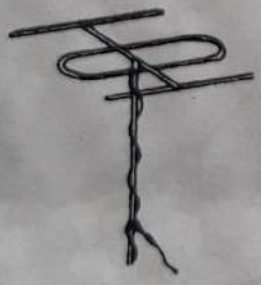
This radio is operated by a germanium diode and has a high "Q" tuner that provides a much clearer reception than that of the old type crystal sets.

FEATURES :

1. LARK PT-8 Features a germanium diode which eliminates having to replace a dry battery.
2. The LARK PT-8 should last for age provided it is not dropped or ill-treated in any way.
3. The LARK PT-8 is ideal on picnic, the beach, the home or even at the office to heur your favorite program without disturbing others.

NOTE :

Since radio waves are weak in concrete buildings, install a simple antenna on the roof or attatch the alligator clip to T.V. antenna.







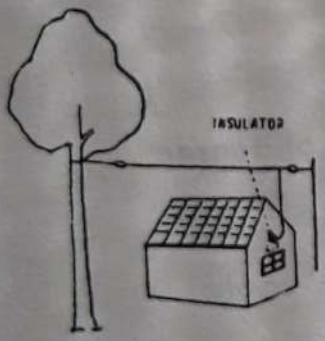


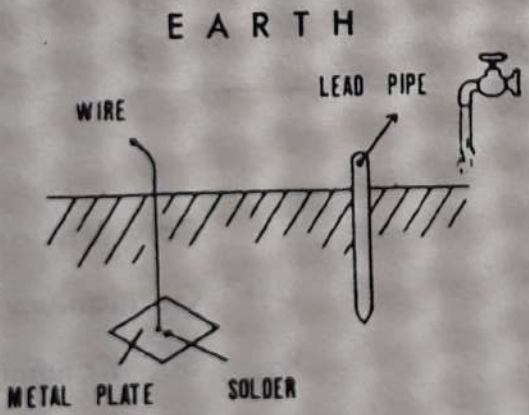
TRUCTIONS :

Use the wire with plug and alligator clip. Place the plug into the antenna Jack and attatch the clip to end of the following;

For Indoors :

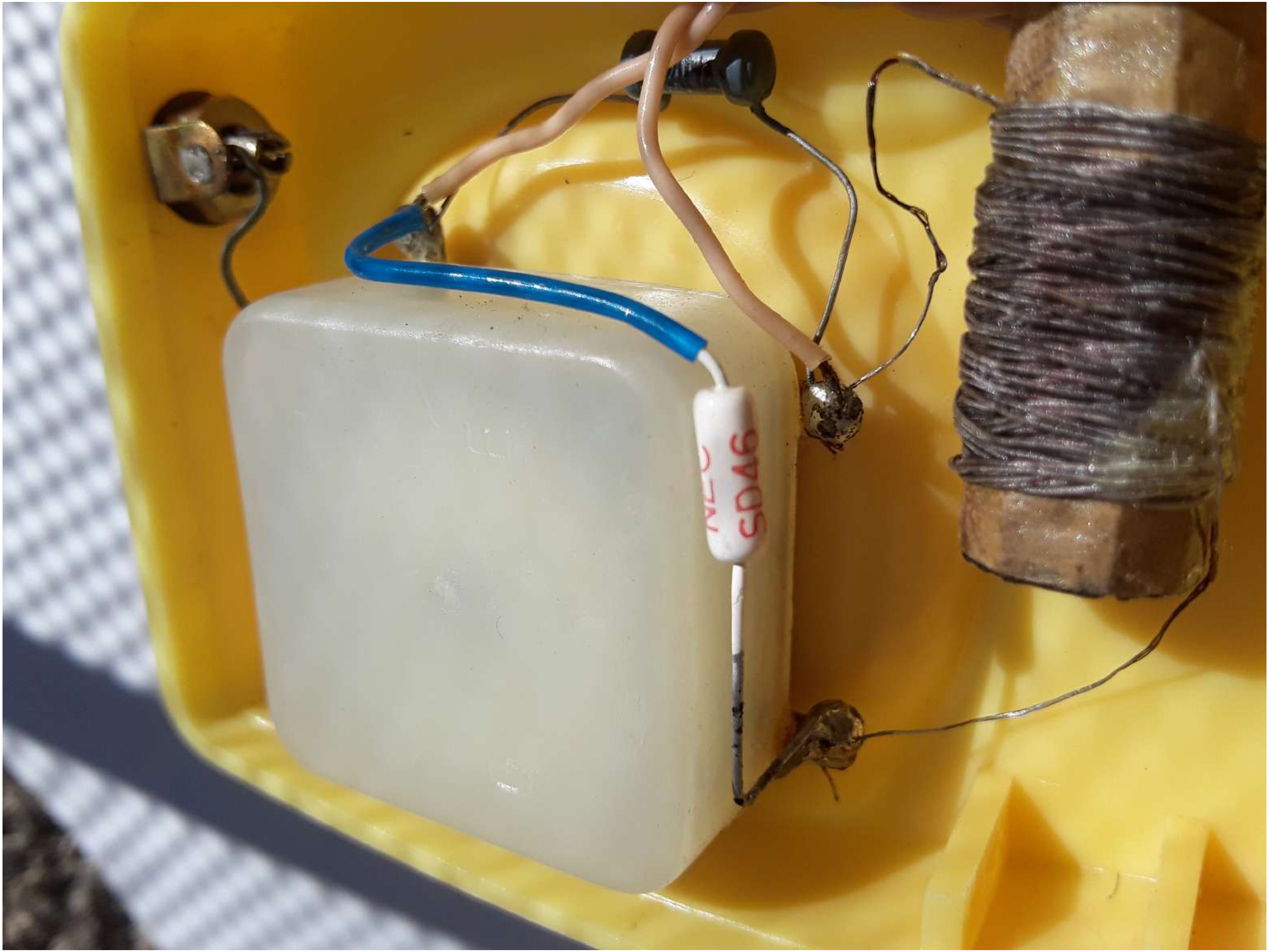
1. The metal finger guard on a telephone.
2. T.V. or radio antenna.
3. The metal framework of a connected lamp.
4. If you are far from the broadcasting station use the regular antenna and earth as illustrated below.

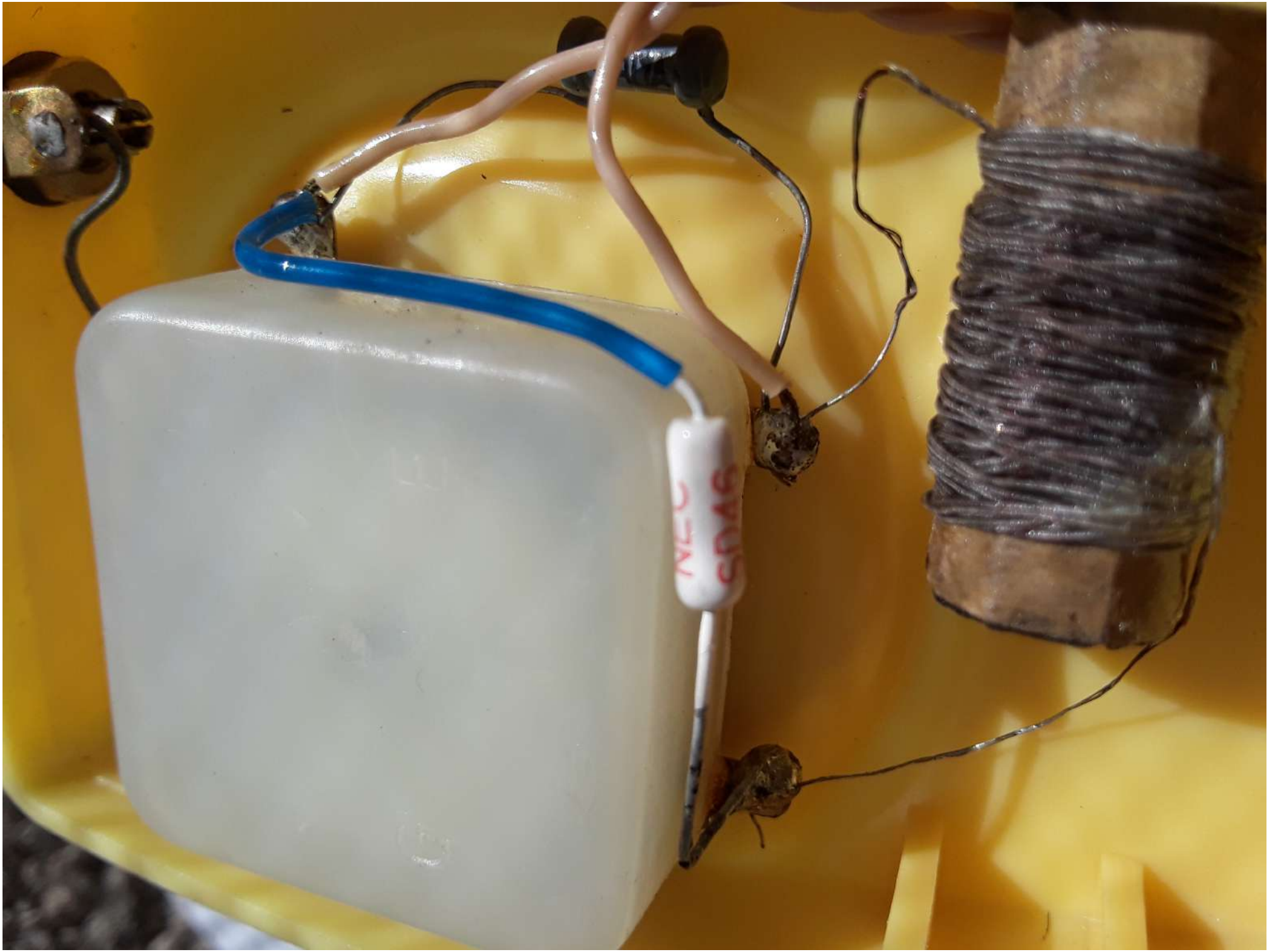




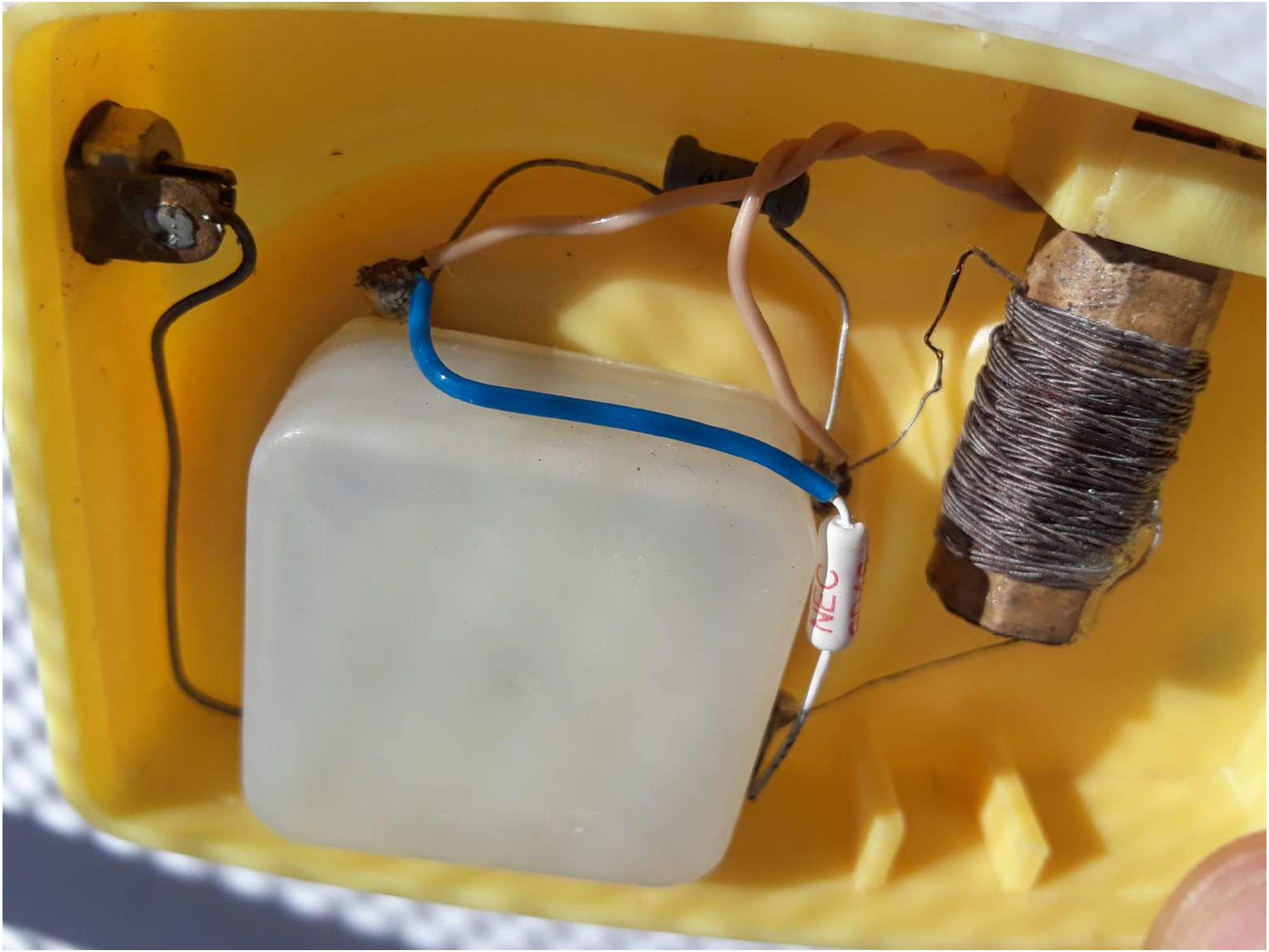


For outdoors : Use the rod antenna, screw it into the antenna jack and pull it out to its full length.

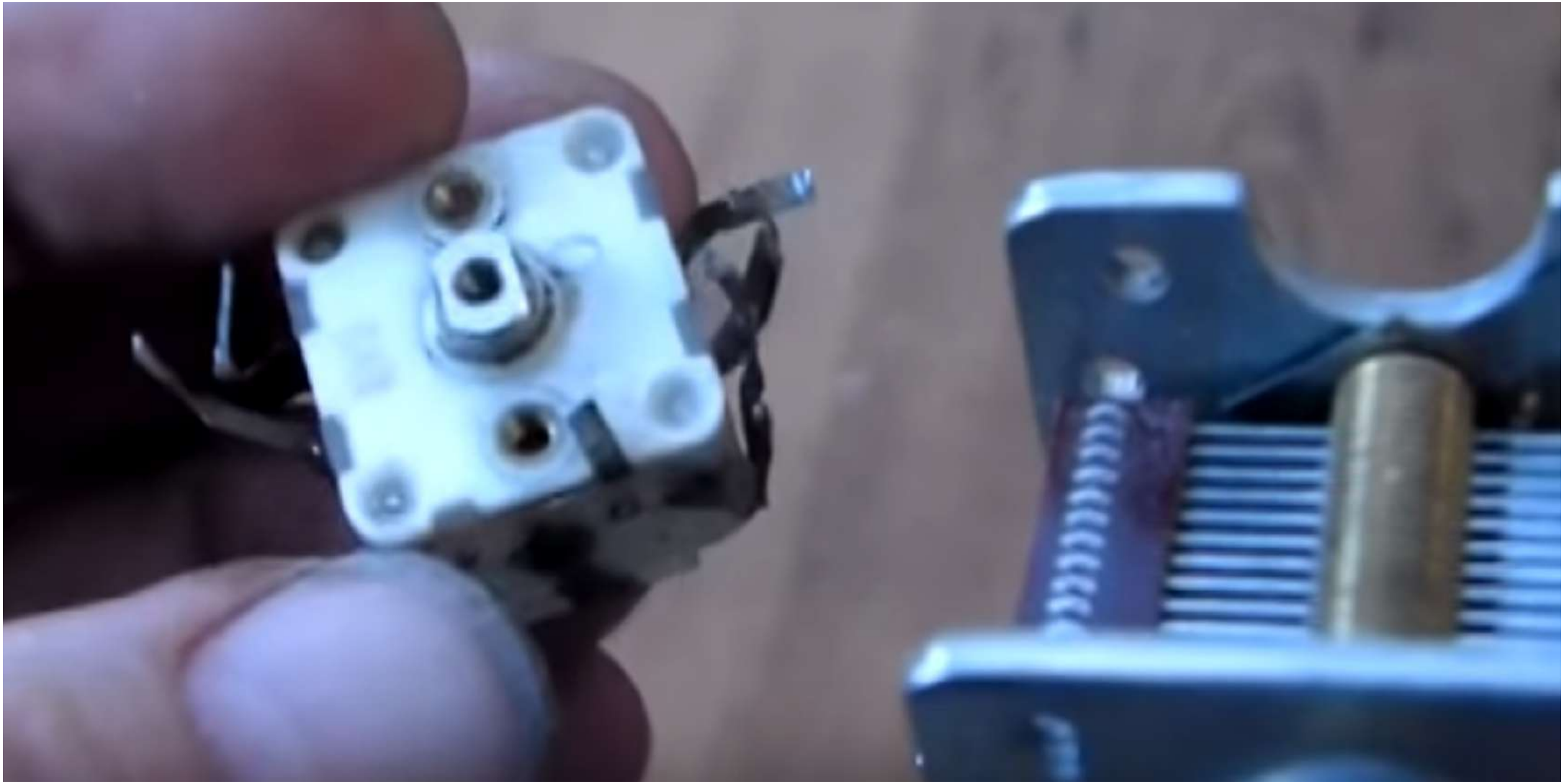

SD46




NEC
SD46


NEC





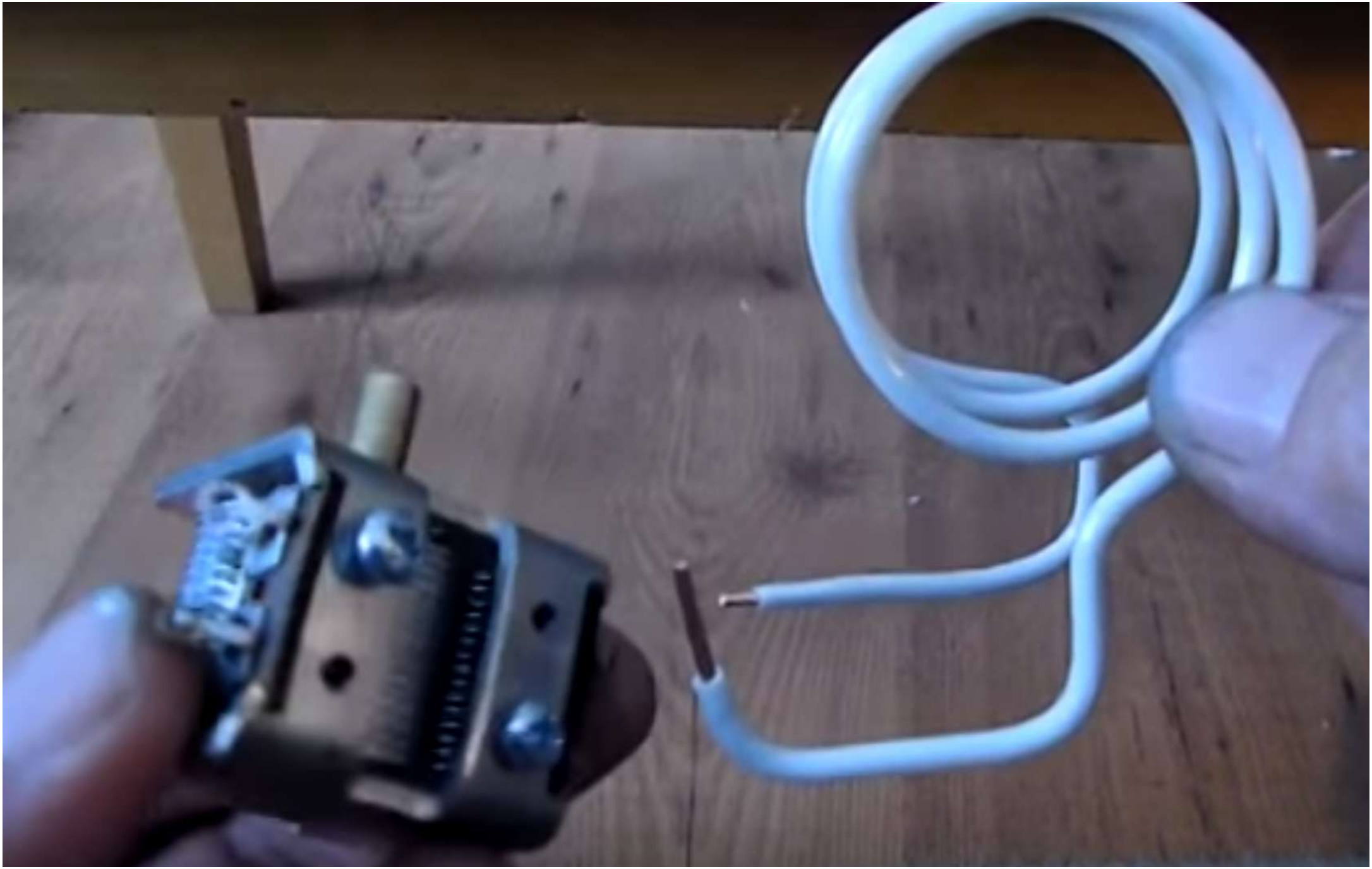













8:54 / 13:14


4:30 / 13:14

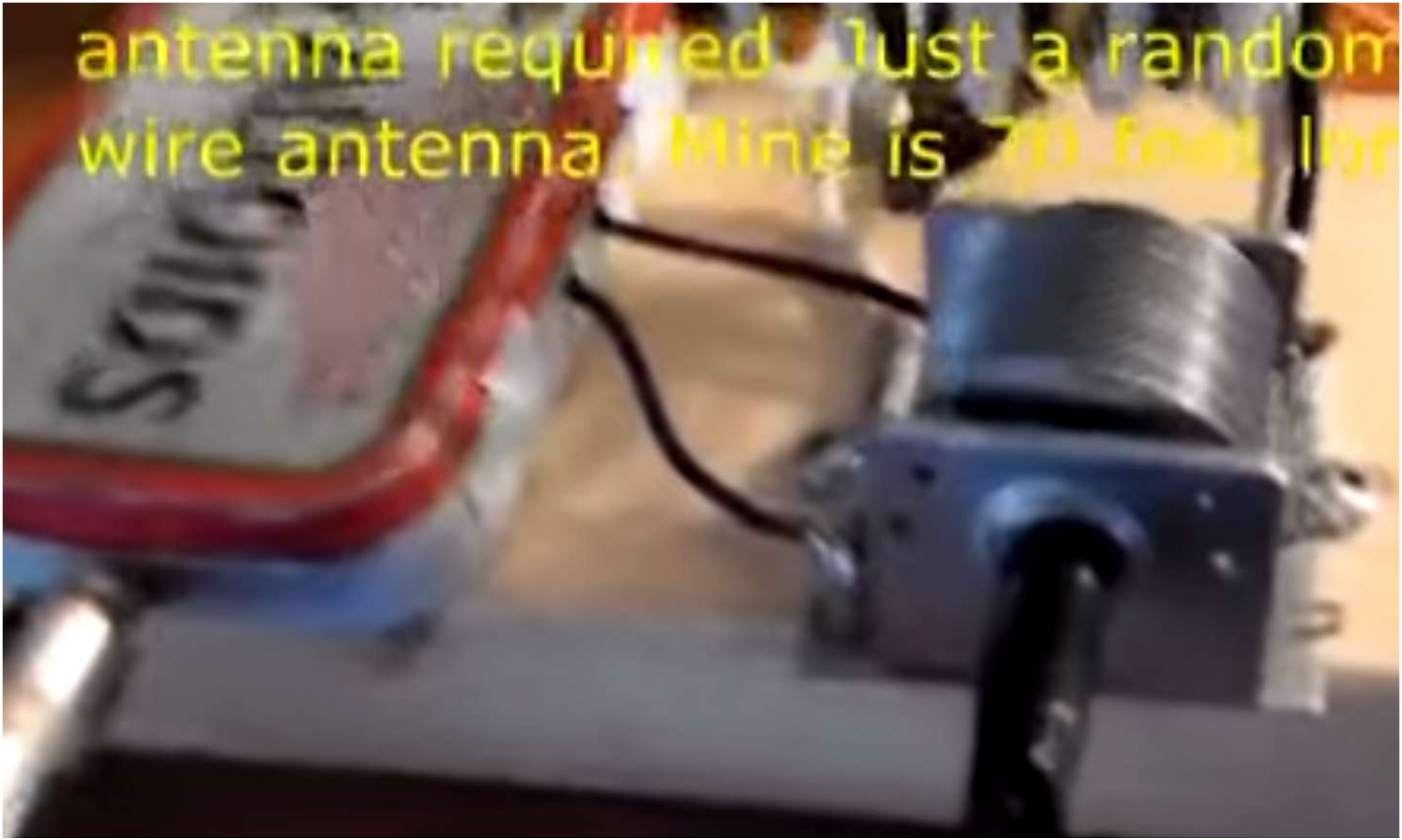

7:37 / 13:14

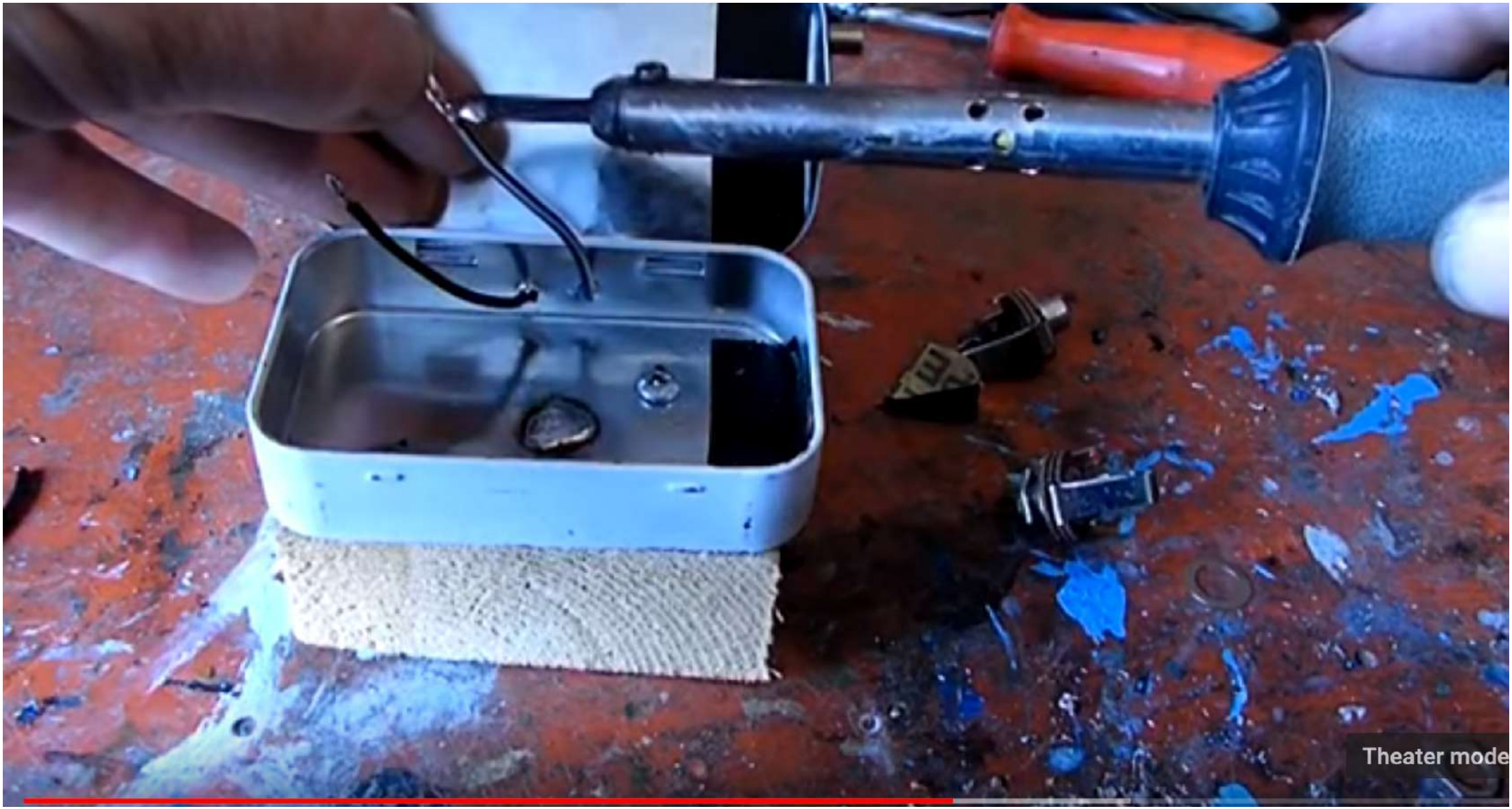



I have heard stations from Alaska, Hawaii,
California, New York, Chicago and Florida.
ALTOIDS
12:03 / 13:14

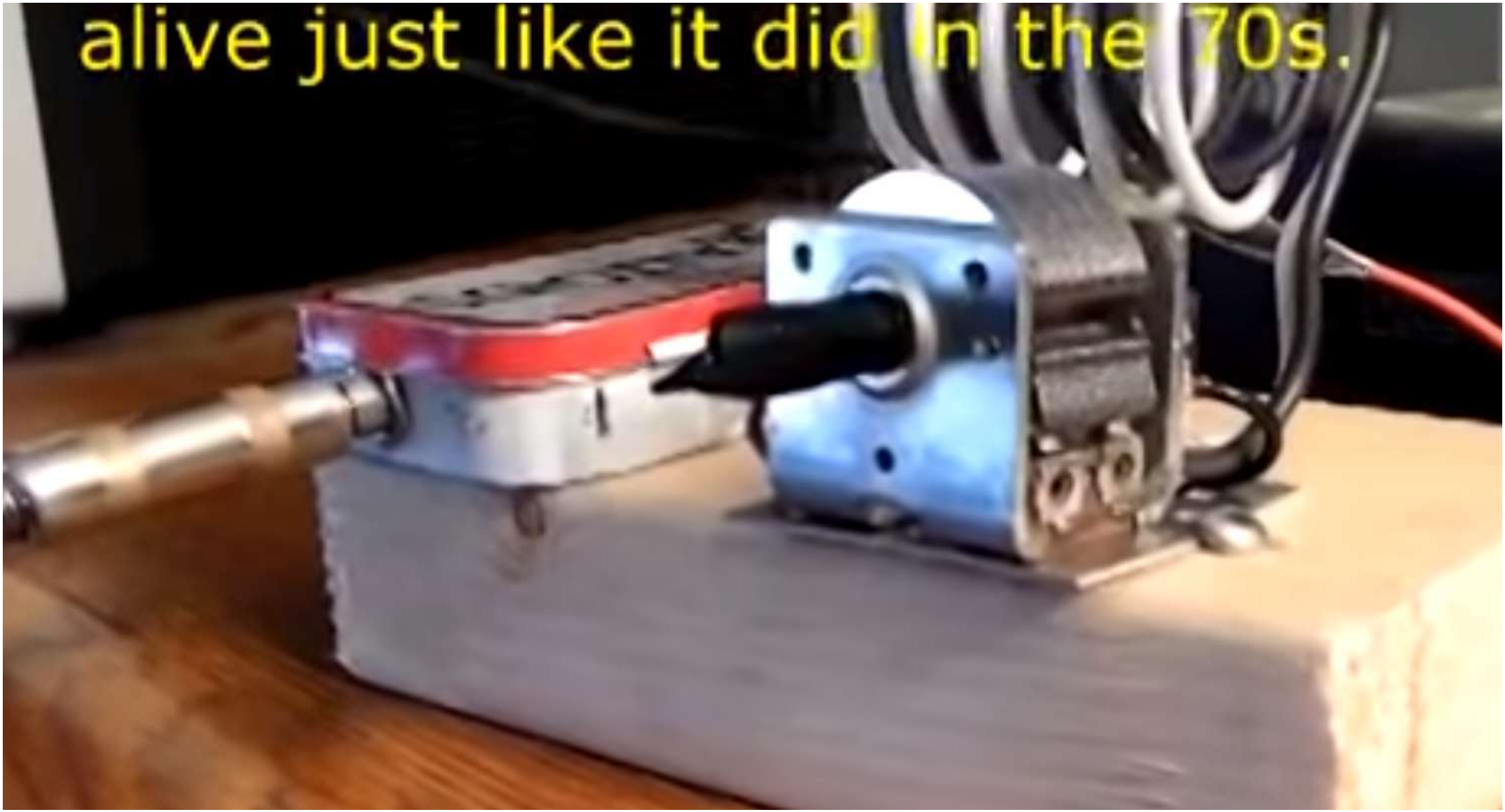

6:26 / 13:14


10:58 / 13:14


antenna required. Just a random
wire antenna. Mine is


Theater mode


12:01 / 13:14

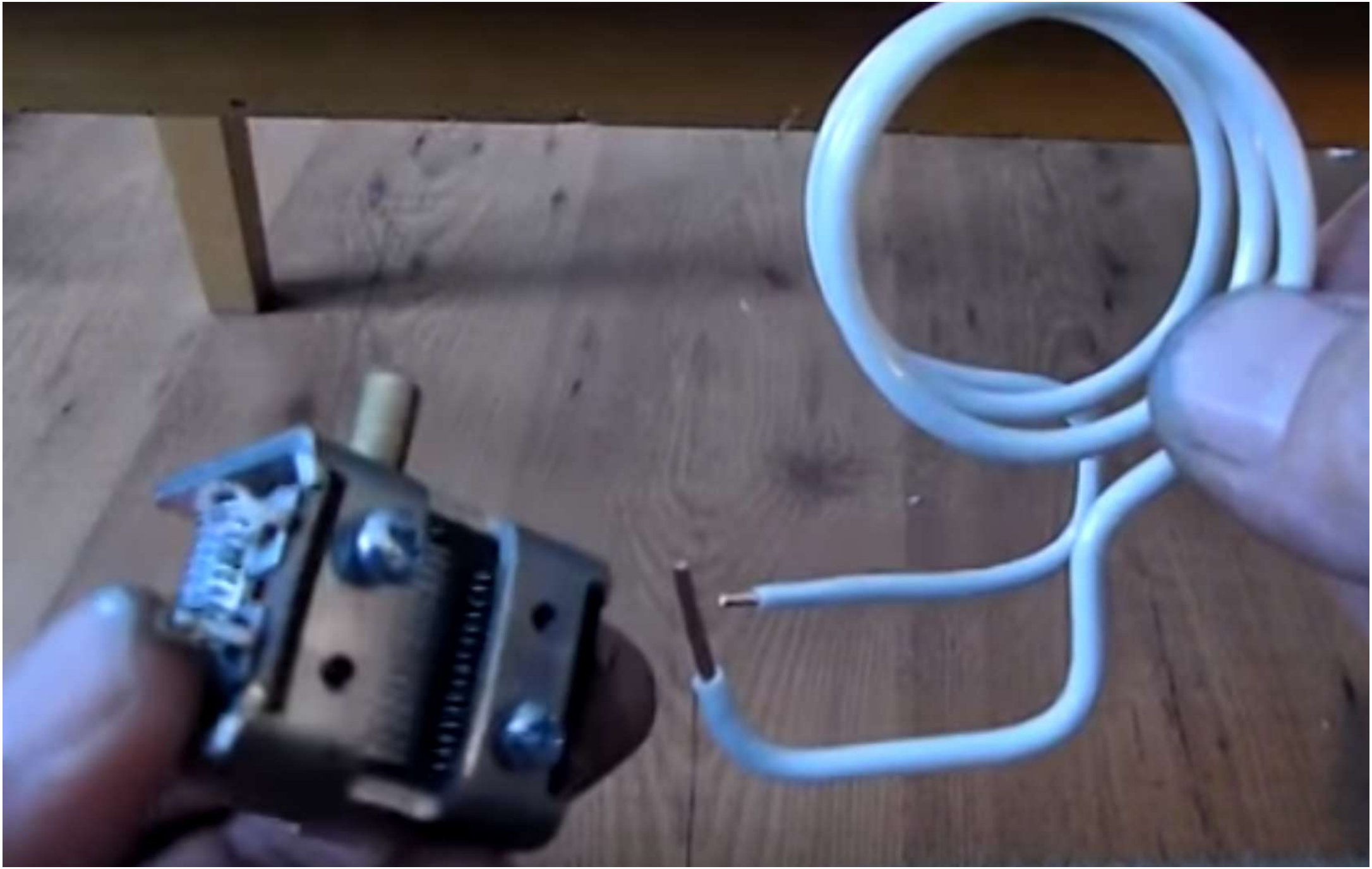

alive just like it did in the 70s.


It could overload or fry yor amp


antenna required. Just a random le
wire antenna. Mine is 70 feet long.
11:56 / 13:14


8:40 / 13:14






8:54 / 13:14

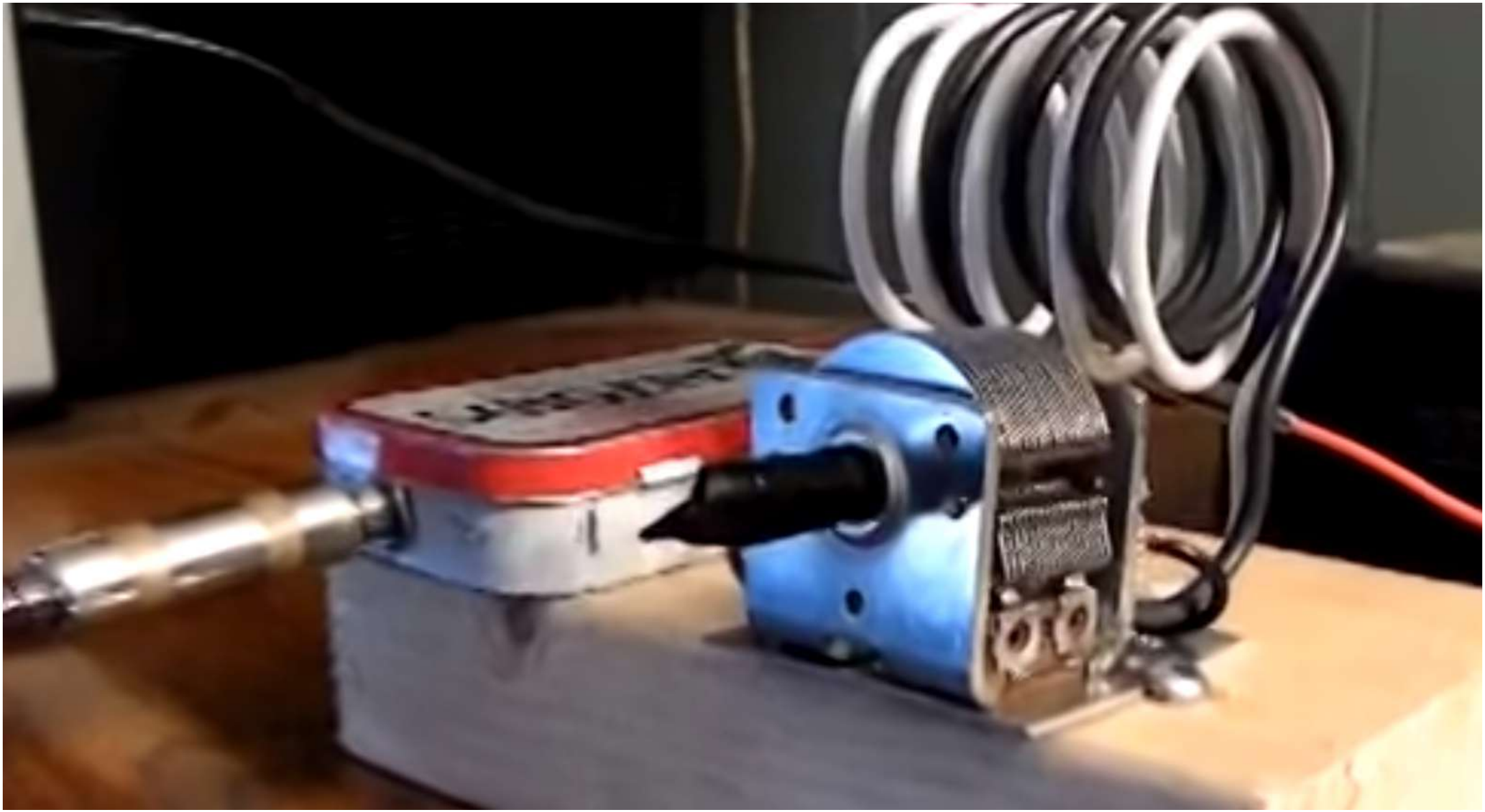



I have heard stations from Alaska, Hawaii,
California, New York, Chicago and Florida.
ALTOIDS
12:03 / 13:14


6:26 / 13:14


4:11 / 13:14
CC



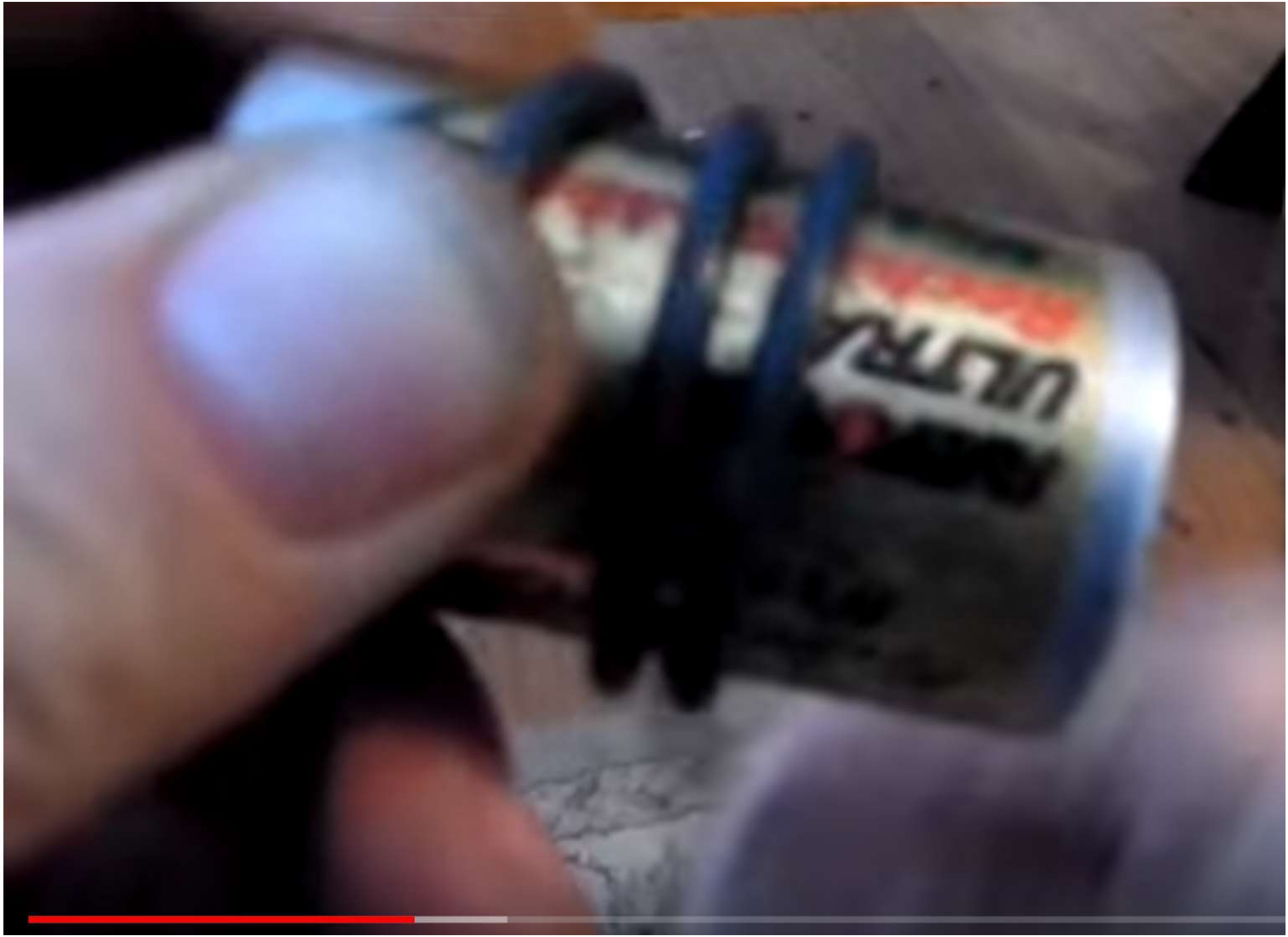









Actualally It turned to be 5 wire turns on the tuning coil.





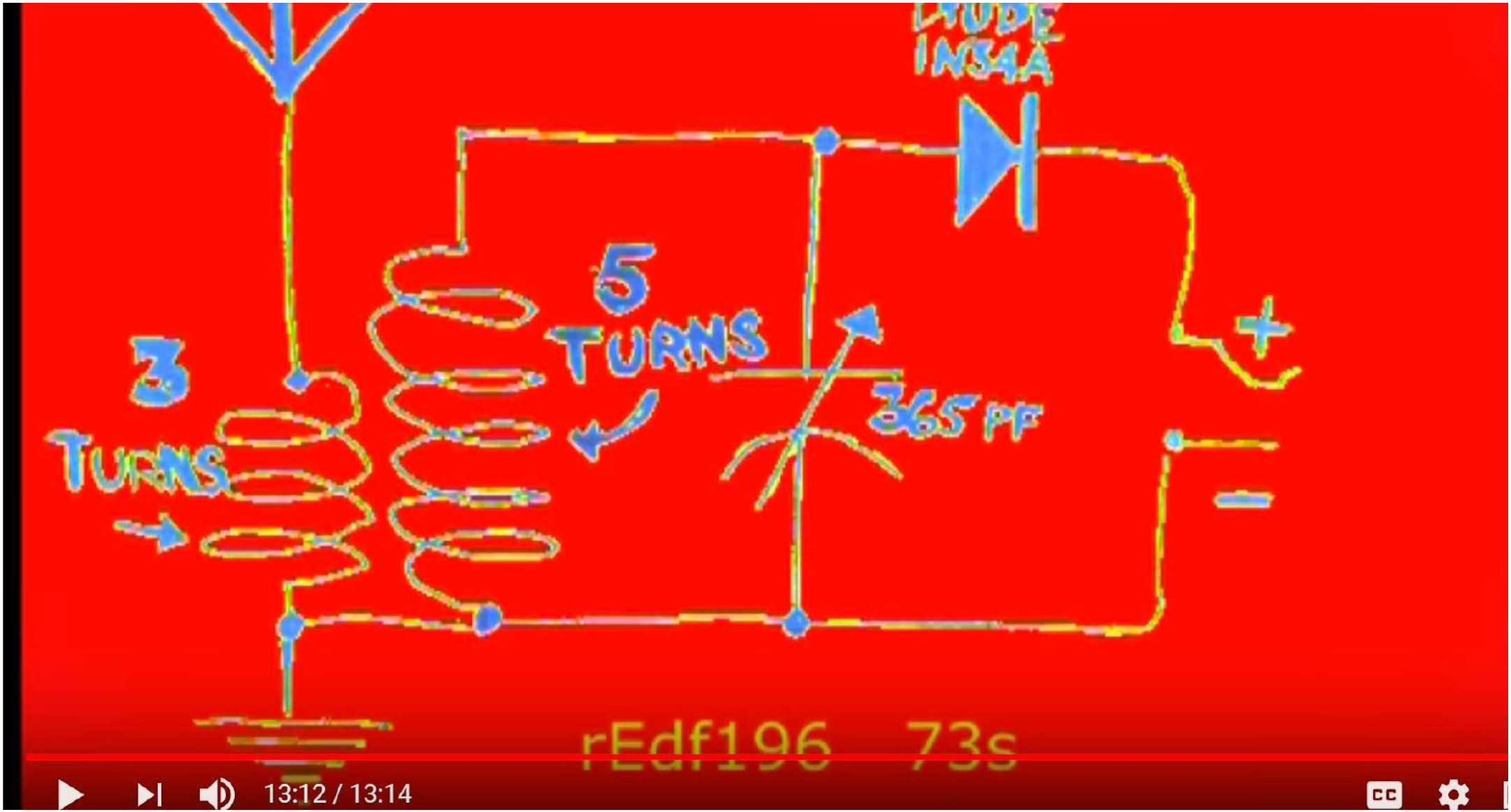

4:11 / 13:14
CC






4:49 / 13:14



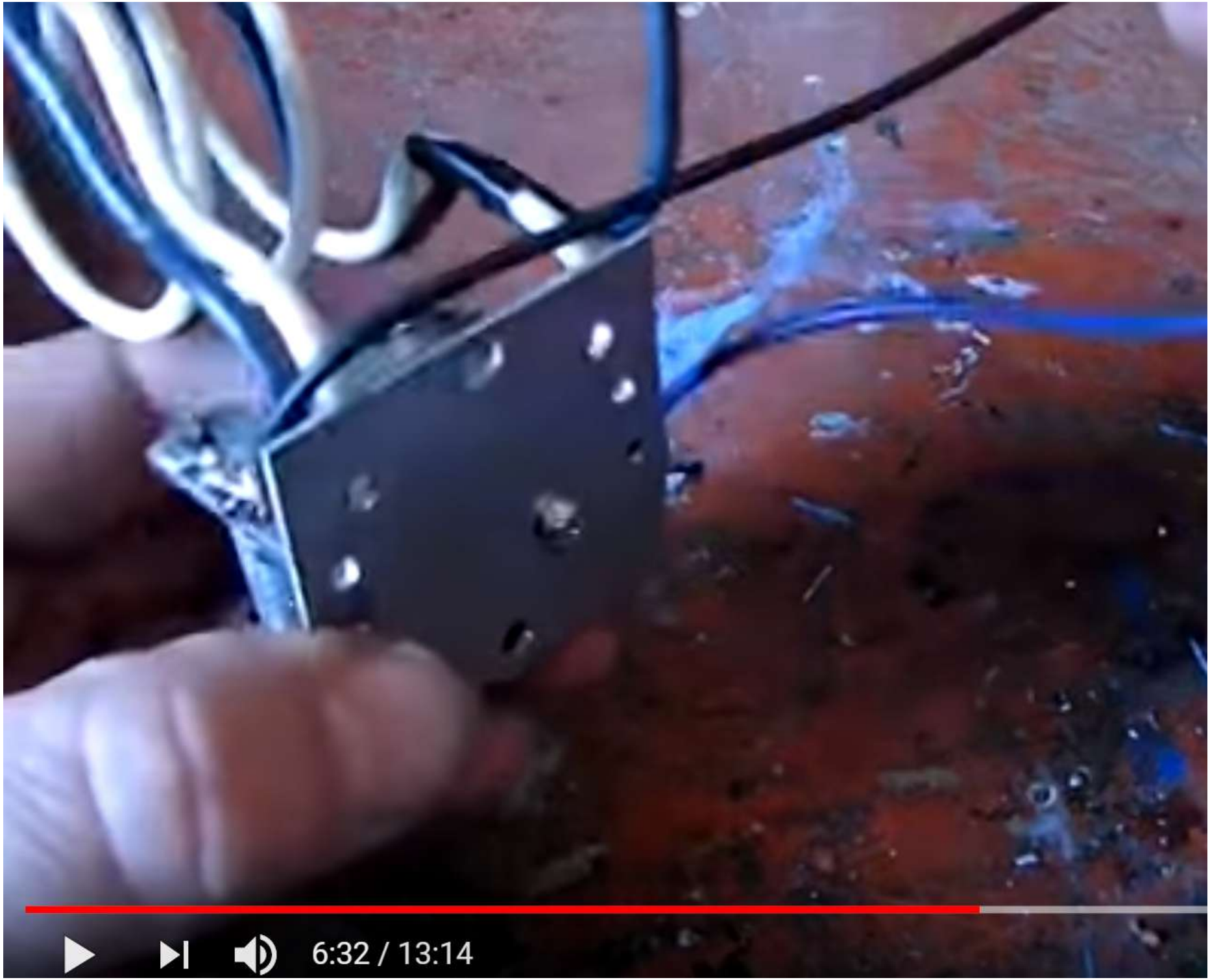

IN34A
5
TURNS
3
TURNS
365 PF
+
-
rEdf196 73s
13:12 / 13:14


the strongest for
EXTREME POWER
11:23 / 13:14


10:20 / 13:14

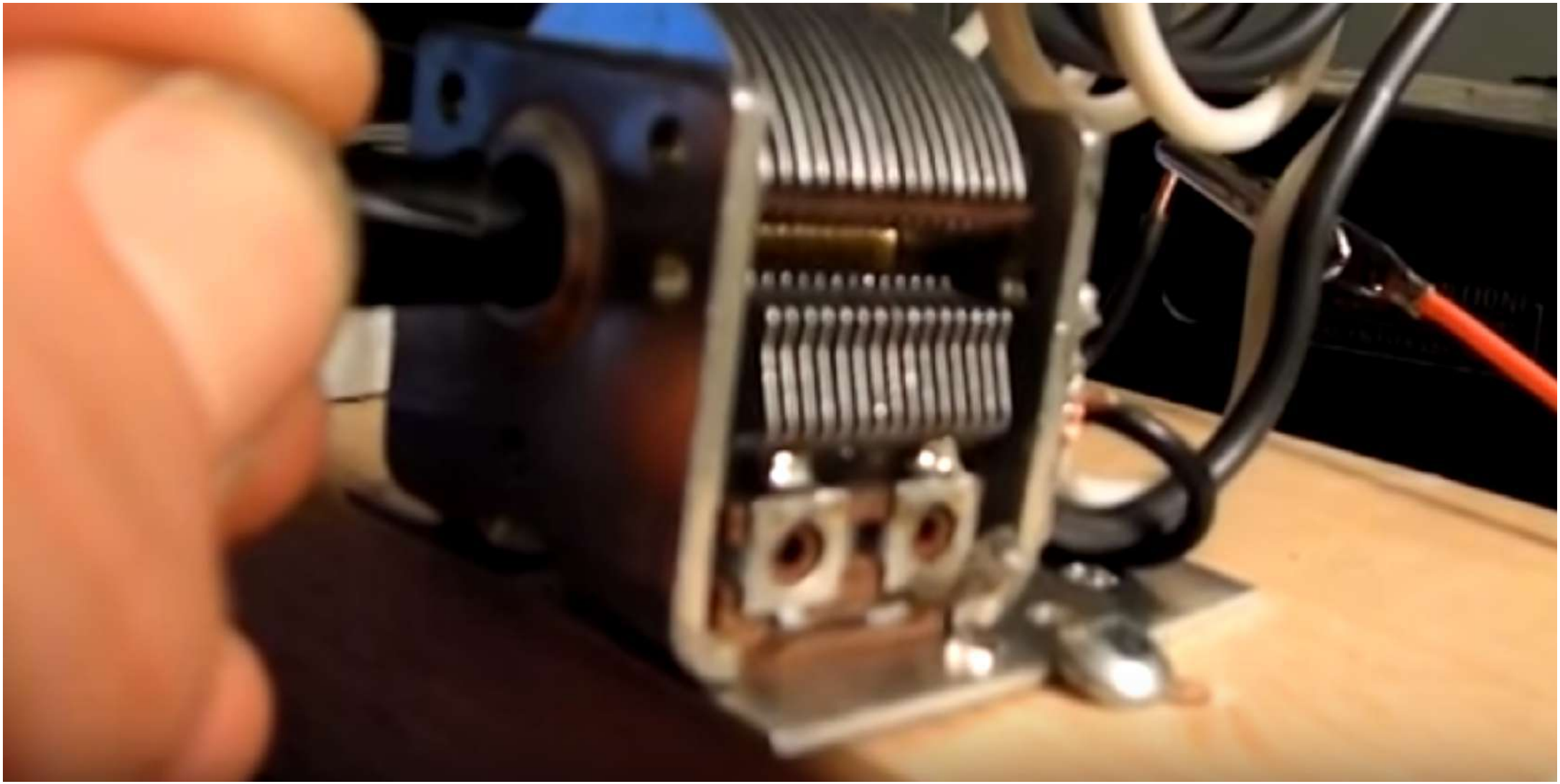



8:35 / 13:14


6:32 / 13:14


7:01 / 13:14


8:56 / 13:14




ALTOIDS
8:21


11:17 / 12:14


8:42 / 13:14

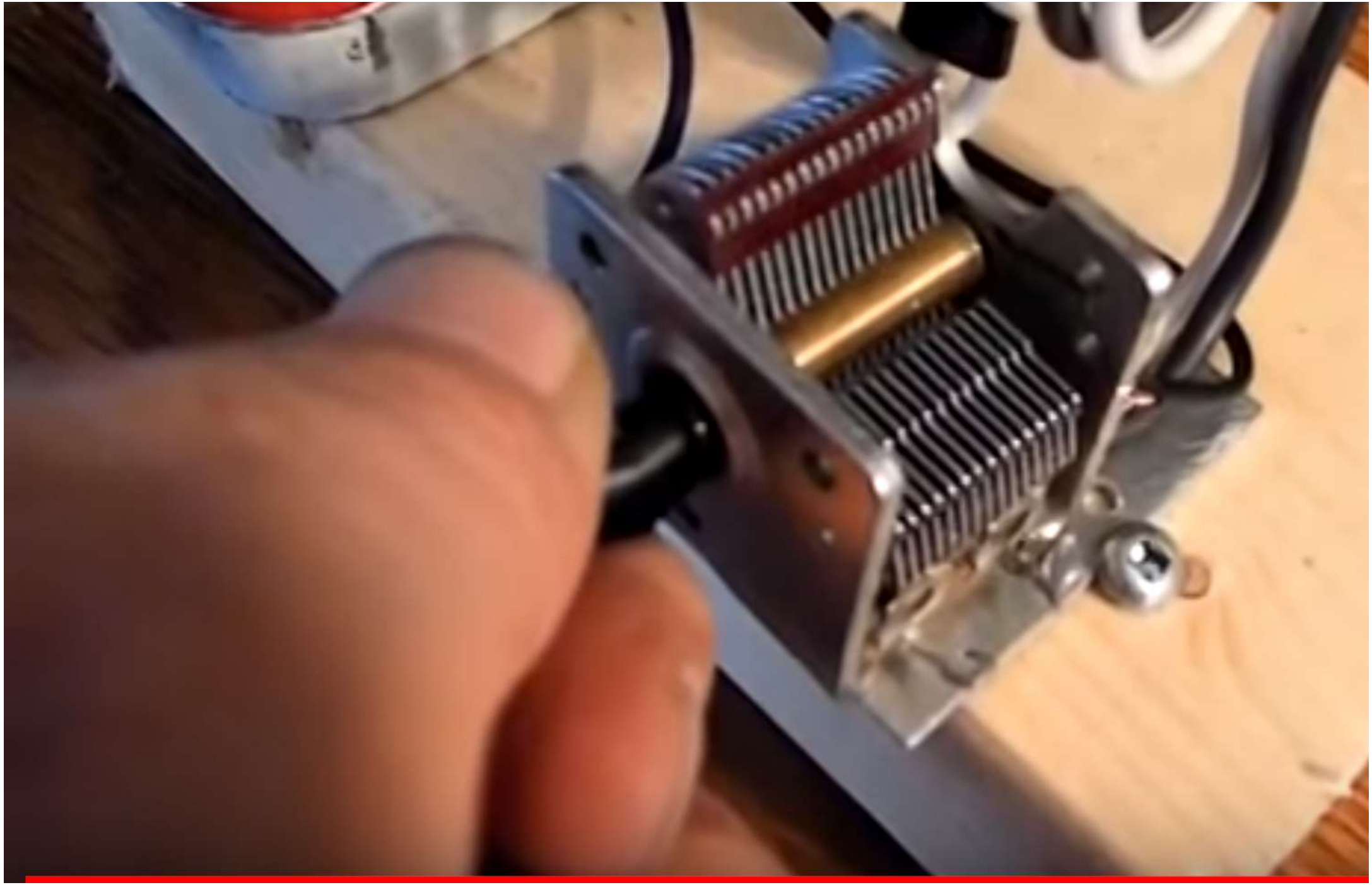

7:39 / 13:14


KEEP TIP
Weller
7:24 / 13:14


8:10 / 13:14

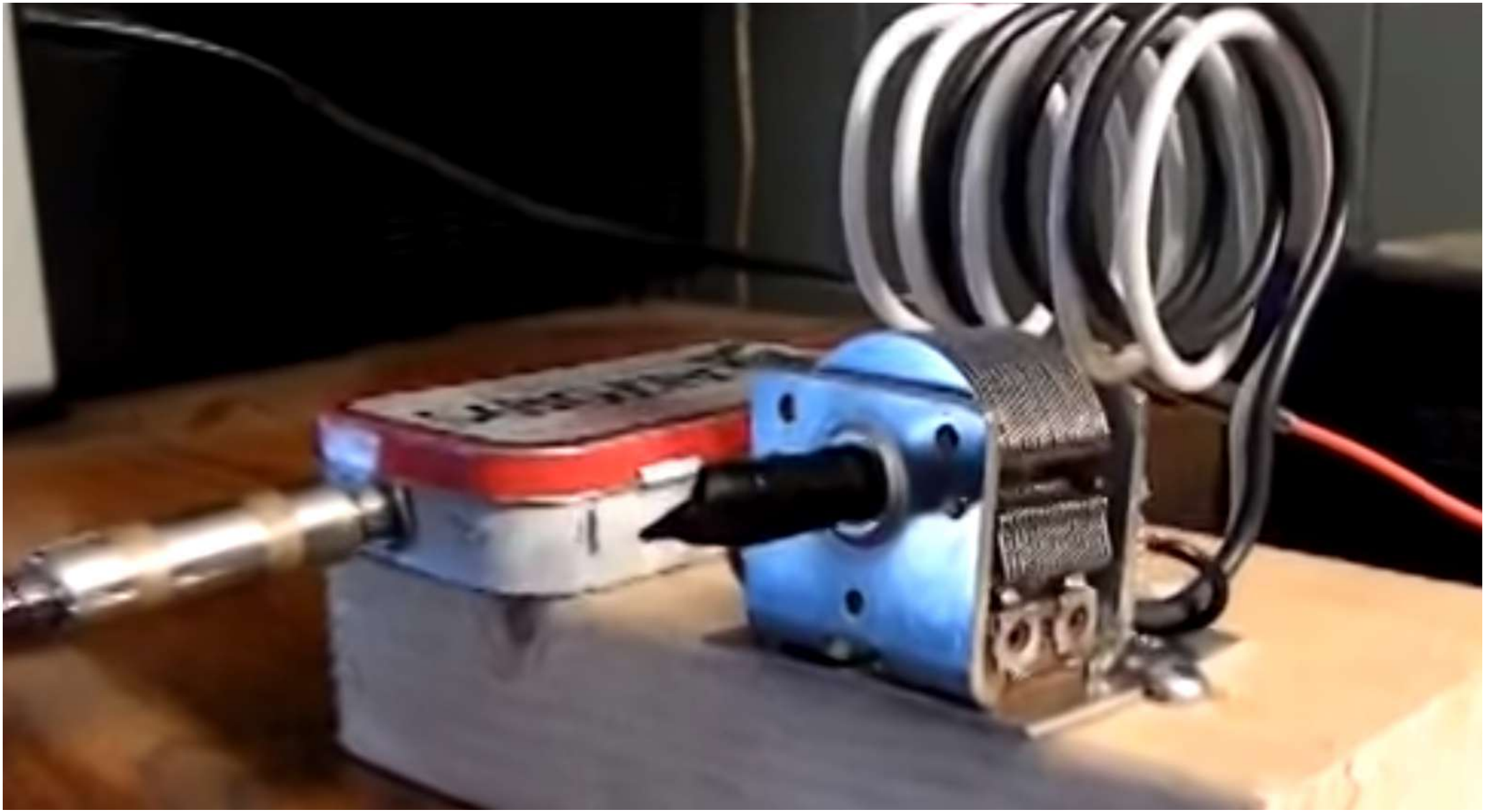



10:35 / 13:14




ALTOIDS
THE ORIGINAL CURIOUSLY STRONG PEPPERMINT

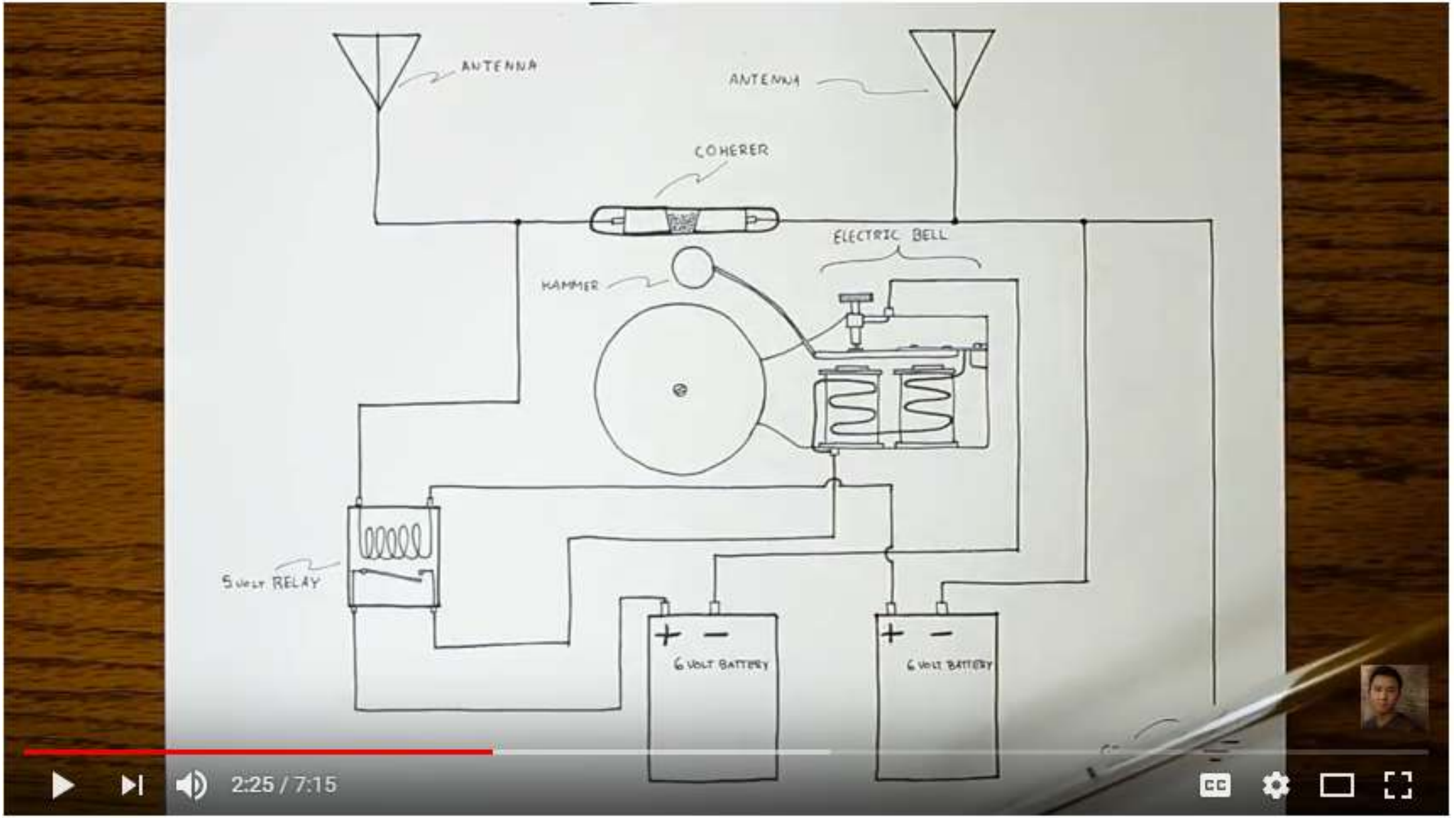

ALTOIDS
9:26 / 13:14



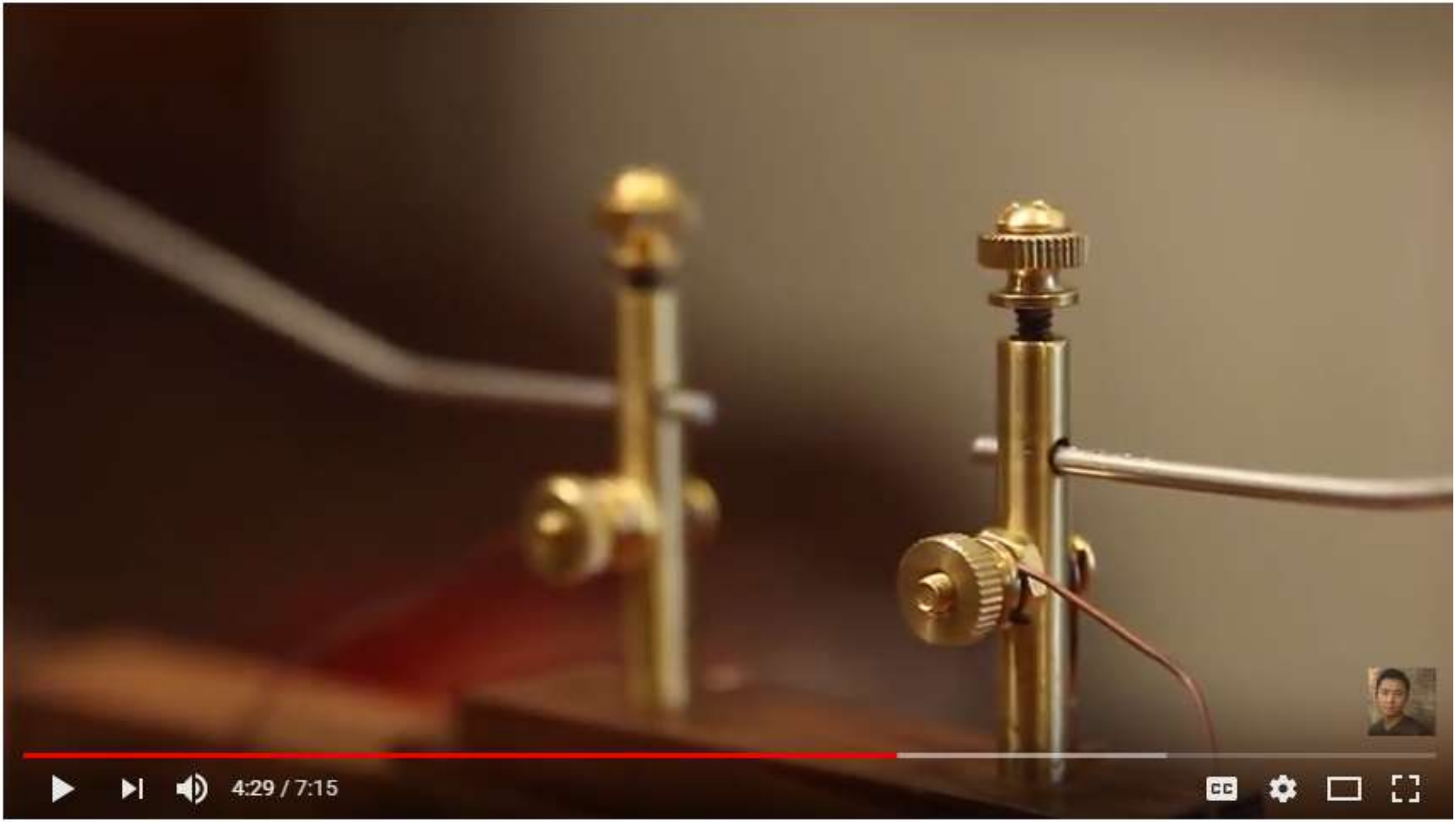


Coherer Detector - Wireless Telegraph


3:32 / 7:15
CC


ANTENNA
ANTENNA
COHERER
ELECTRIC BELL
HAMMER
5 VOLT RELAY
6 VOLT BATTERY
6 VOLT BATTERY
2:25 / 7:15


6:40 / 7:15
CC
HD


4:29 / 7:15
CC


6:12 / 7:15
CC

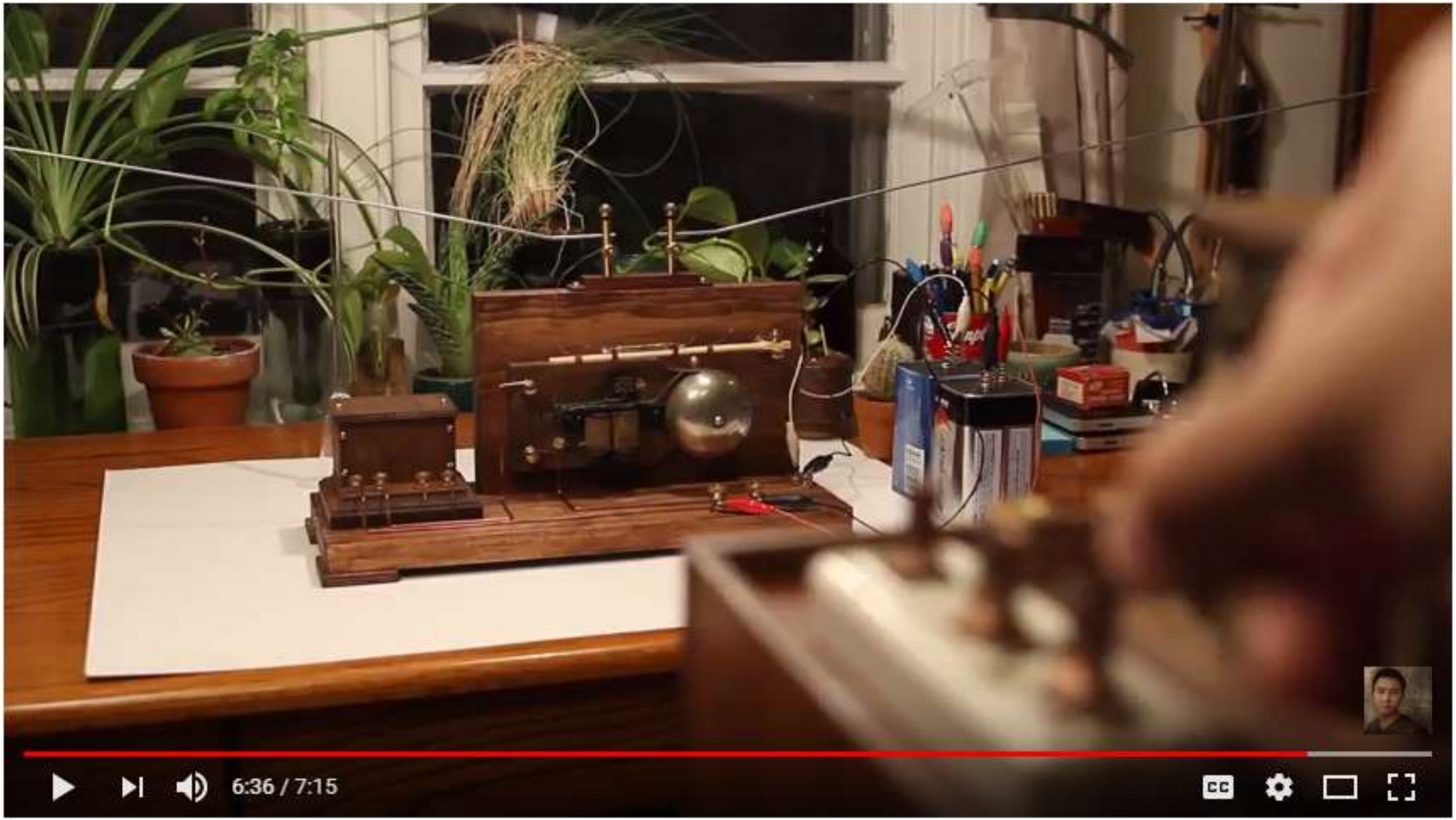

6:18 / 7:15
CC

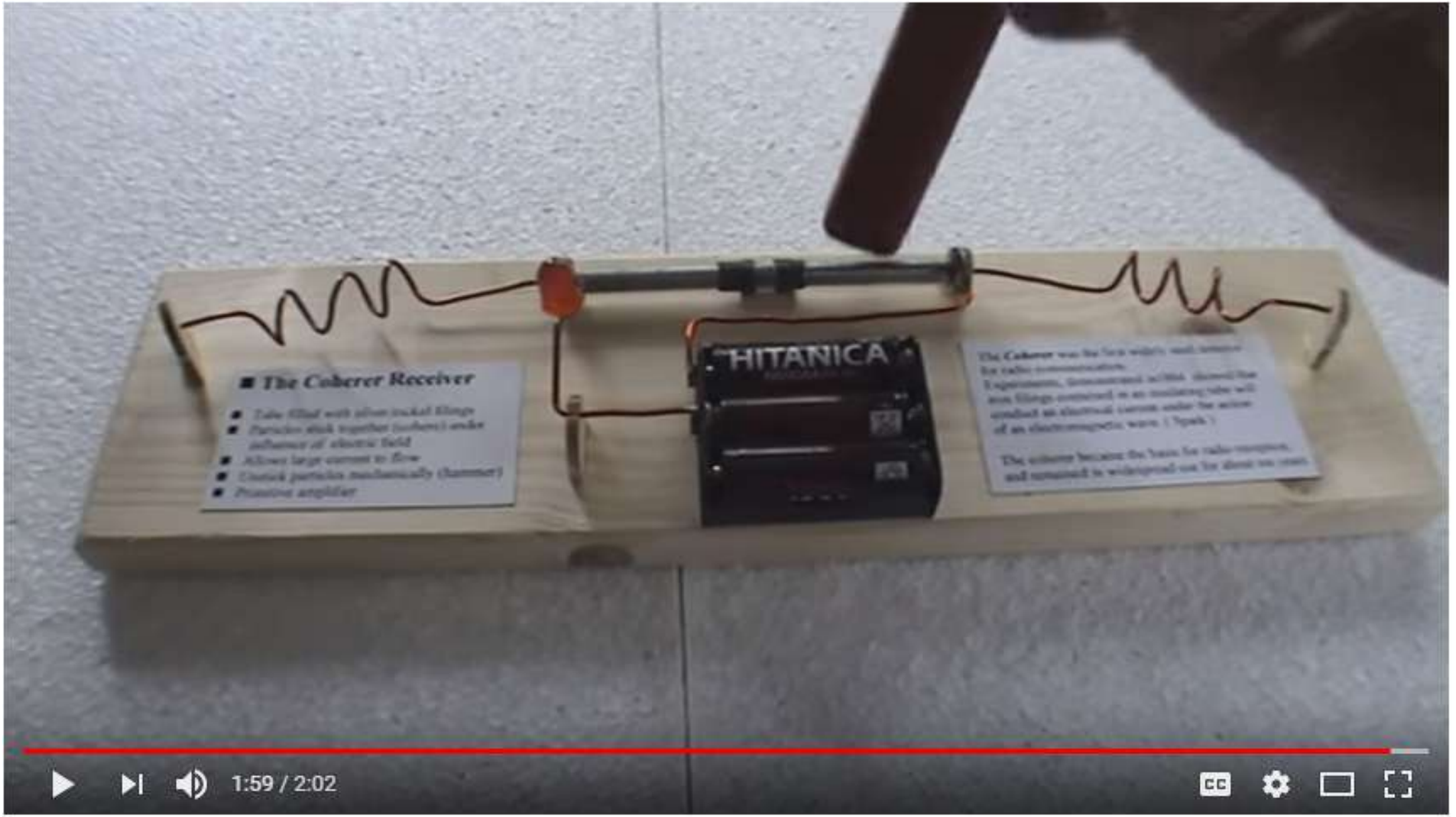

4:20 / 7:15
CC

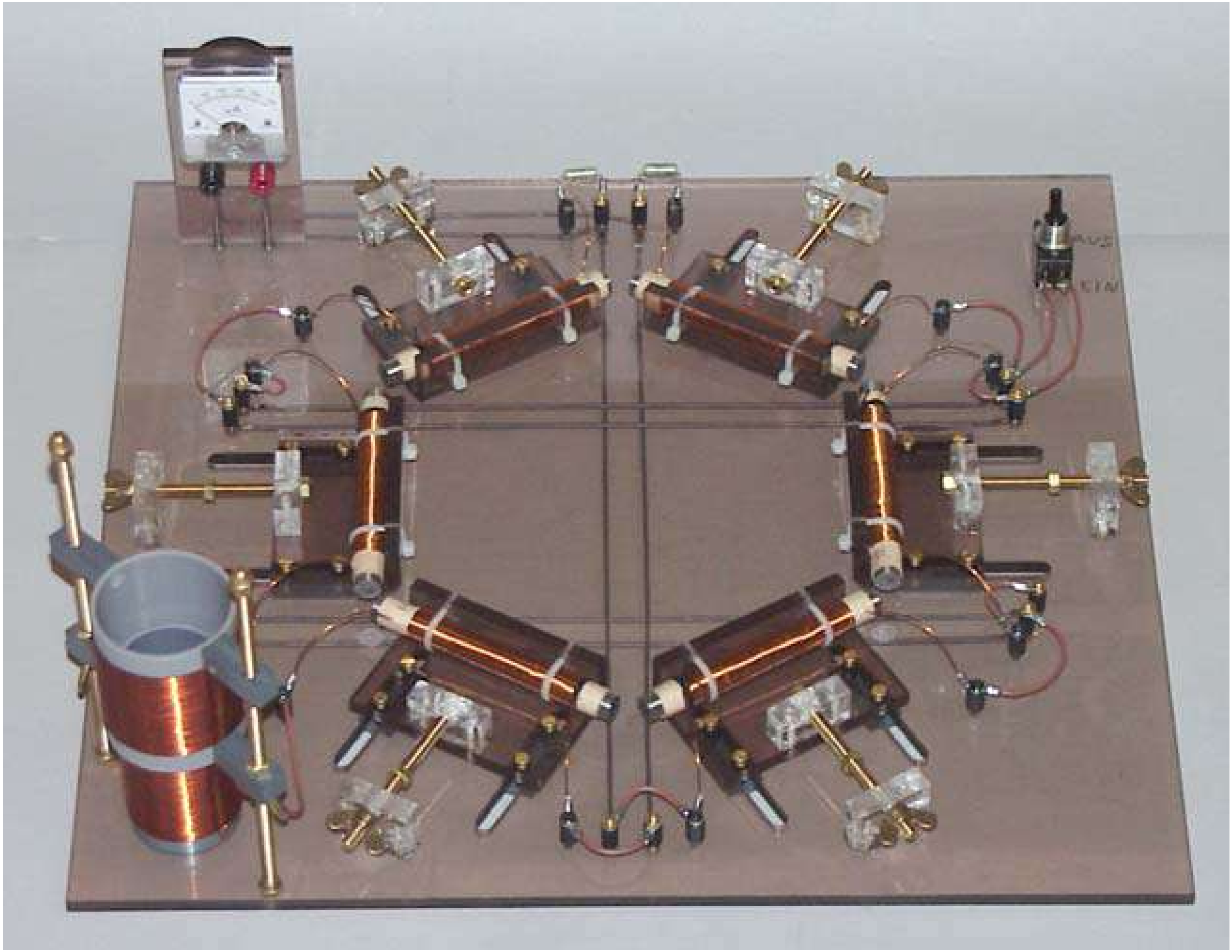

6:05 / 7:15

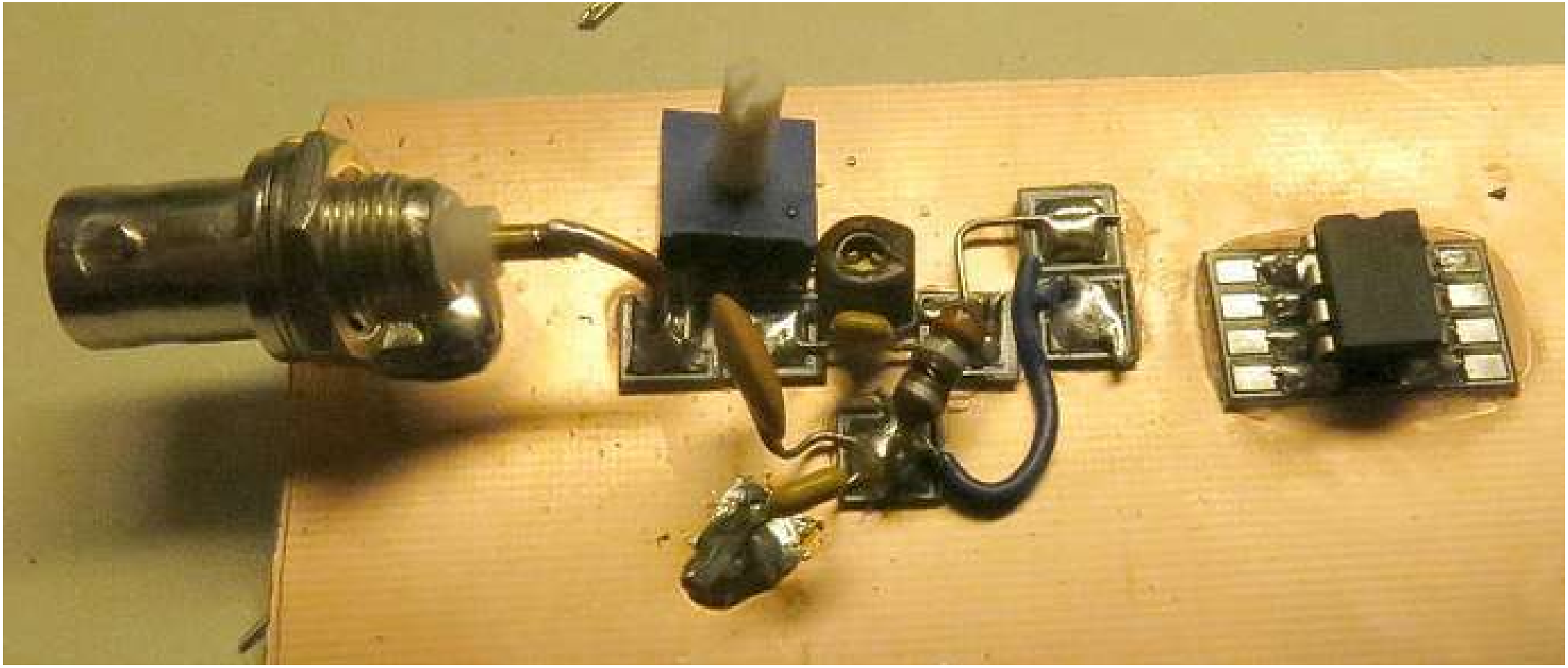

6:06 / 7:15

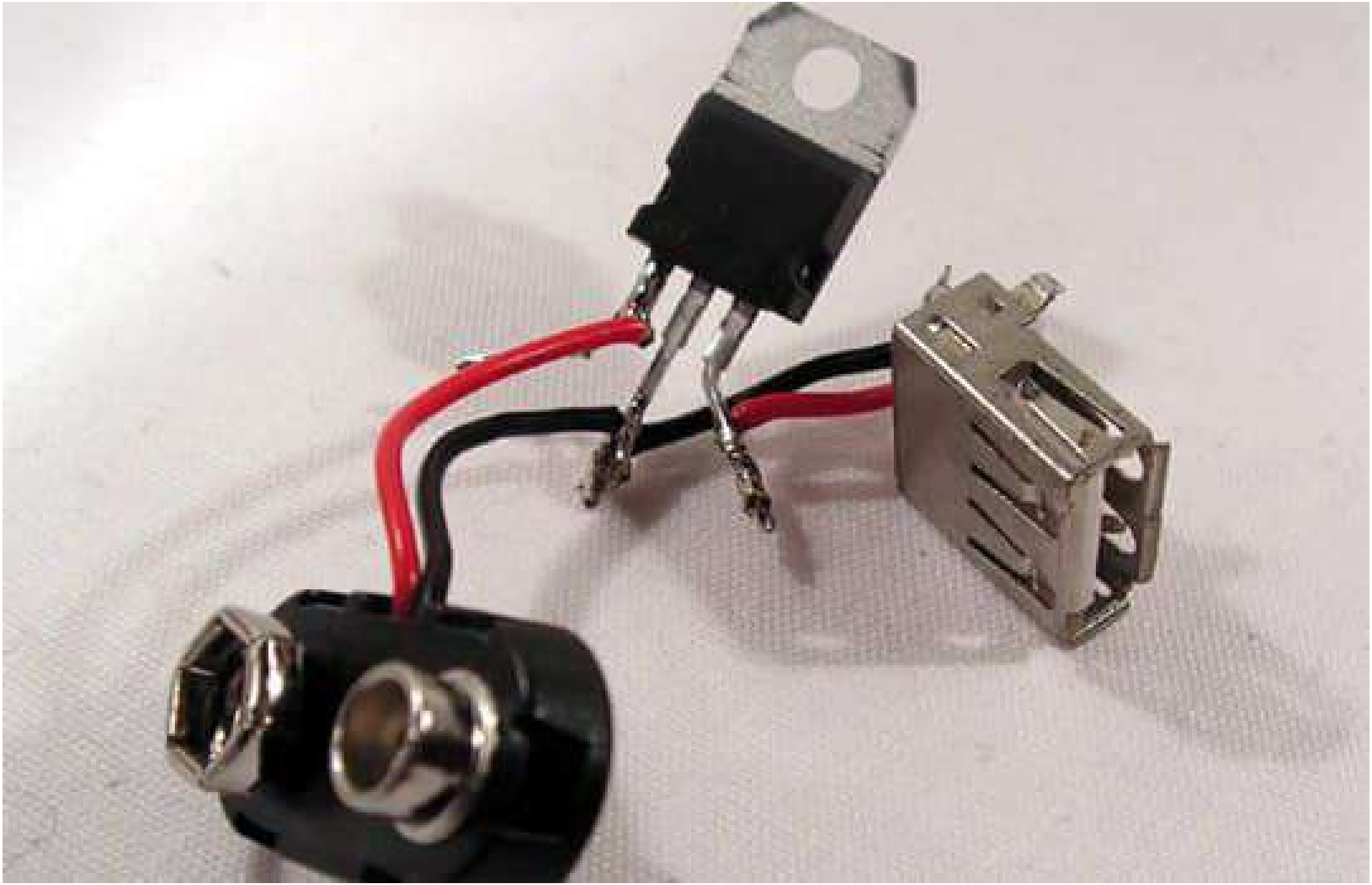

6:26 / 7:15


6:36 / 7:15
CC


The Coherer Receiver
HITANICA
1:59 / 2:02

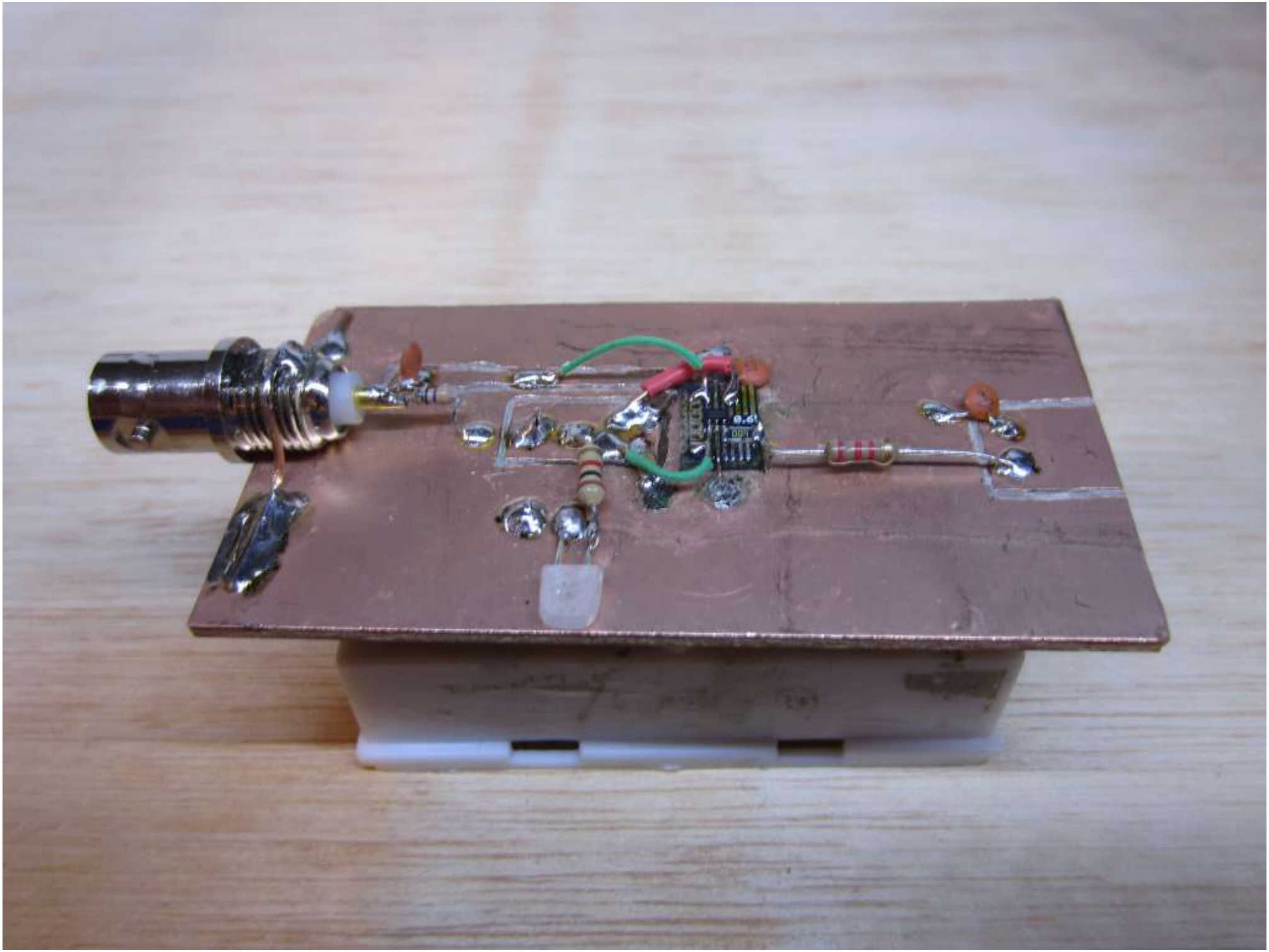


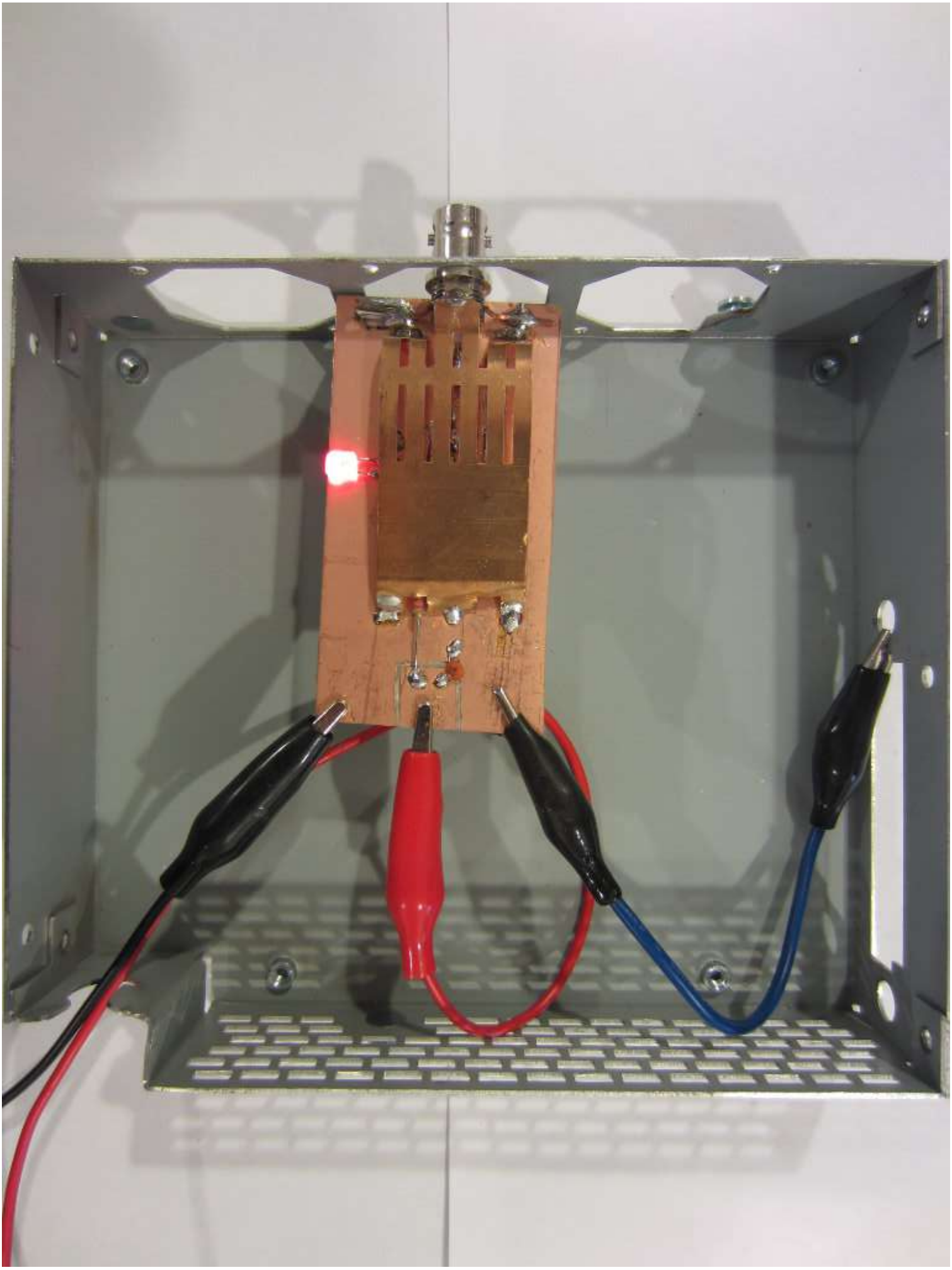








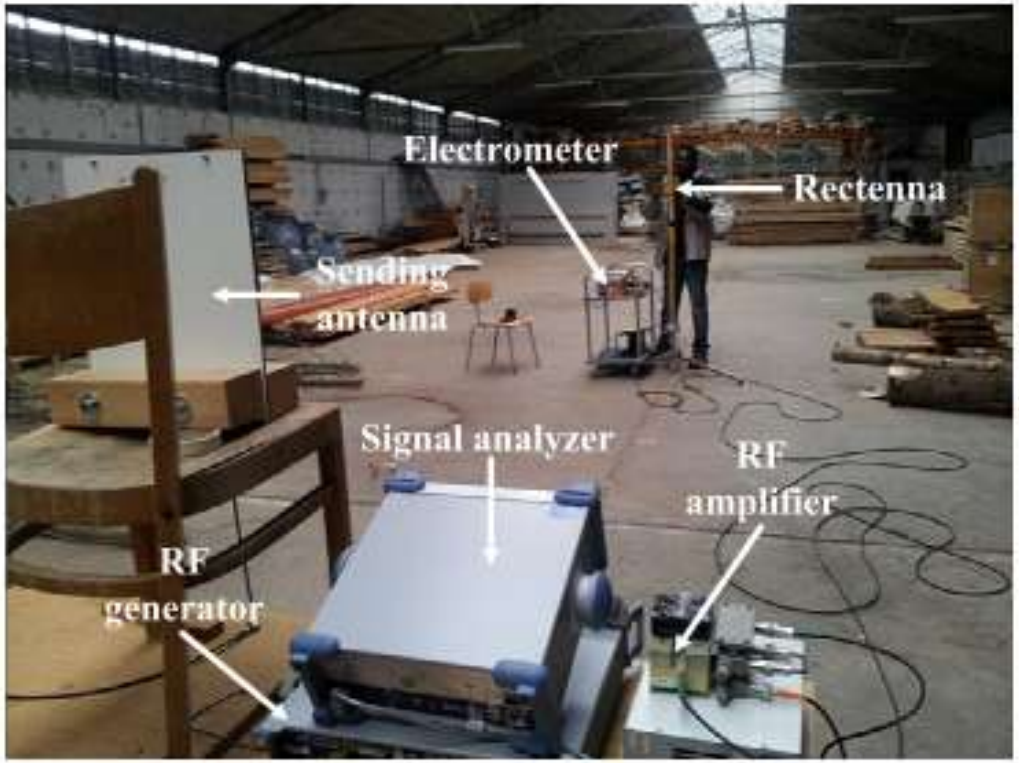


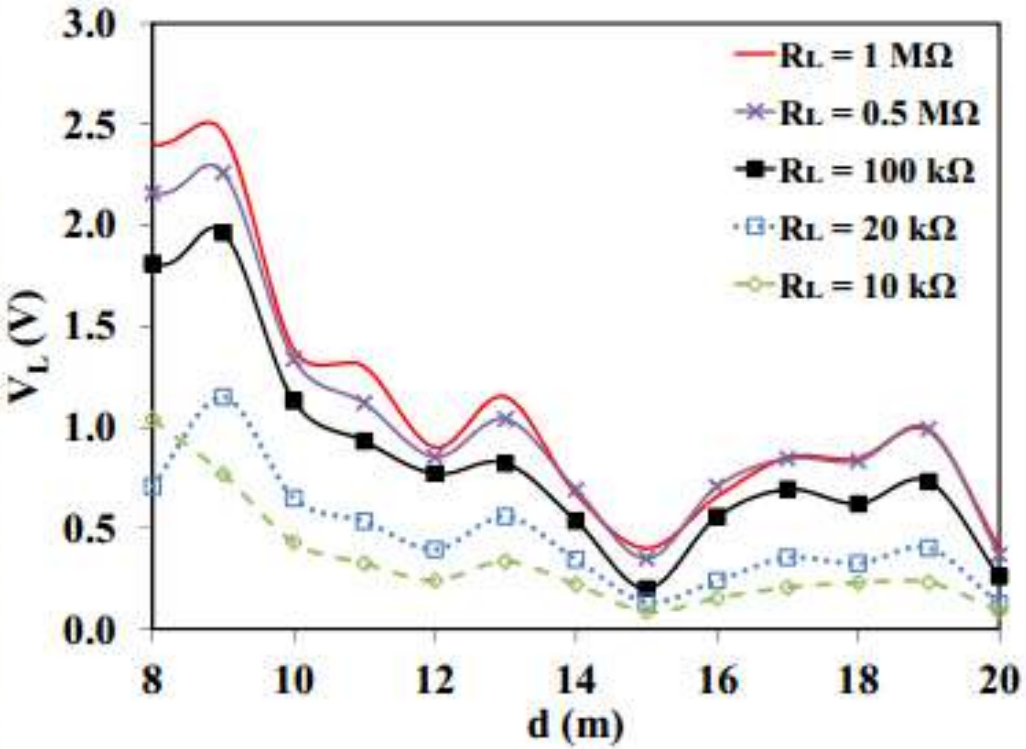



QRP IN
-6dB 50R
V_peak
V_reflect
GW3UEP QRP Meter LF-HF 10W max
12 June 2012


25 V
470 µF
105K
250

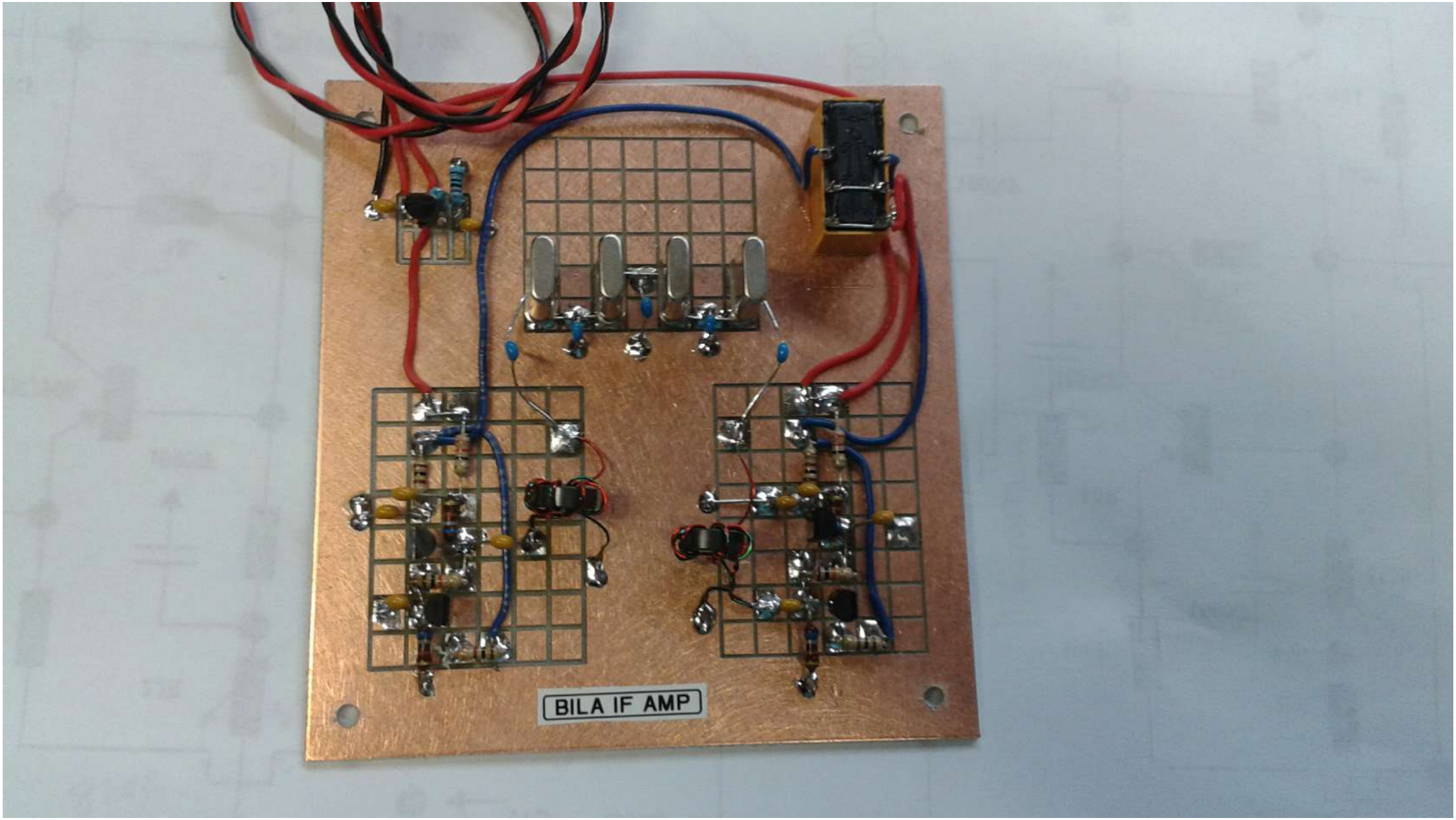

RF
IN
REGEN
V
TUNE
AF

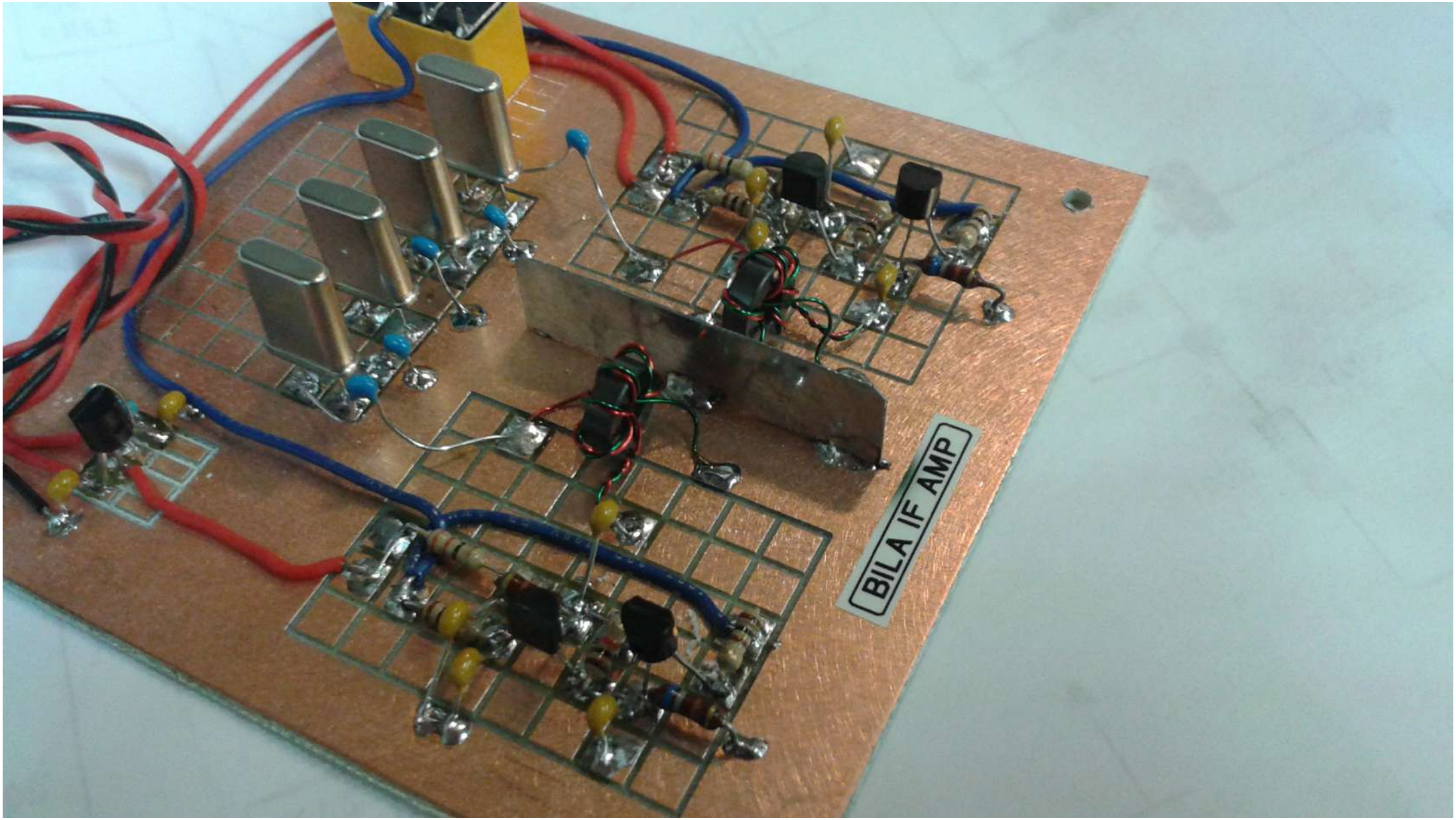

Electrometer
Rectenna
Sending antenna
Signal analyzer
RF amplifier
RF generator

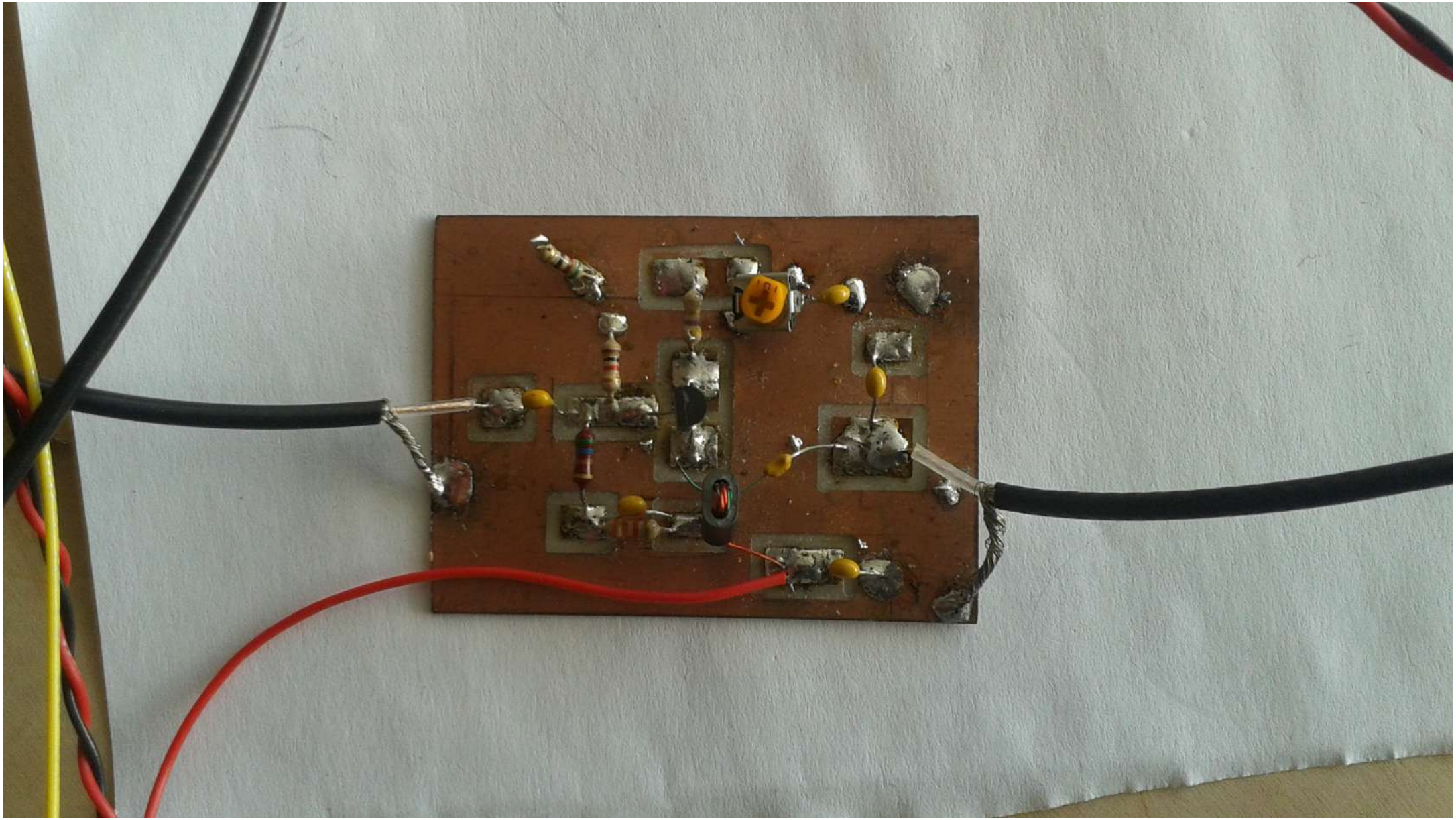

3.0
2.5
2.0
1.5
1.0
0.5
0.0
V_L (V)
8
10
12
14
16
18
20
d (m)
RL = 1 MΩ
RL = 0.5 MΩ
RL = 100 kΩ
RL = 20 kΩ
RL = 10 kΩ

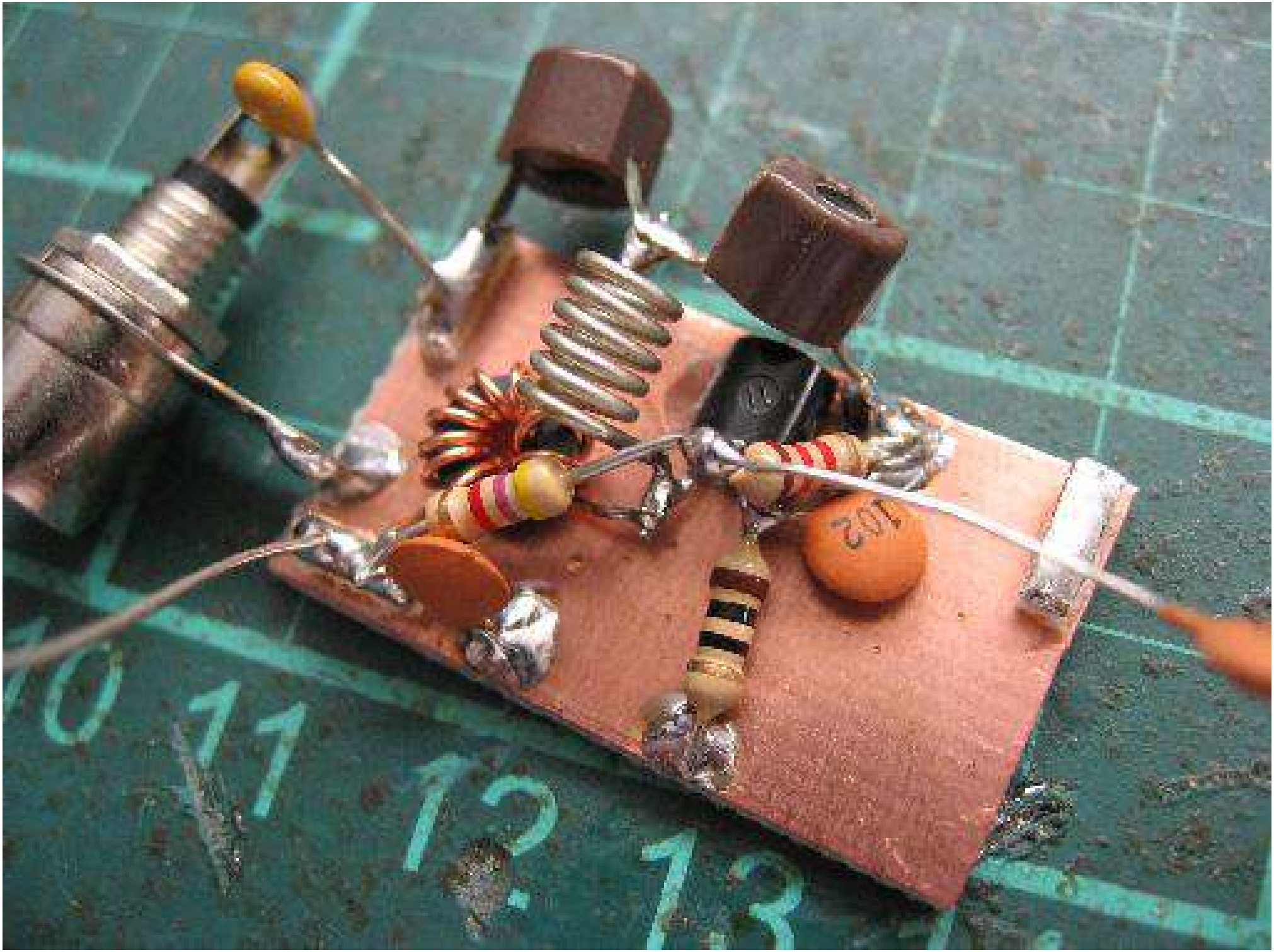

DENGYO
ch7 20MHz幅
Wi-Fi波収種用
レクテナ

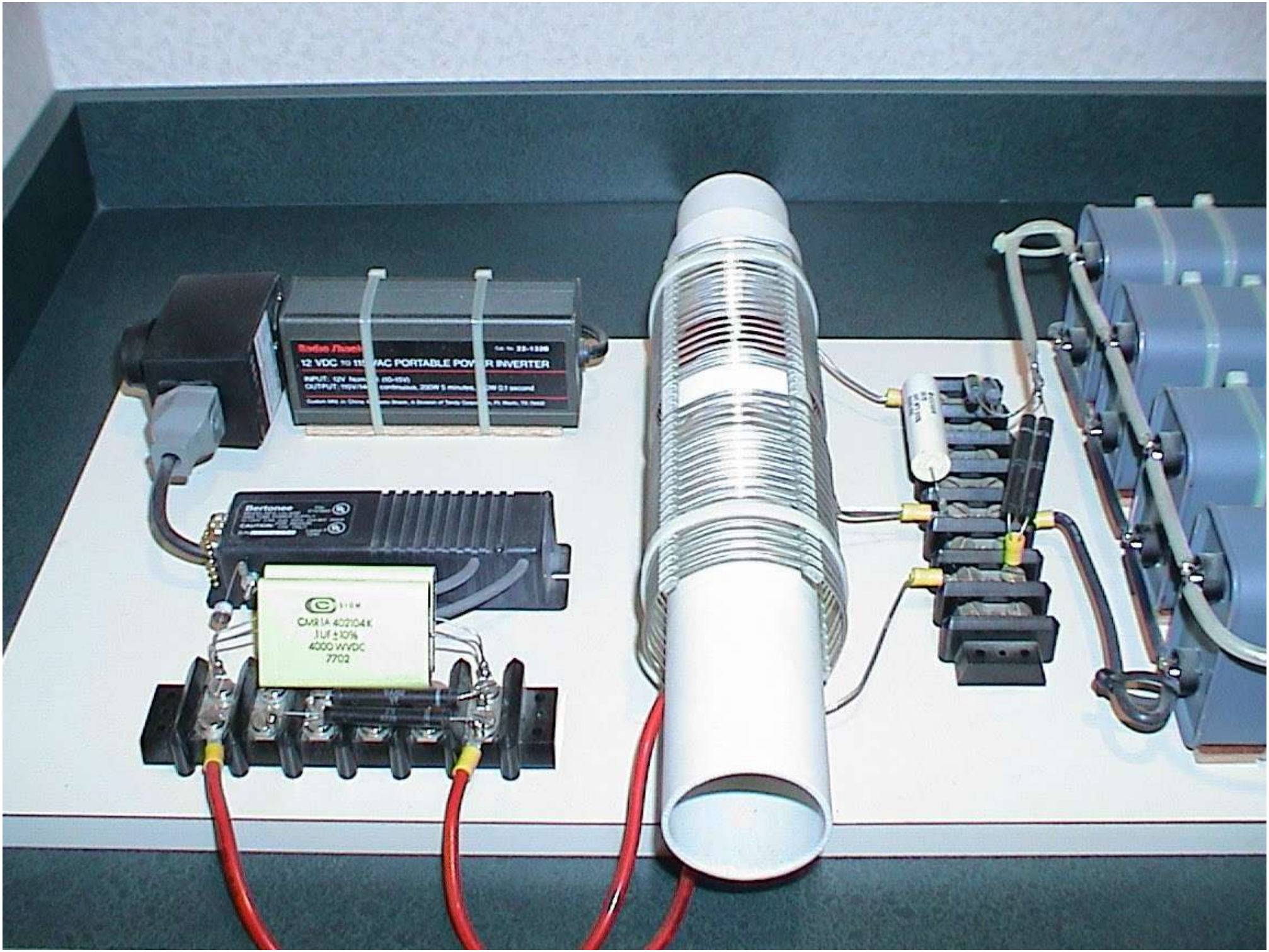


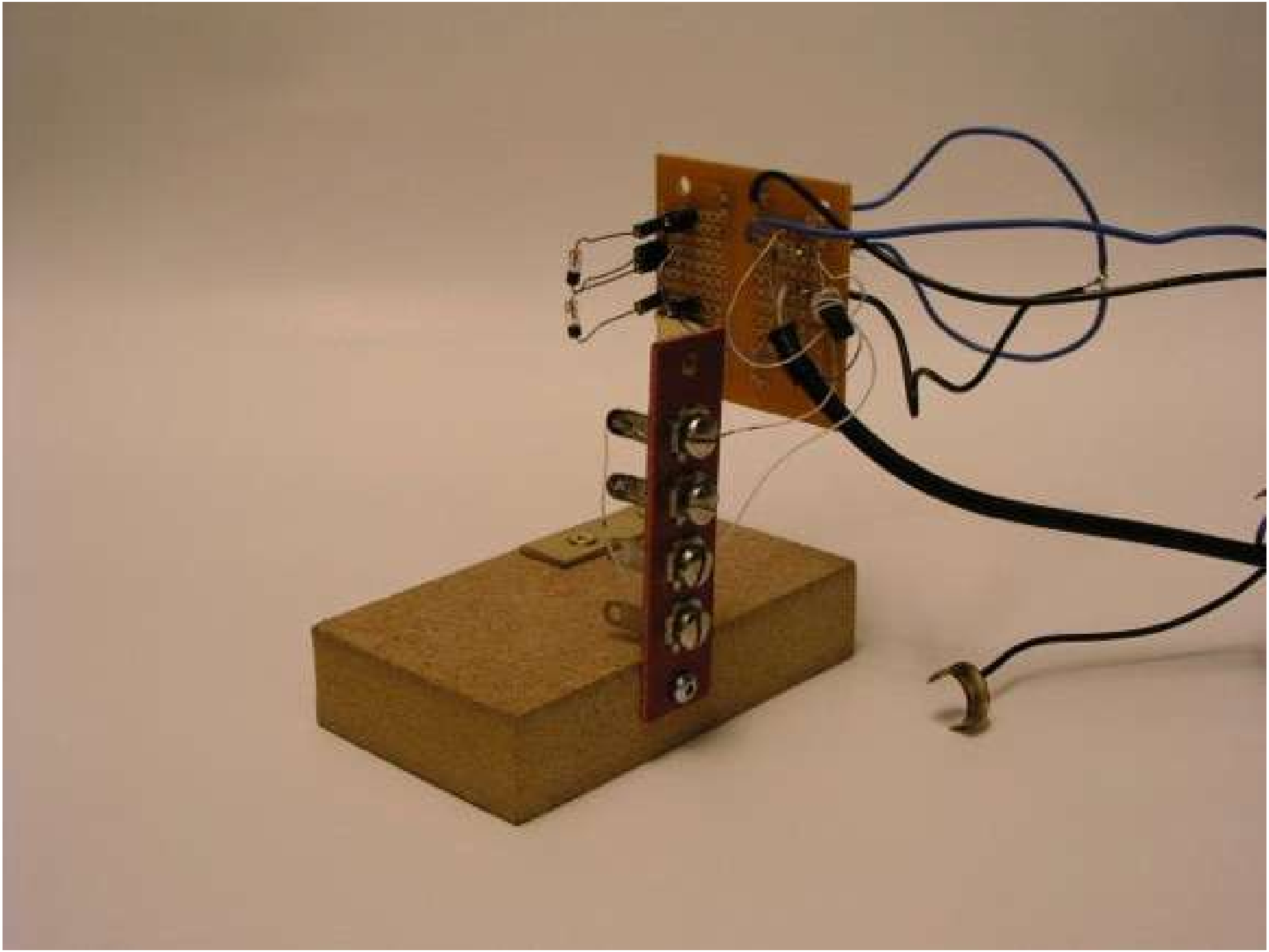

BILA IF AMP

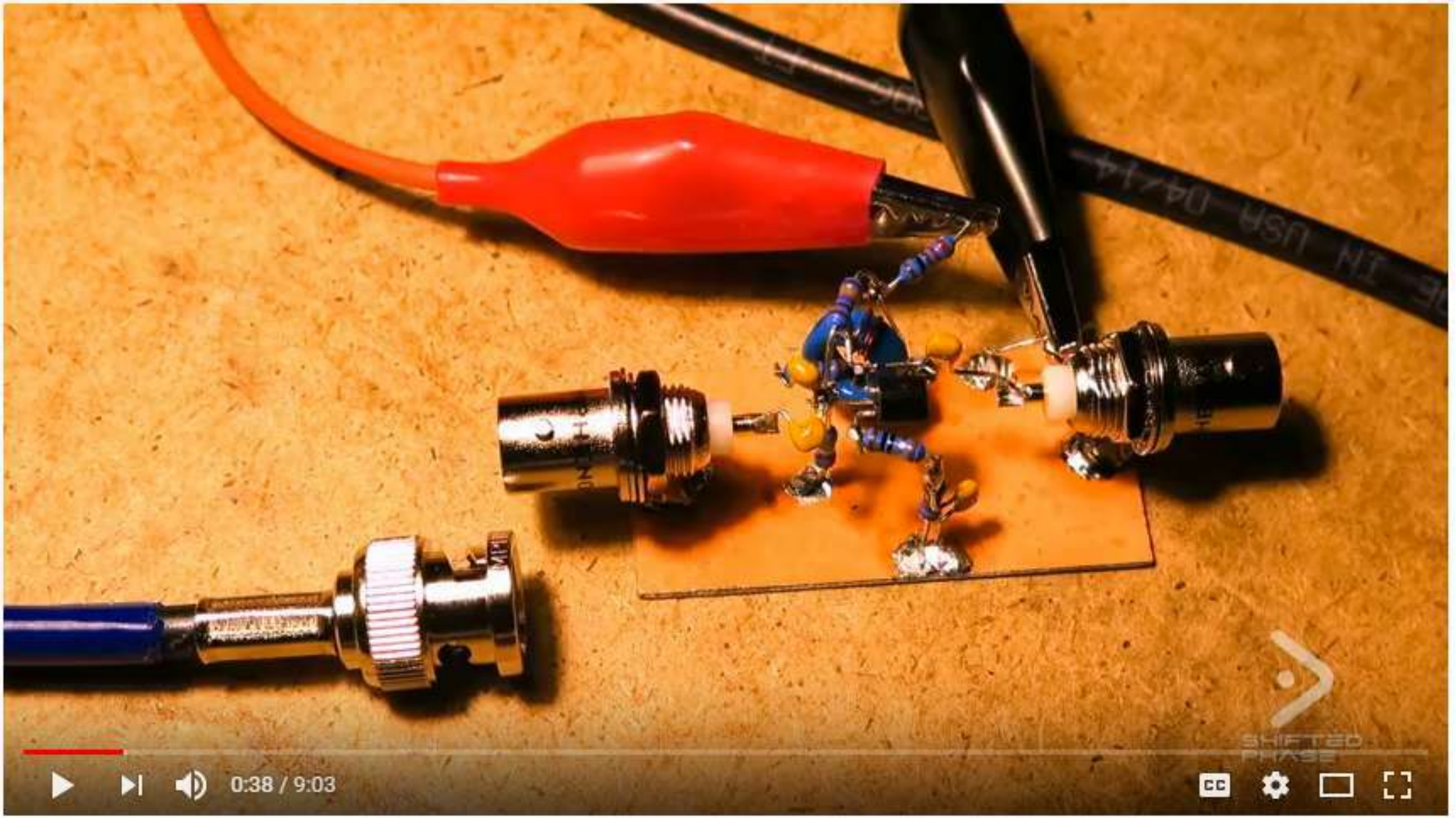

BILA IF AMP



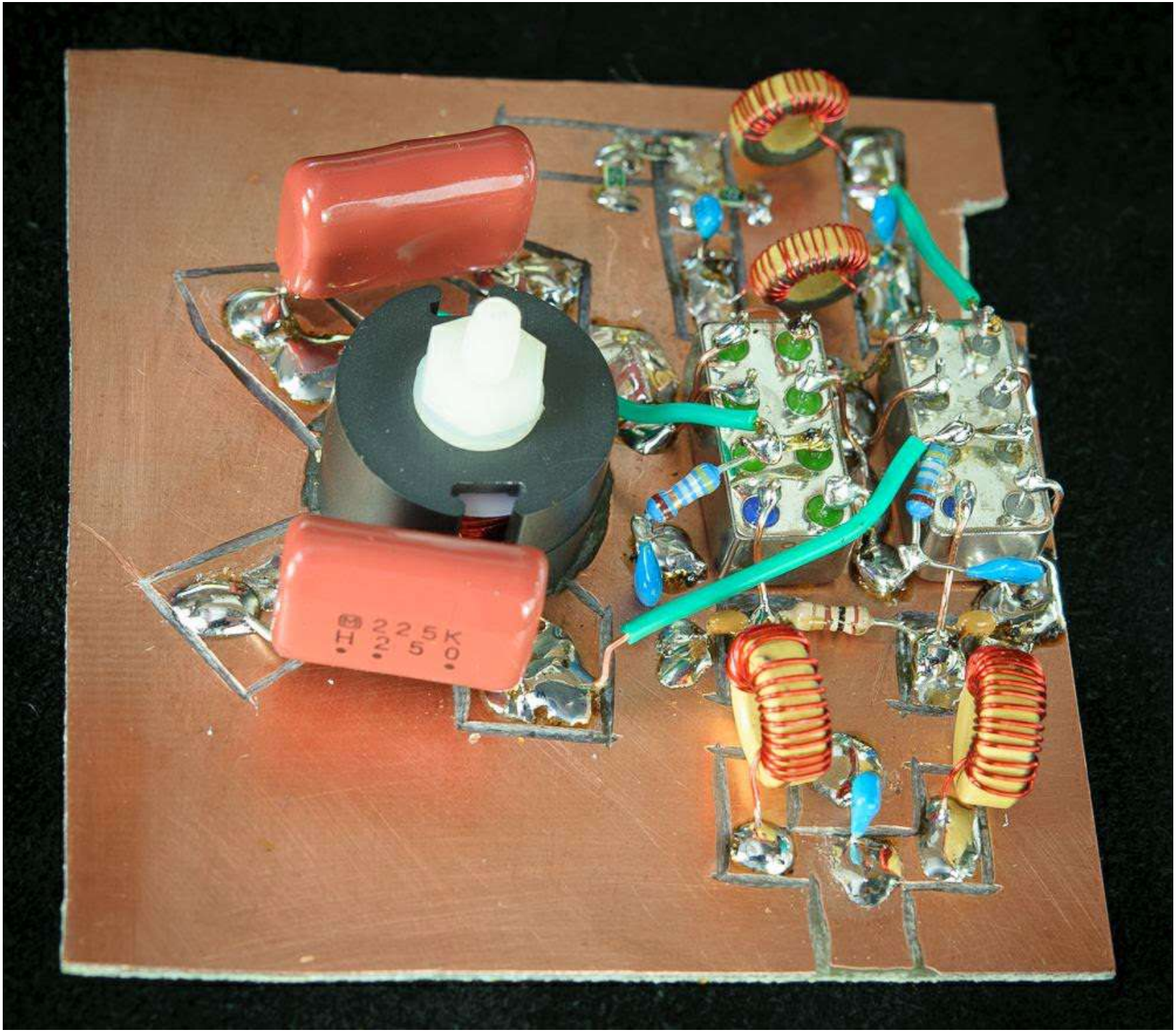


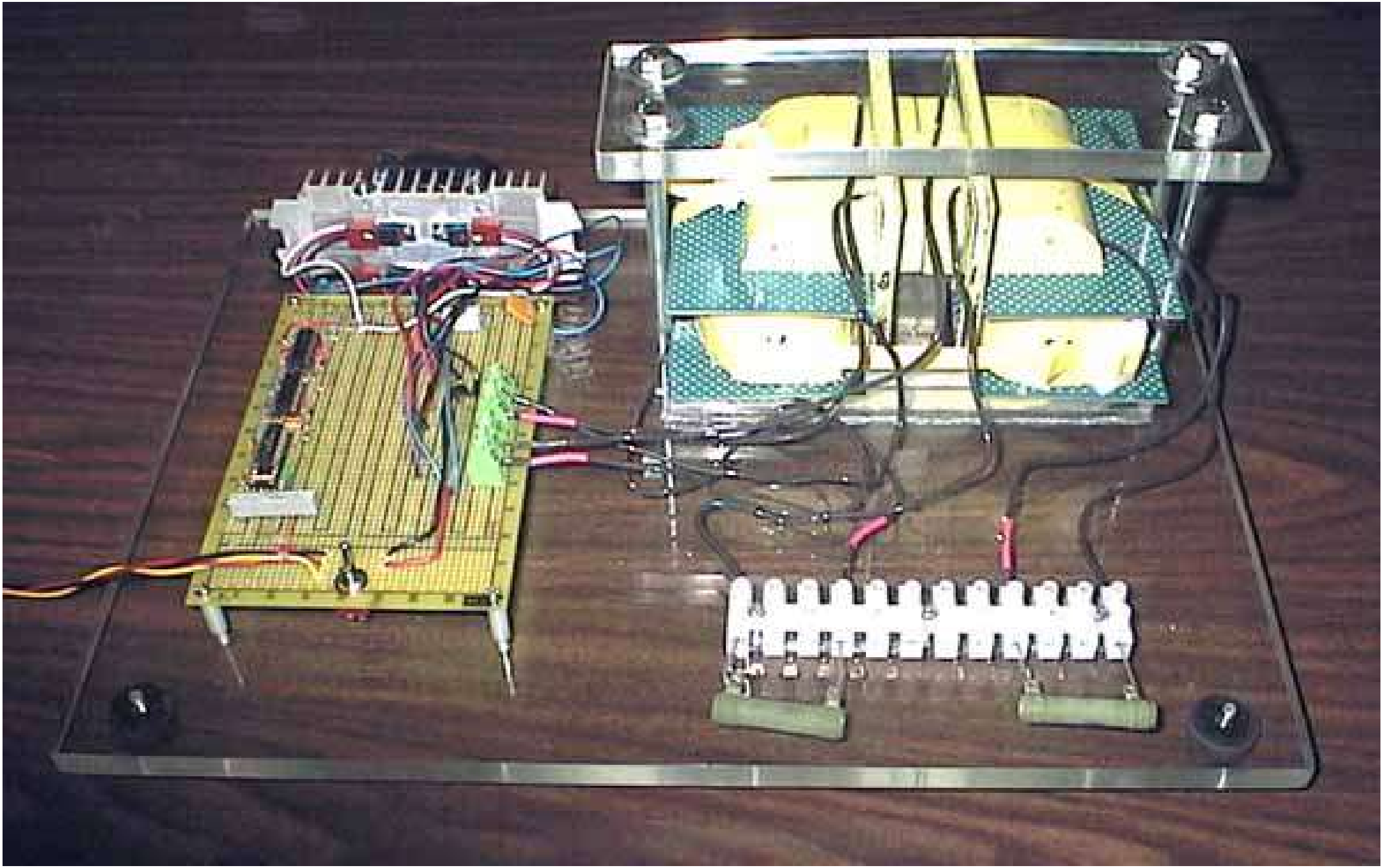

12 VDC
AC PORTABLE
INVERTER
CMR1A 402104K
1 UF ±10%
4000 WVDC
7702

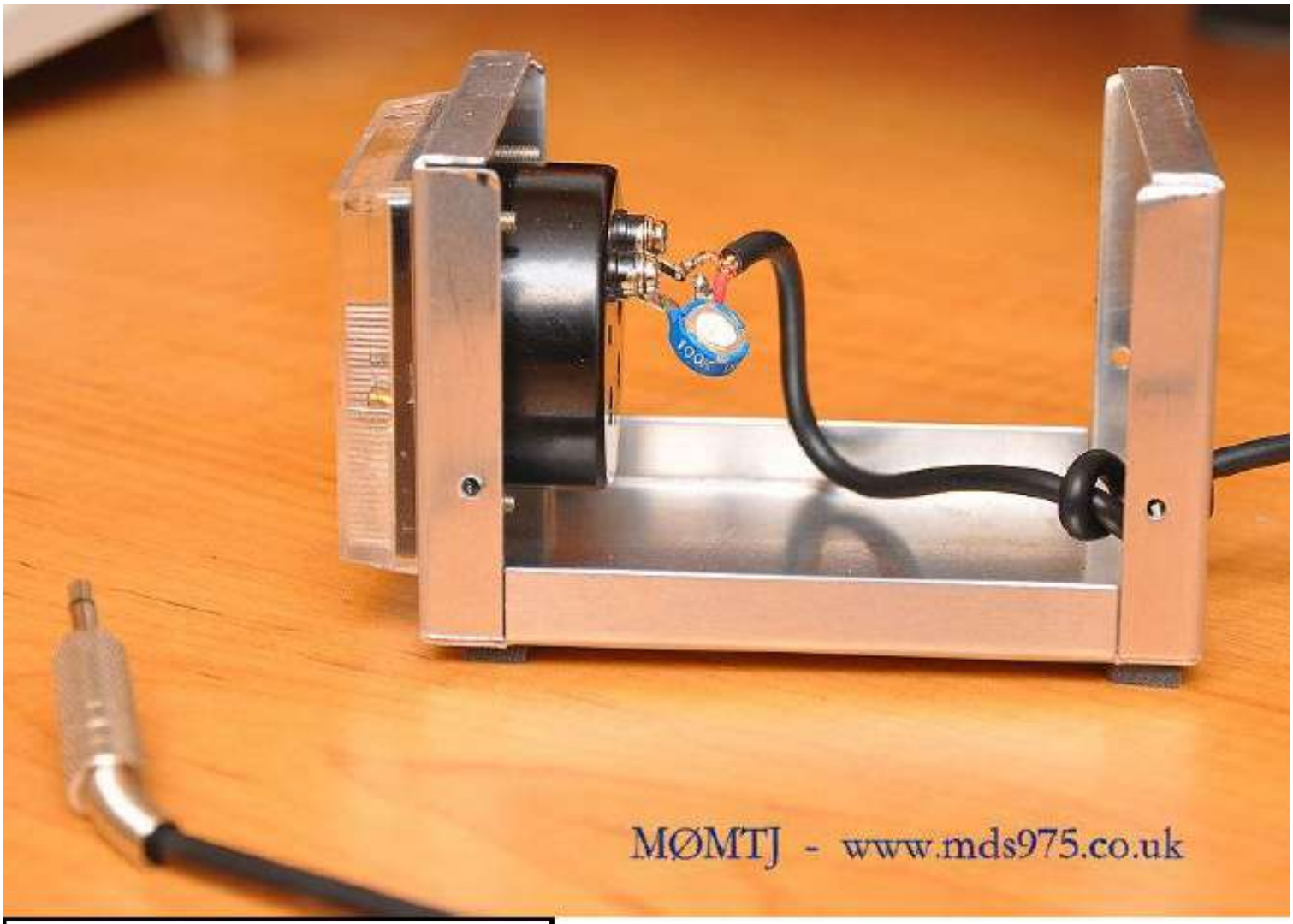




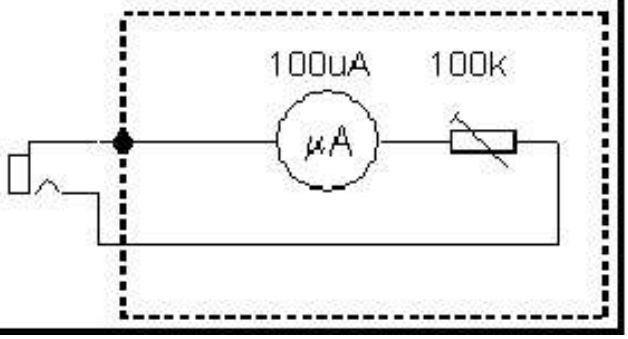
Electronics Tech - RF Amp


H 225K
H 225



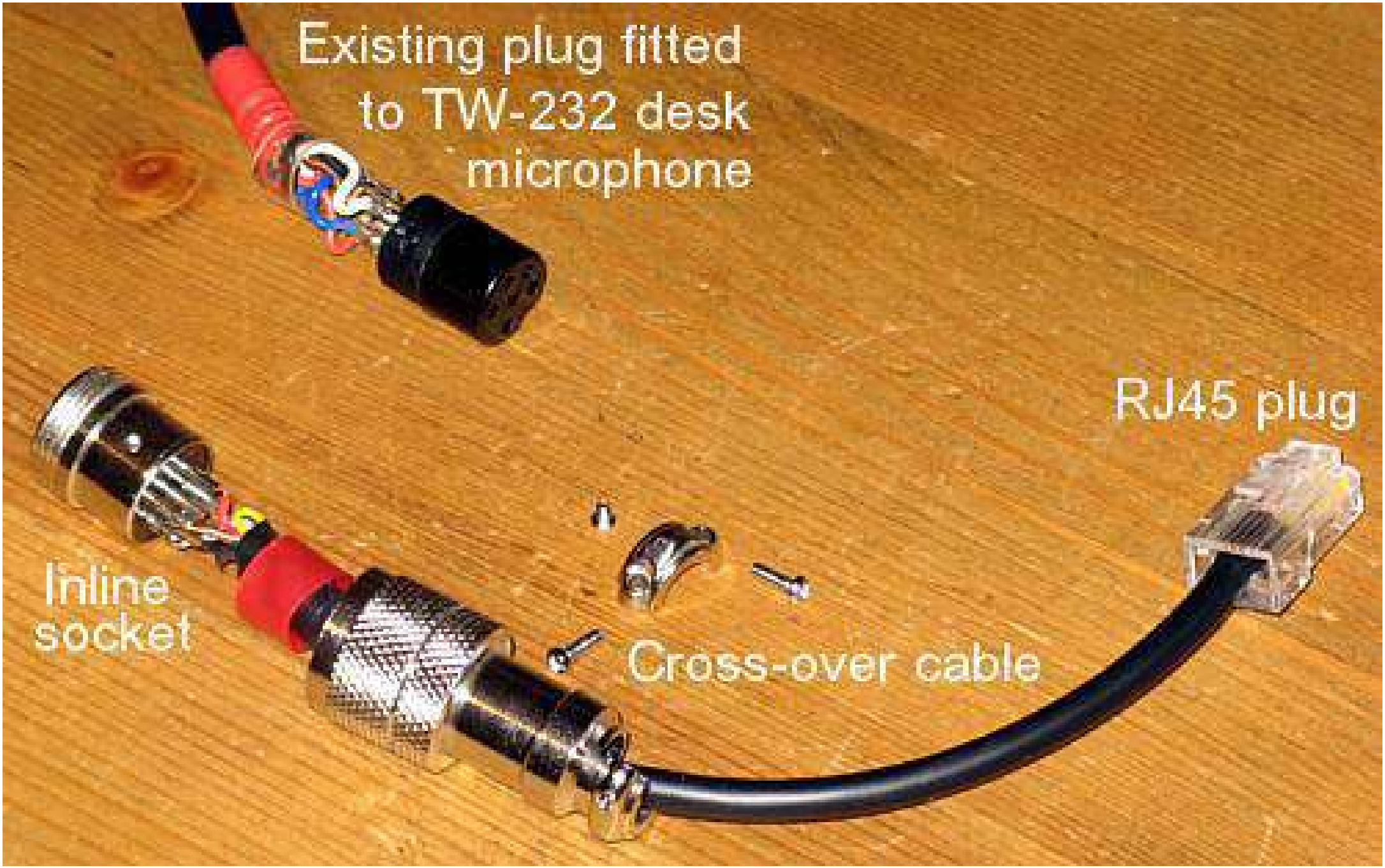


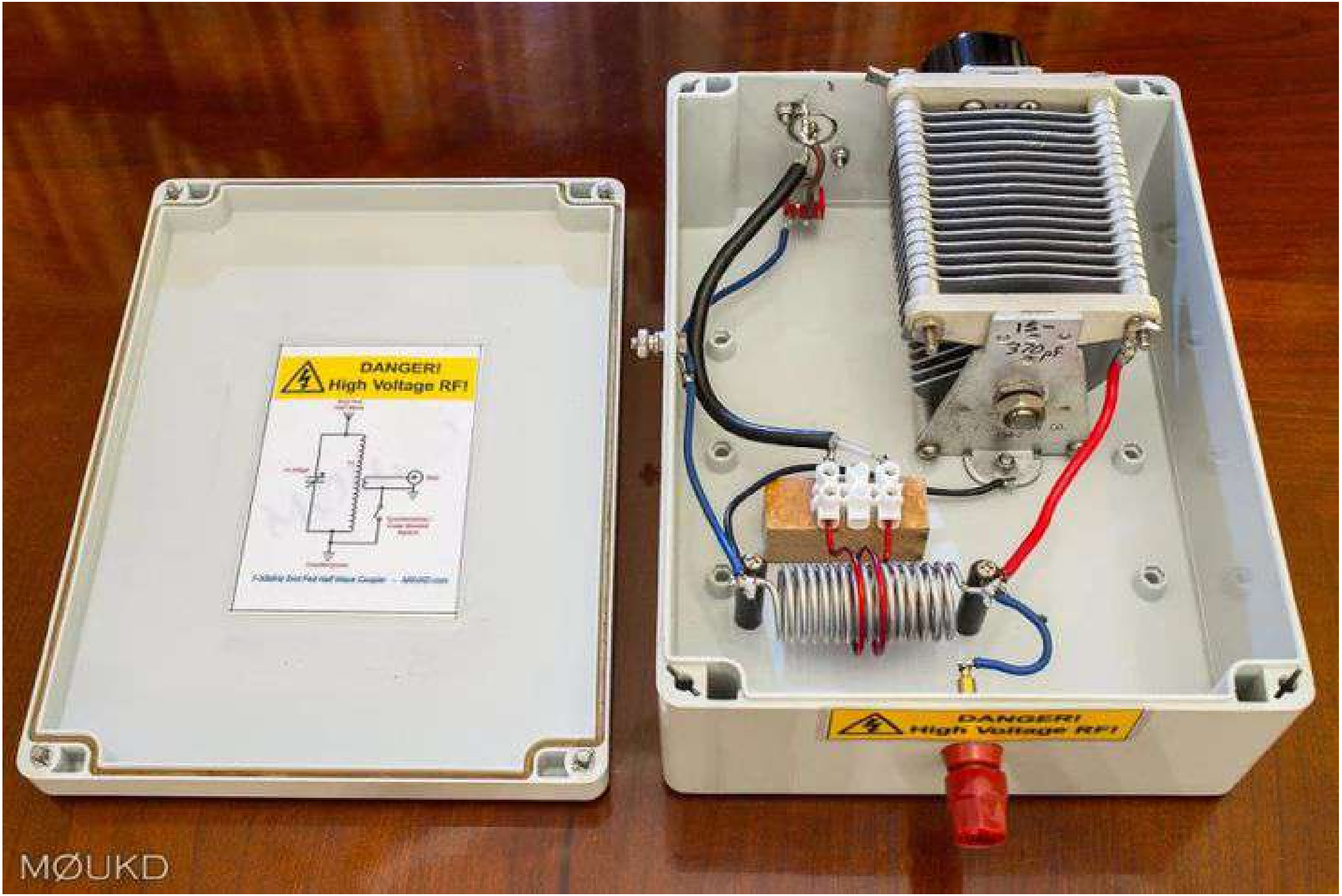
FT Meter




ANTENNA
GROUND
VK5JST
AERIAL ANALYSER
SET FREQUENCY
12.5-31MHz
6.8-16MHz
3.7-9MHz
2.2-5MHz
1.3-3MHz
DOWN
UP
07.100MHz R=047Ω
X=000Ω SWR=1.8
4DIGITS
POWER

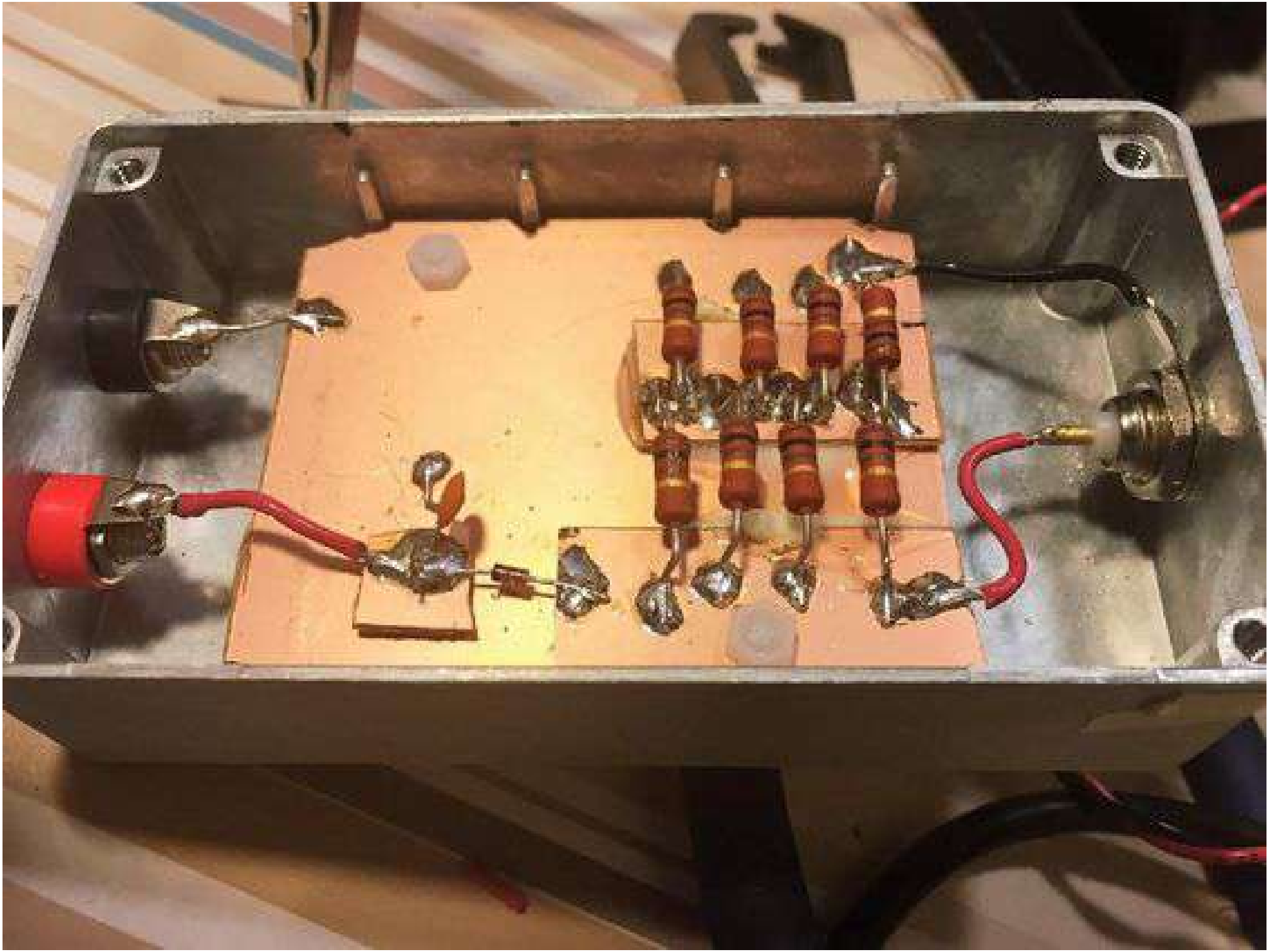

BRAIN POWER
brain-power.com


Existing plug fitted
to TW-232 desk
microphone
RJ45 plug
Inline
socket
Cross-over cable


DANGER!
High Voltage RF!
DANGER!
High Voltage RF!
MØUKD

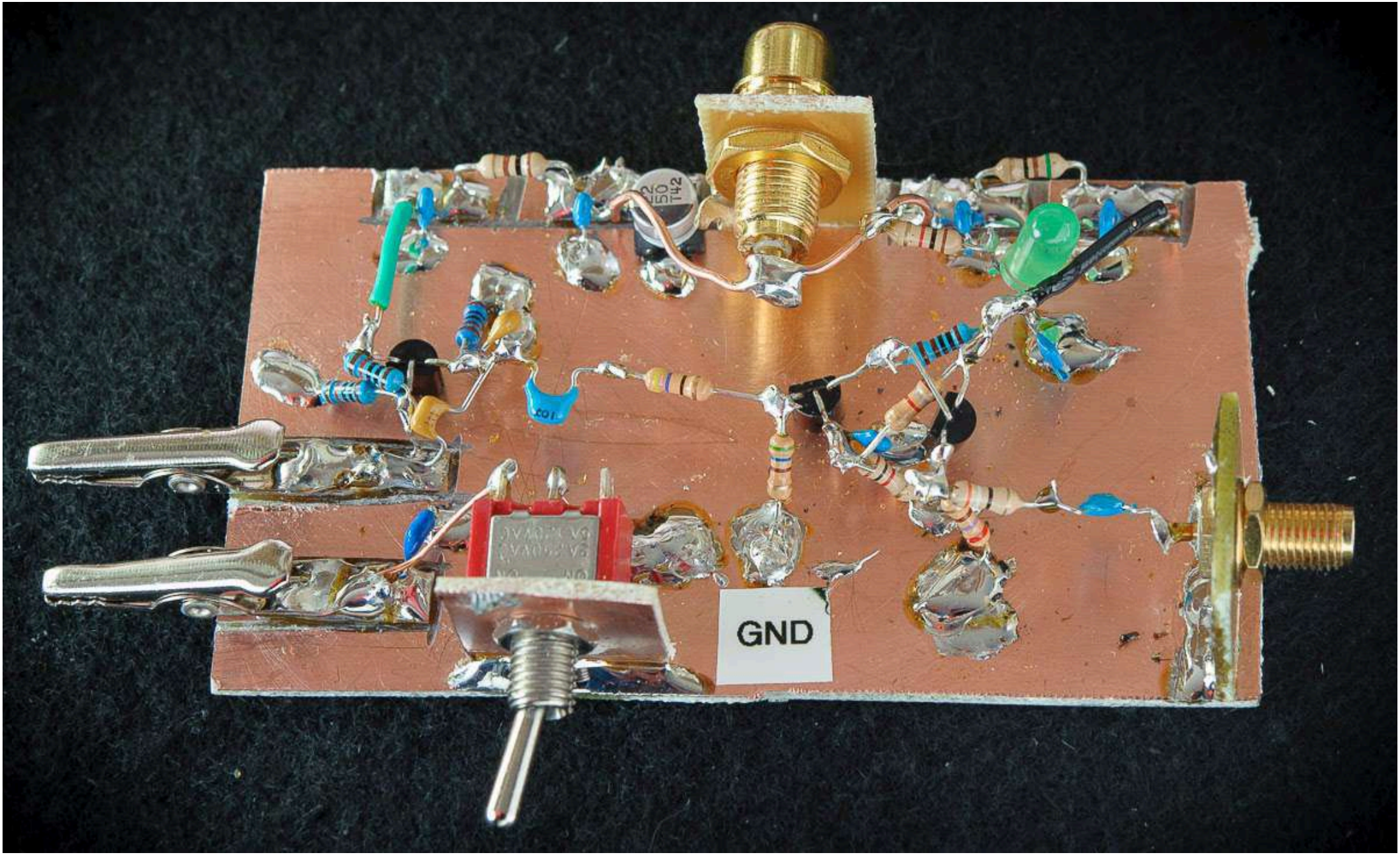


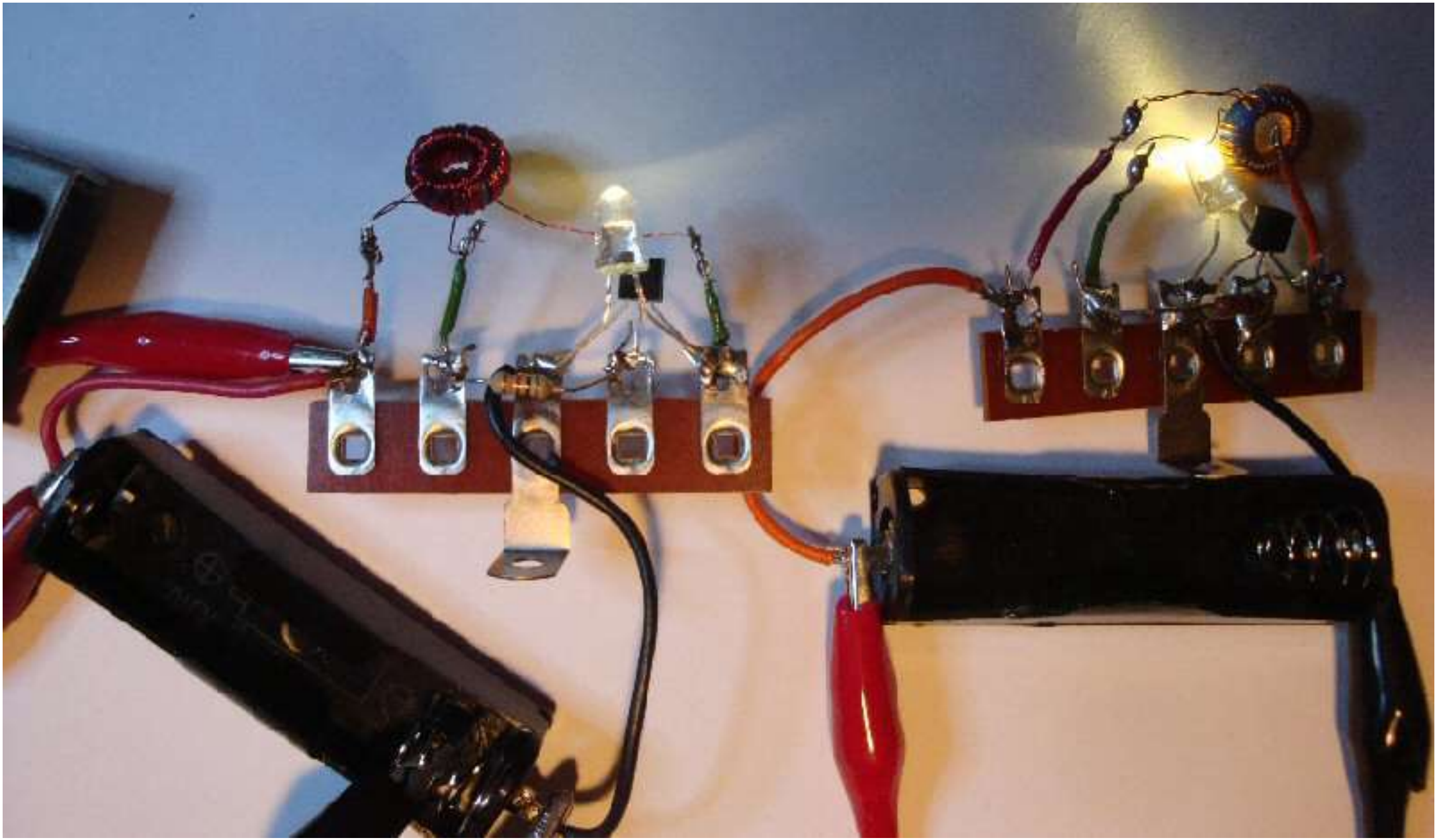




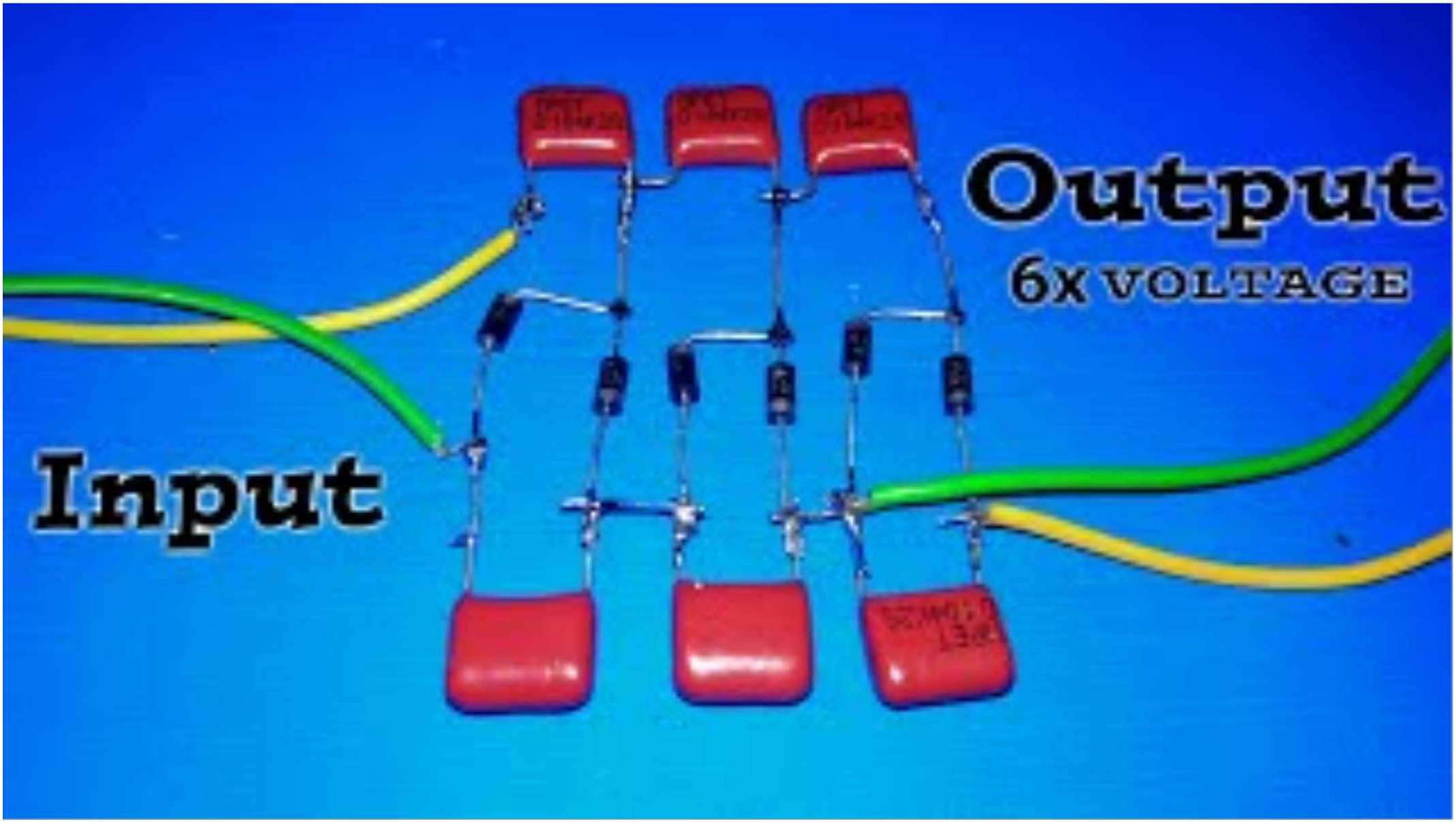

22
50
T42
GND
NO
NO

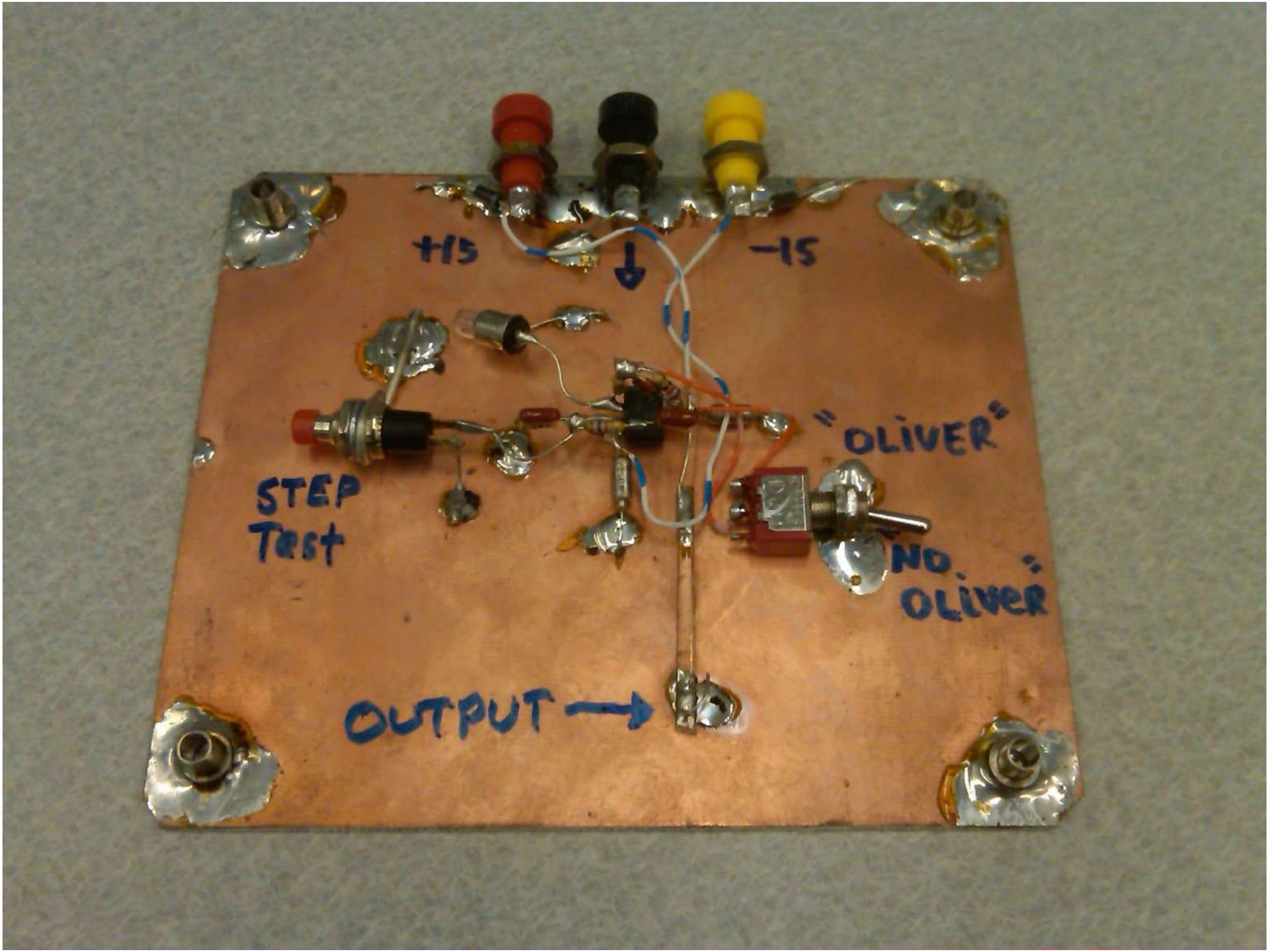



GND

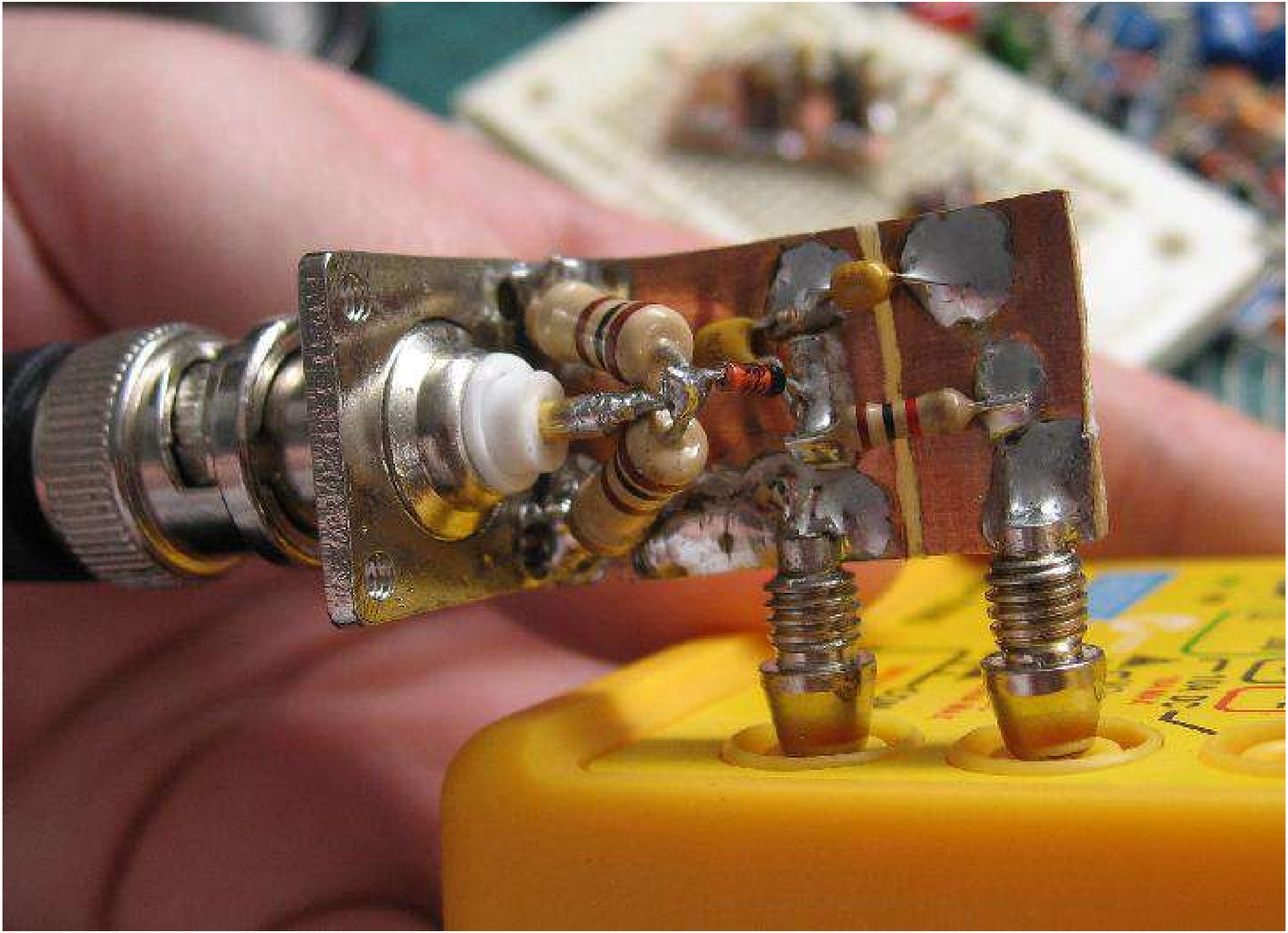




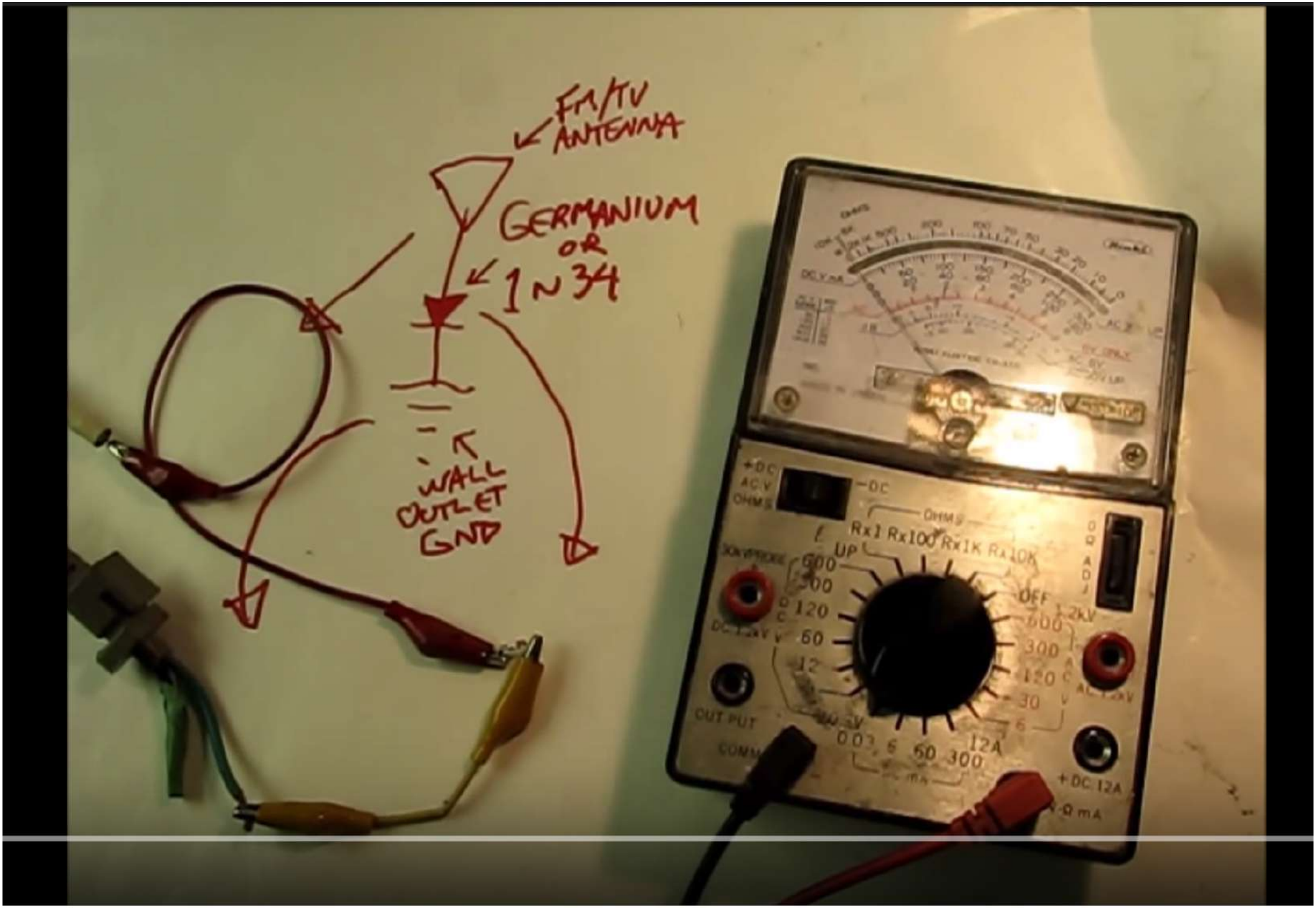

Output
6X VOLTAGE
Input


+15
-15
"OLIVER"
NO OLIVER
STEP TEST
OUTPUT

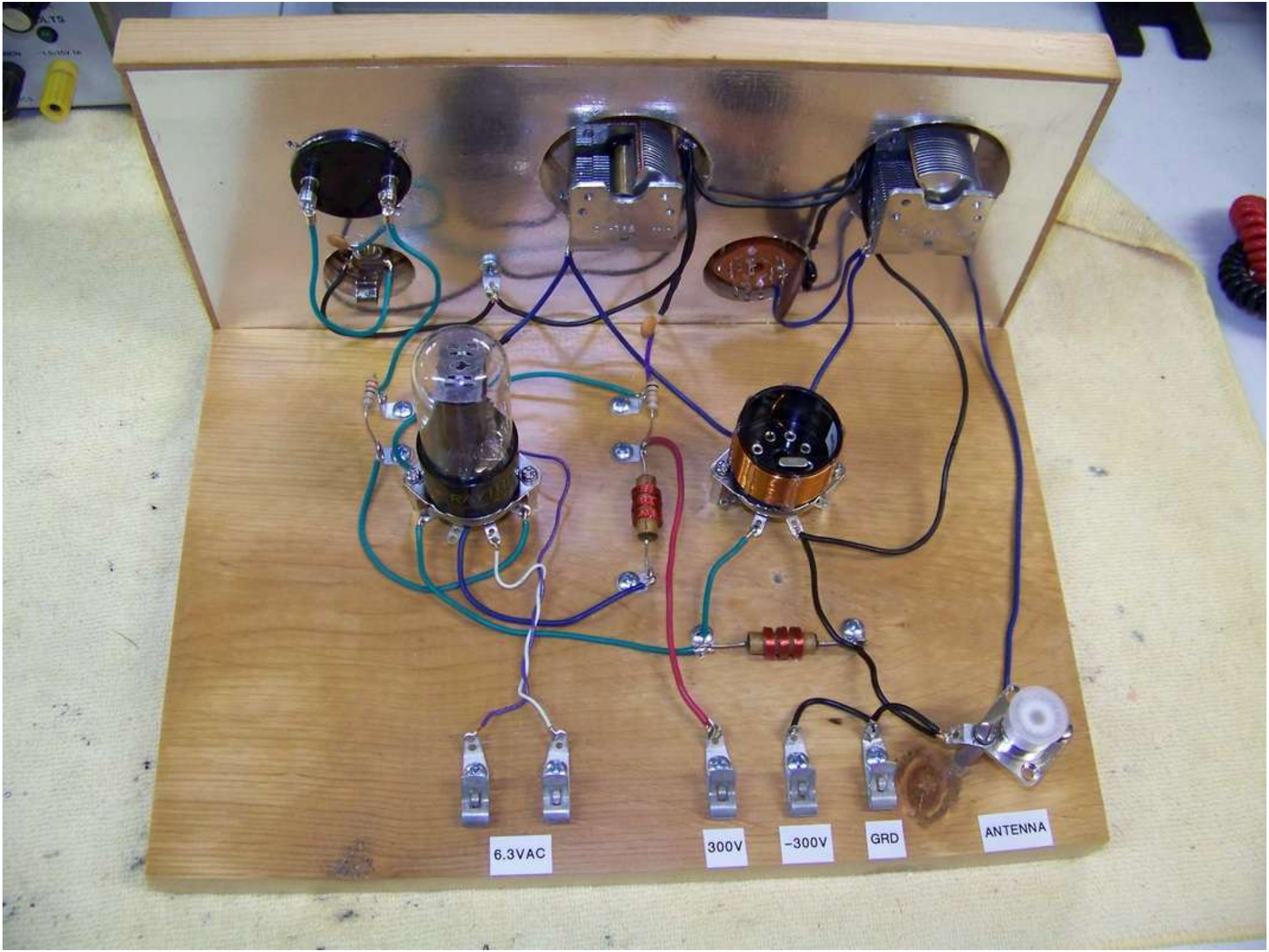

103

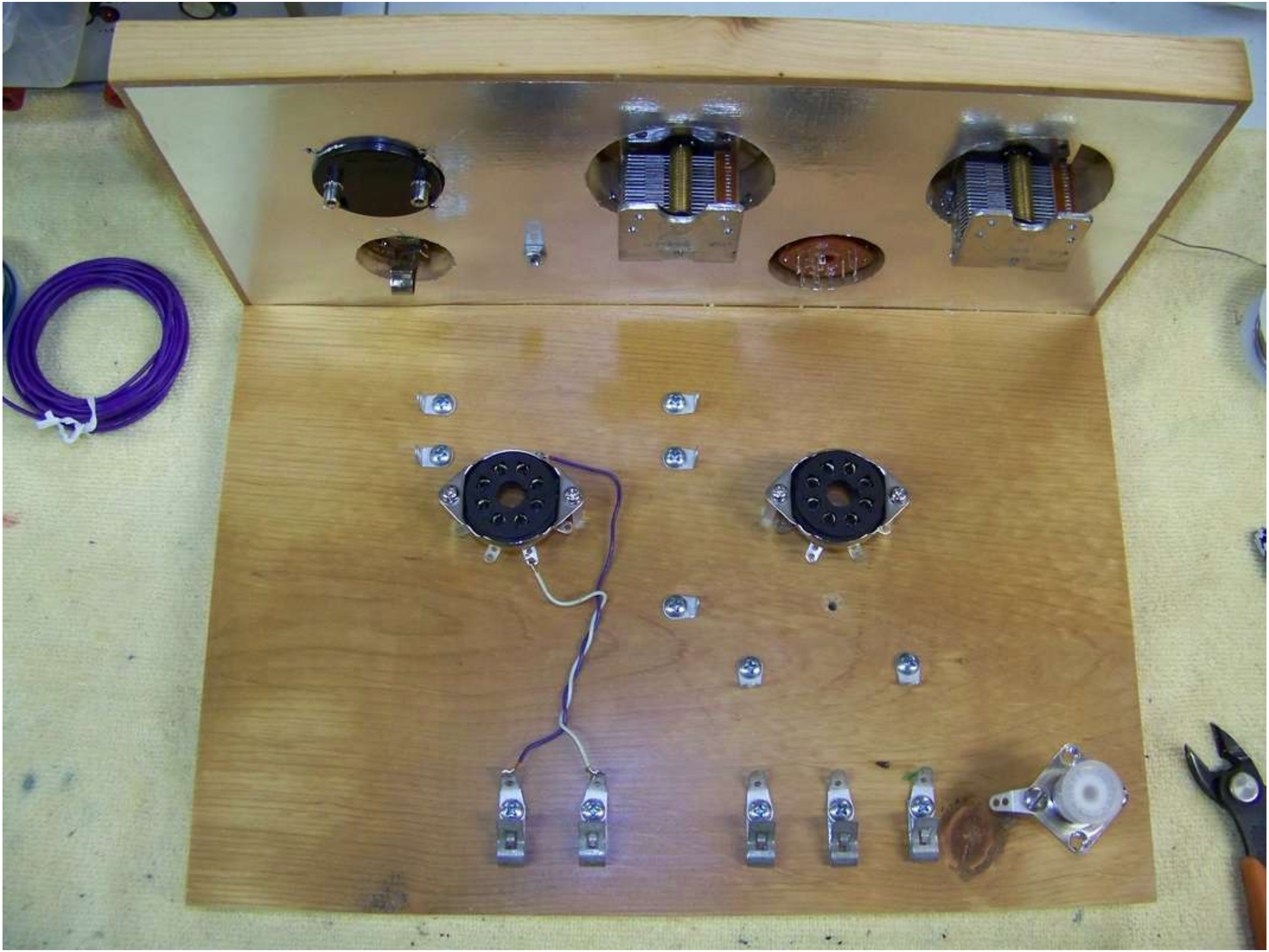


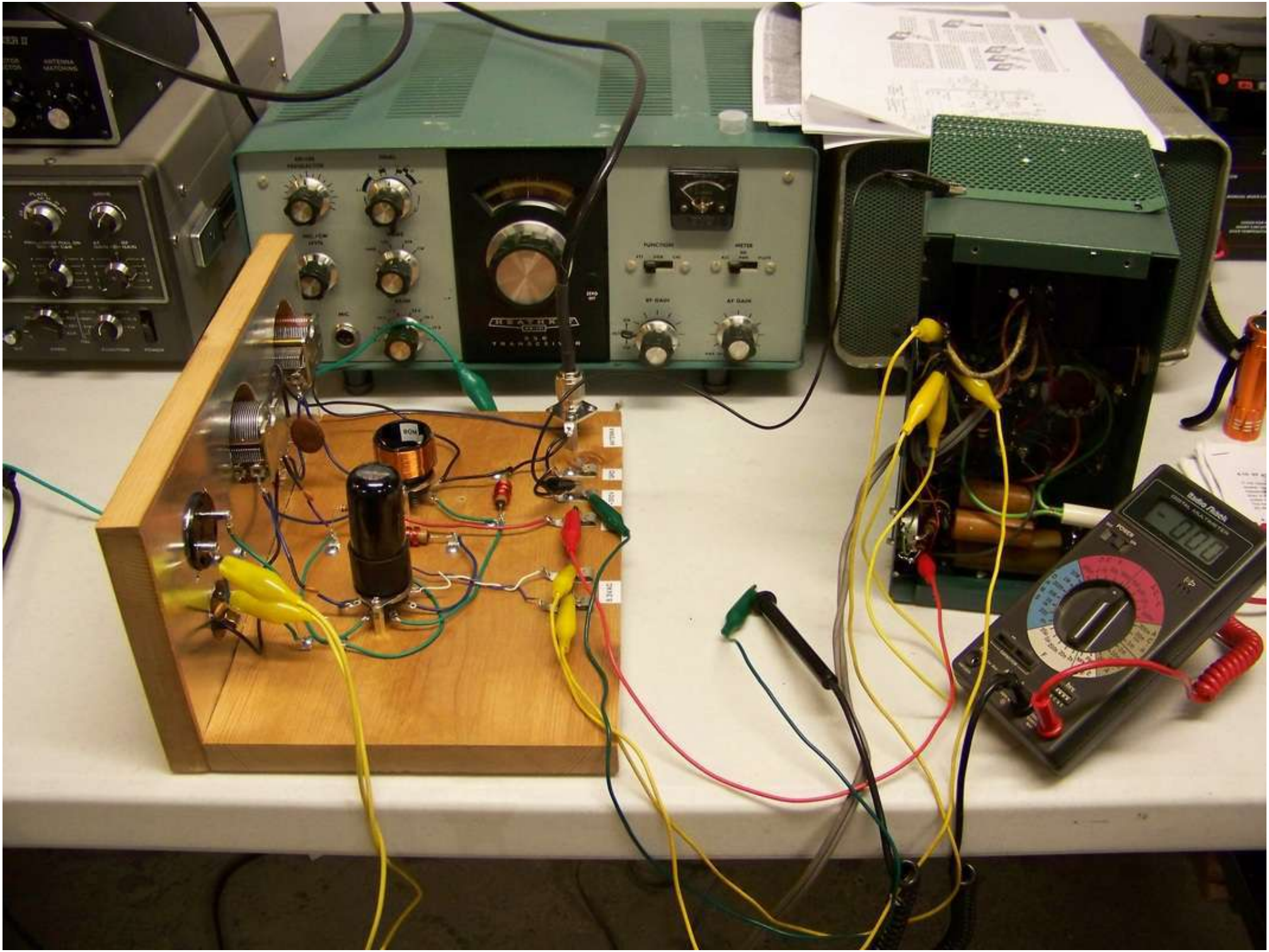

LENA
WWW.RADIODX.ONL.R
0:38 / 2:51


FM/TV
ANTENNA
GERMANIUM
OR
1N34
WALL
OUTLET
GND
+DC
AC V
OHMS
-DC
OHMS
Rx1 Rx100 Rx1K Rx10K
UP
600
300
120
60
12
OFF
1.2kV
600
300
120
30
6
12A
OUT PUT
COM
+DC 12A




6.3VAC
300V
-300V
GRD
ANTENNA





The "No Fibbin'" RF Field Strength Meter

The field strength meter is simple, effective and easy to construct. This project answers that age-old question—is anything radiating from this antenna?



The RF Signal Strength meter responding to my Kenwood TH-26AT transmitting on 147.900 MHz with 1 W, 2 feet away from the meter. The sensitivity control is set at mid range.

This low budget homebrew project will pay big dividends in making sure you get the best signal out of your antenna system. And it needs no batteries.

In the 25 years I have spent working as a telecommunications technician, one of the most useful, yet simple, pieces of test gear I have used is the RF field strength meter. Its only job is to give you a relative signal strength reading of near field RF signal radiated from a transmitting antenna. After the bench testing is done and antenna VSWR is measured, nothing else will give you a better idea of transmitter and antenna performance than the RF field strength meter.

Any ham who has a 146 MHz or a 440 MHz hand-held transceiver is at the mercy of the sales brochures when choosing the best flexible [rubber duck] antenna for your radio. How many times have you *not* been able to work a repeater or work simplex nearly as well as someone else who has a similar radio or one with even less RF output power than yours? How can you tell if the wire inside a flexible antenna has broken or if the antenna doesn't radiate well? The RF field strength meter will soon reveal how well (or how poorly) your antenna is radiating. The meter is great for determining the front to back ratio and forward gain of a Yagi or quad. You can also compare relative signal strength between a ¼, ½ and ⅝ wavelength antenna on your vehicle. You might be surprised at the results!

The "No Fibbin'" field strength meter can be made using parts that many hams already have around the shack. The best results will be obtained using germanium or Schottky small signal diodes, a metal enclosure and an analog meter movement (which has a low full-scale deflection current). The other component values are not critical; close is good enough. All the parts can be mounted on a small pre-punched PC board or they can be wired point-to-point without a PC board. In either case, keep the component leads as short as pos-

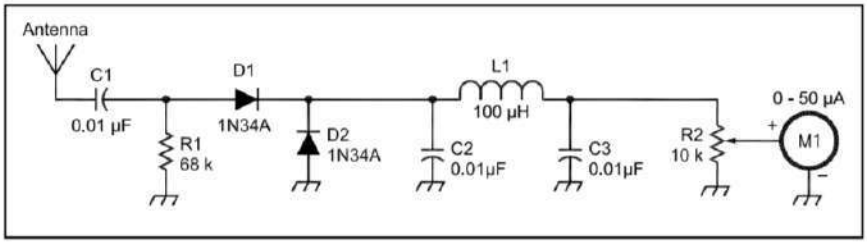


Figure 1—Schematic diagram of the signal strength meter. RS = Radio Shack (www.radioshack.com/).

C1-C3—0.01 µF capacitors (RS 272-1051 or equiv).
D1, D2—1N34A diodes (RS 276-1123).
L1—100 µH inductor (RS 273-102).
M1—Analog meter, 50 µA (RS 910-0360).
R2—Sensitivity control potentiometer, 10 kΩ (RS 271-1715).
Antenna—BNC female chassis mount socket. Antenna selection should match the frequency band for VHF and UHF. A random length of wire might work best for close field measurements on HF to 40 meters. Metal box enclosure is mandatory.

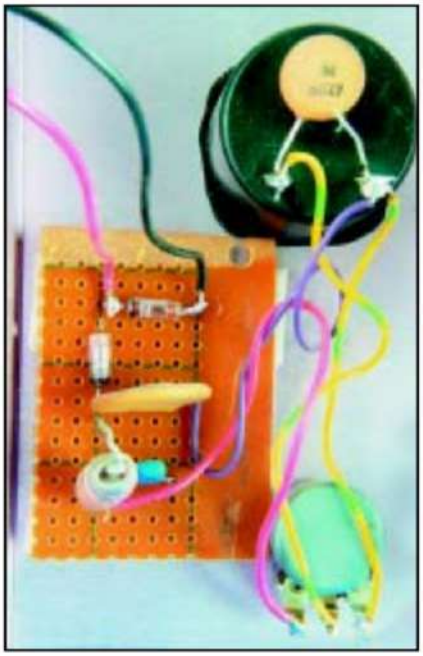


Figure 2—Close up of the circuit board.



Figure 3—The case, circuit board and antennas for the field strength meter.

FEEDBACK

◊ An error appears in Figure 1 of "The 'No Fibbin' RF Field Strength Meter" (Aug 2002 *QST*, p 28). The correct way to wire D2 is the anode to ground and the cathode to the anode of D1 (also the junction of R1 and D1). As shown in the photos, C1 is optional and an additional 0.01 µF bypass capacitor can be installed across the meter movement.—*John Noakes, VE7NI*

STRAYS

MILITARY RADIO COLLECTORS TO MEET

◊ The Military Radio Collectors Association will hold its third annual meet at the West End Fairgrounds, Gilbert, Pennsylvania, September 6-8, 2002. Hours are 0800 to 1700 local time. Activities include equipment displays, on the air operation, formal presentations and a swapmeet. For more information, see **www.milradio.org/** or contact Pete Hamersma, WB2JWU, PO Box 467, Holderness, NH 03245, e-mail **pehamers@worldpath.net**.

Previous • Next Strays

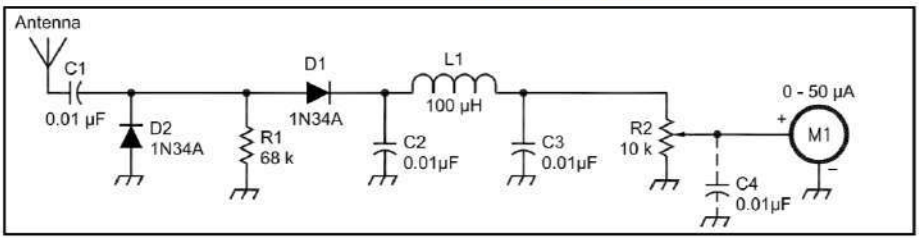
FEEDBACK

◊ In the item concerning magnetic headings in "The Doctor is IN," *QST*, Jul 2002, p 47, the Doctor reversed his plus and minus signs. The first paragraph should read:

The ARRL maps are calibrated in True degrees, referred to True North ("straight up" on the maps). Magnetic headings are calculated by taking the True headings and subtracting the Magnetic Declination (also called the Magnetic Variation in nautical applications). For example, if the map shows a variation (declination) of 12° east, this means that Magnetic North is 12° east of "straight up." So, a heading of 45° True is equivalent to a magnetic heading of 45° – 12° east = 33° magnetic. For a westerly variation (for example 6° west), add the value for variation. Thus, 45° True + 6° west = 51° magnetic. An old mariner's ditty, "east is least; west is best," can help you remember that you subtract an easterly declination or add a westerly declination to convert True to Magnetic.

◊ An error appears in Figure 1 of "The 'No Fibbin' RF Field Strength Meter" (Aug 2002 *QST*, p 28). The correct way to wire D2 is the anode to ground and the cathode to the anode of D1 (also the junction of R1 and D1). As shown in the photos, C1 is optional and an additional 0.01 µF bypass capacitor can be installed across the meter movement.—*John Noakes, VE7NI*

Previous • Next Feedback



Revised Figure 1

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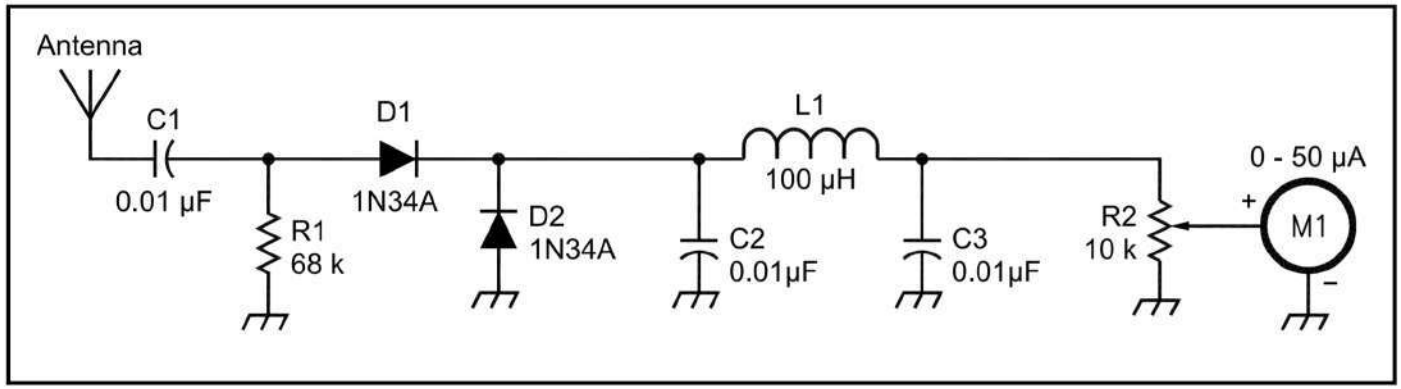


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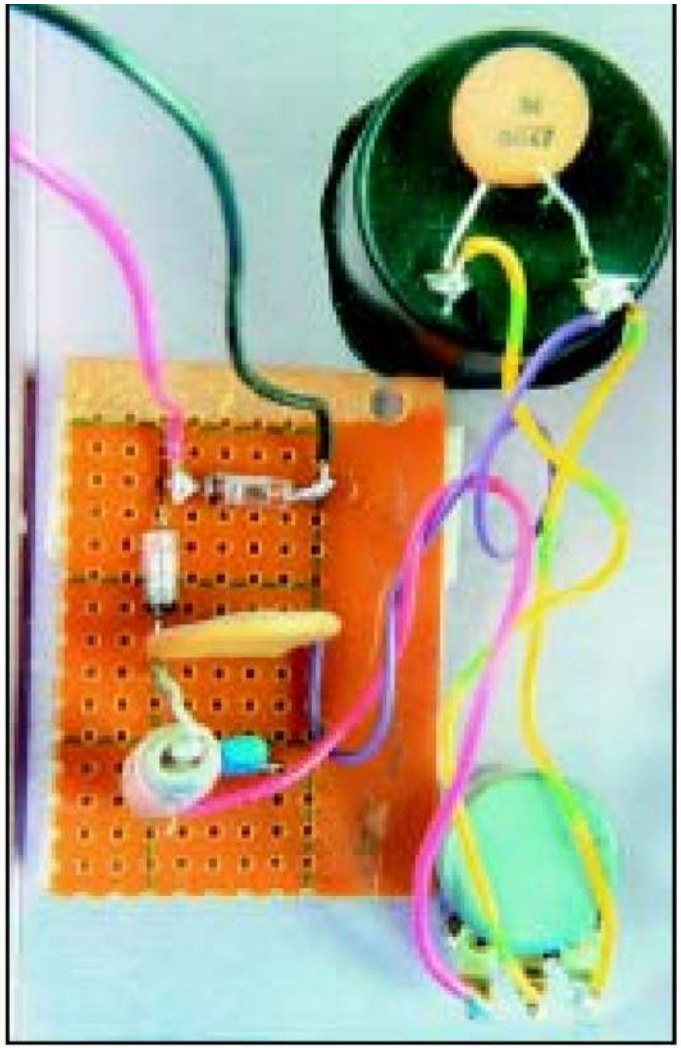


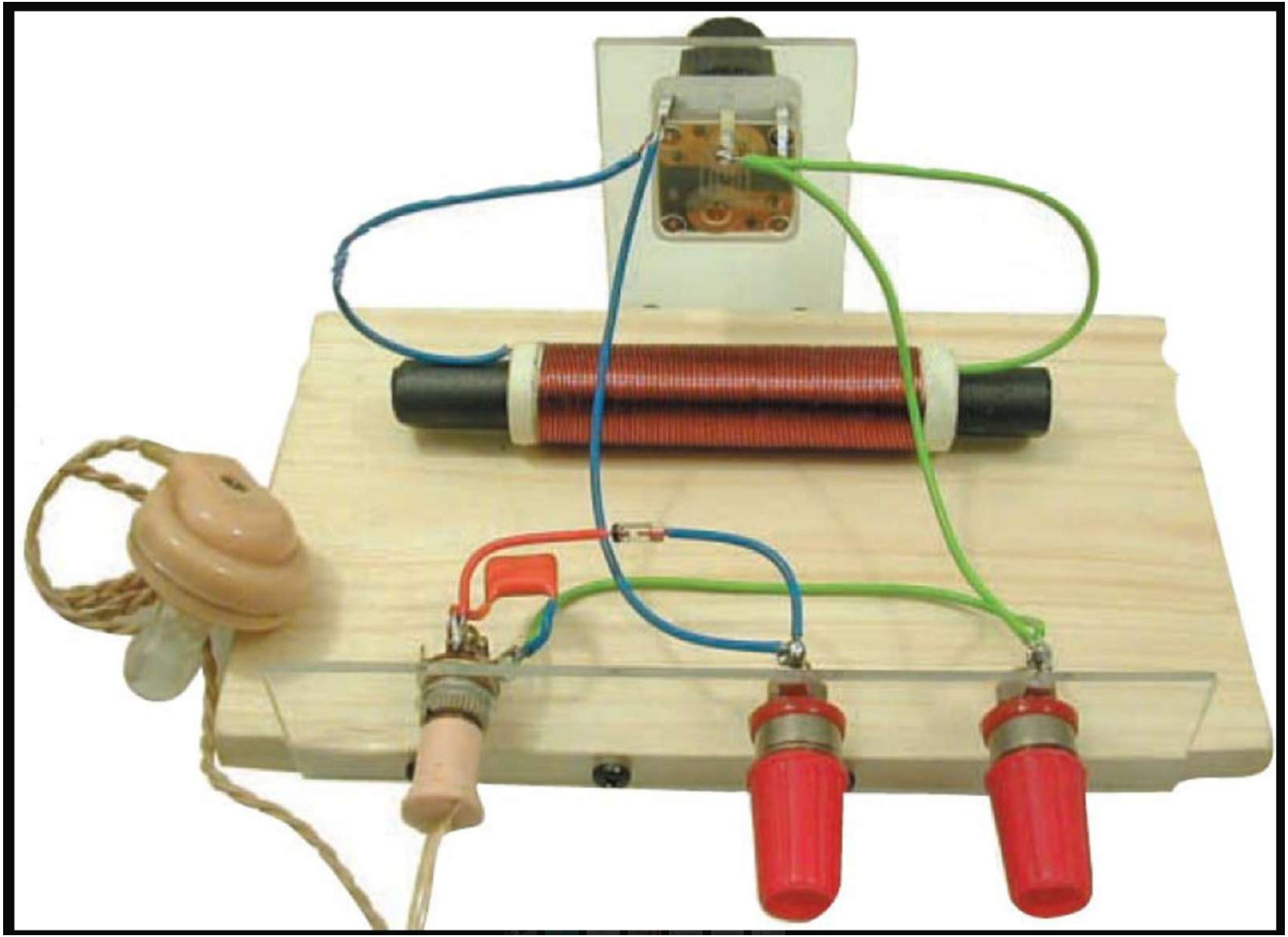
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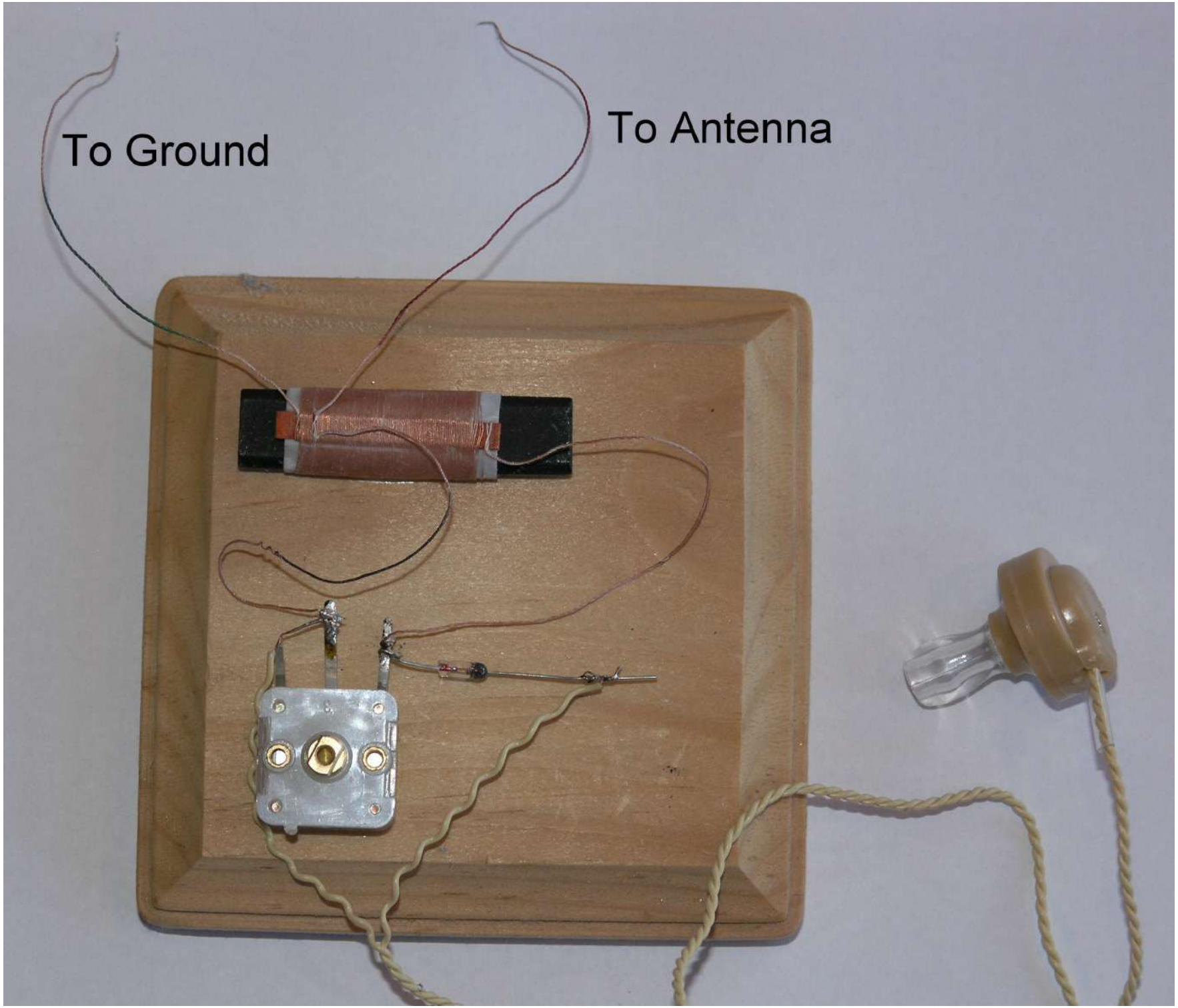


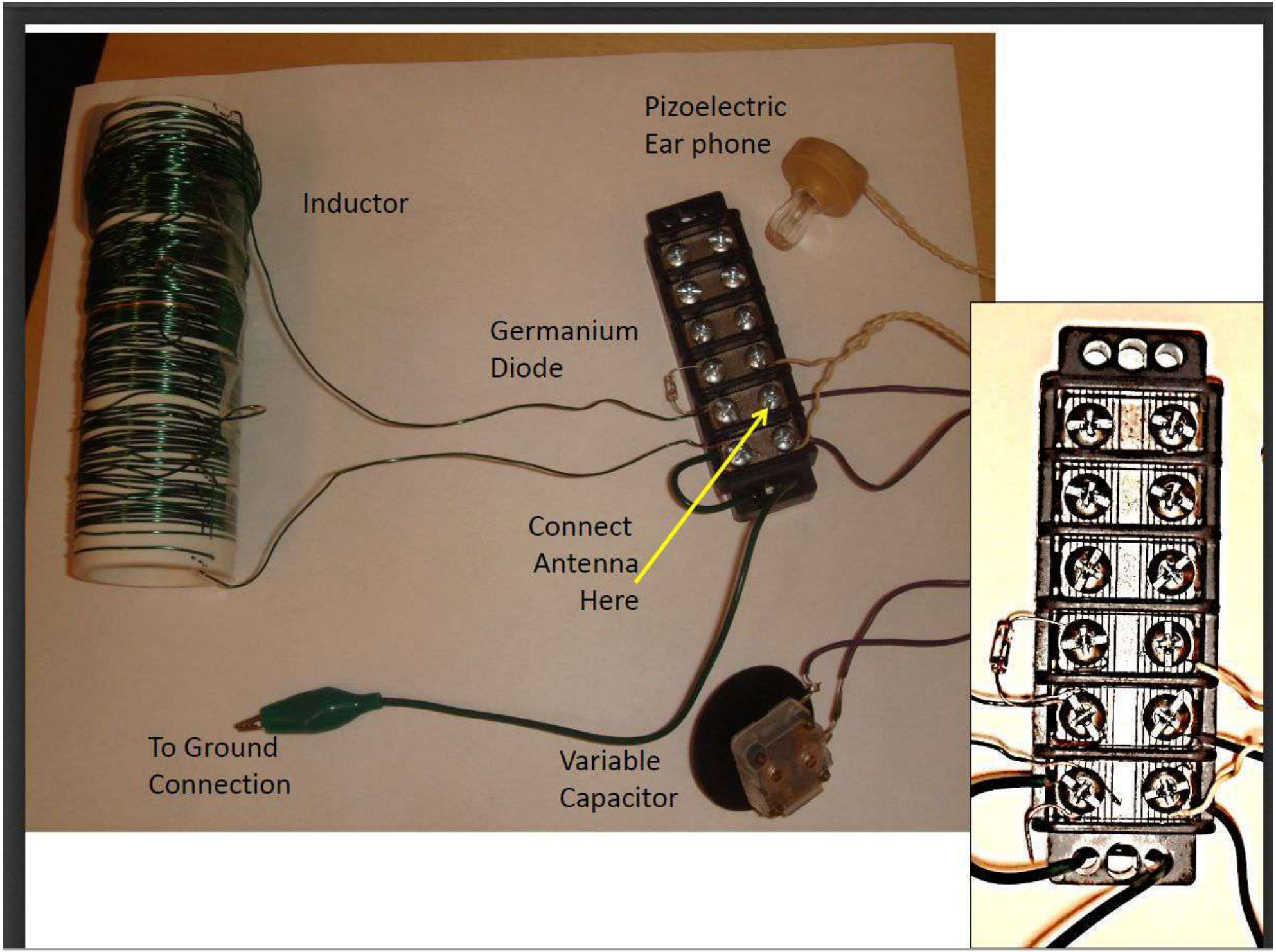
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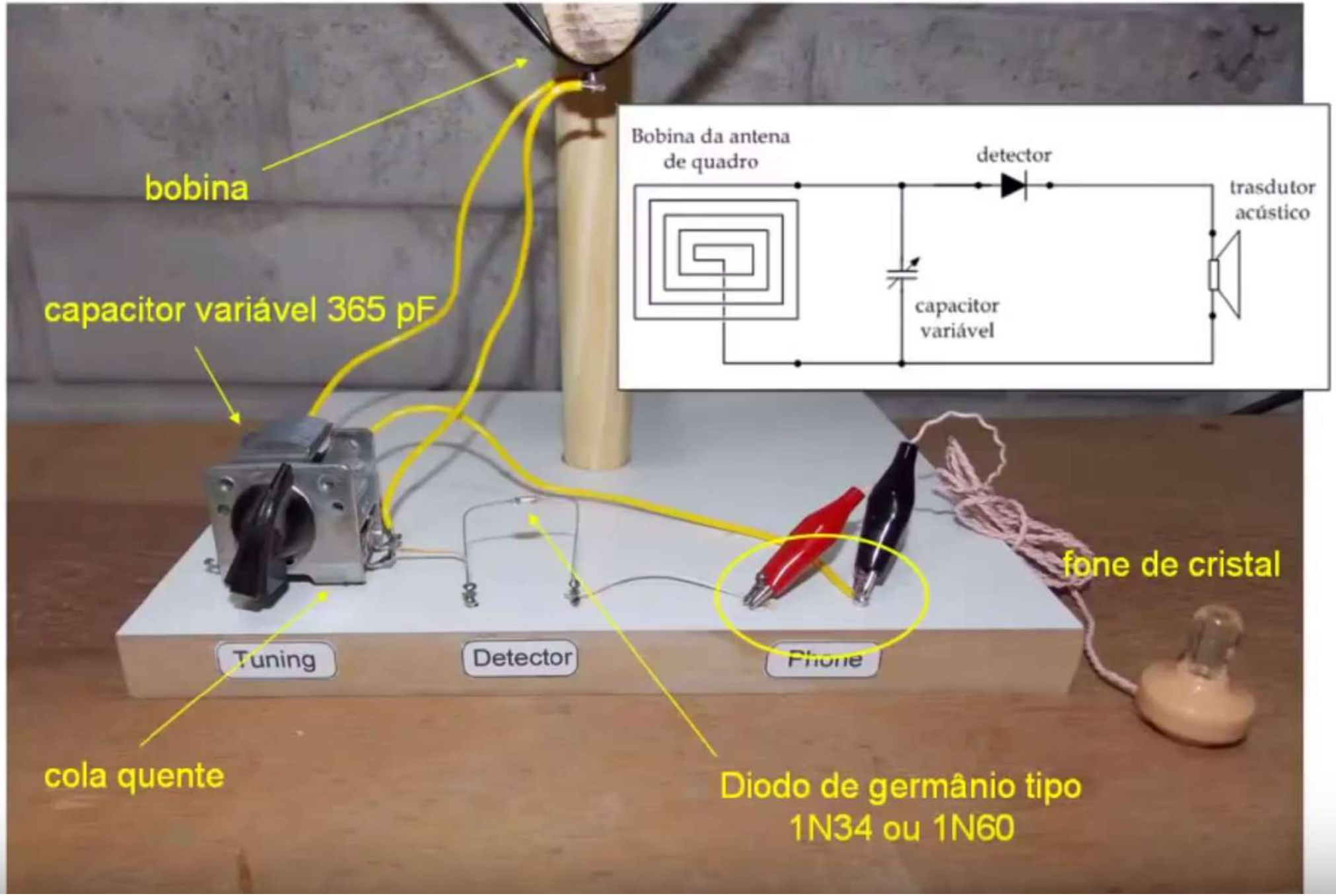
FEEDBACK

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To Ground
To Antenna


Pizoelectric
Ear phone
Inductor
Germanium
Diode
Connect
Antenna
Here
To Ground
Connection
Variable
Capacitor


bobina
capacitor variável 365 pF
cola quente
Diodo de germânio tipo
1N34 ou 1N60
fone de cristal
Tuning
Detector
Phone
Bobina da antena
de quadro
detector
trasdutor
acústico
capacitor
variável

Radio a galena FM

per la "banda commerciale" 88 – 108 MHz



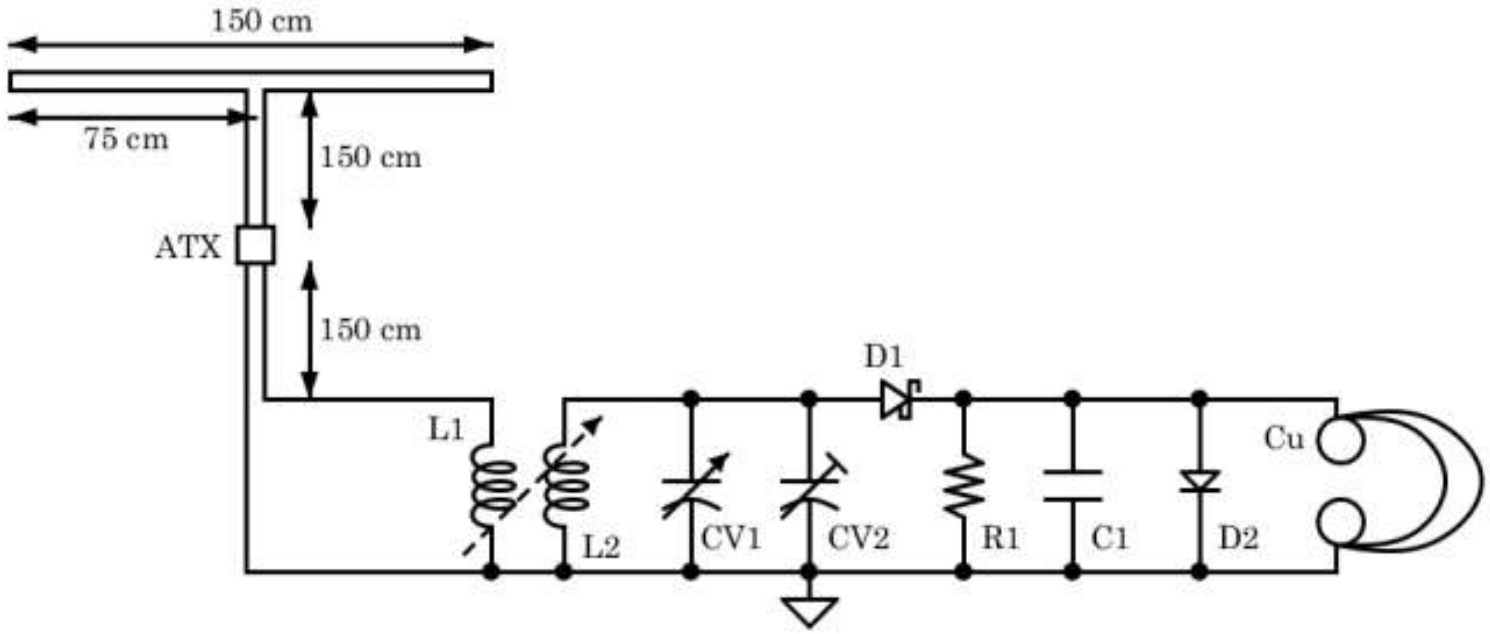


Figura 2: Schema elettrico della radio a galena FM.

I componenti adoperati sono:

- L1 = vedi testo (sezione Bobine L1 e L2);
- L2 = $0.137\mu H$, vedi Figura 7;
- CV1 = Johnson 160-211-1 $(2.7 - 10.8)pF$ per sezione;
- CV2 = trimmer tubolare da $(5 \div 15)pF$;
- D1 = diodo Schottky Skyworks modello SMS7630-001;
- D2 = diodo di segnale 1N4148;
- R1 = $47k\Omega$, 1/4W;
- C1 = $100pF$ ceramico a disco;
- Cu = cuffie ad alta impedenza ($2k\Omega$ o superiore);
- ATX = connettore ATX femmina e header pin;
- Due connettori banana femmina.



Figura 8: Vista posteriore del cablaggio

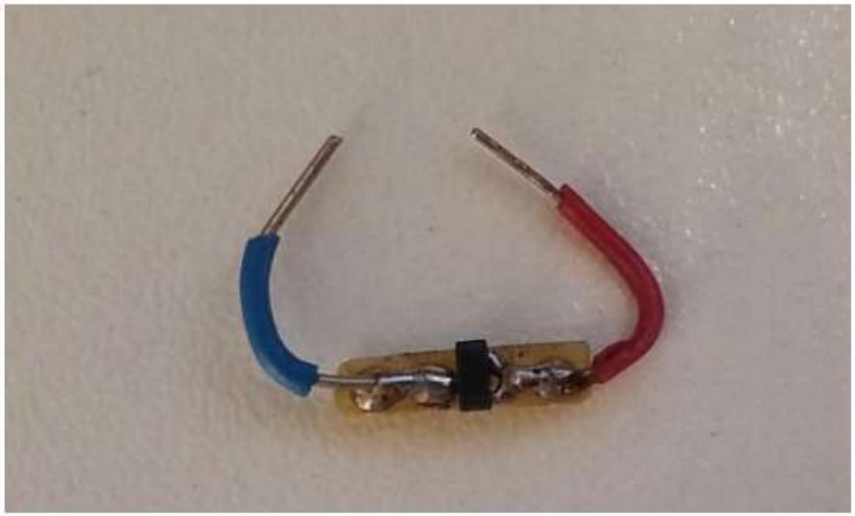
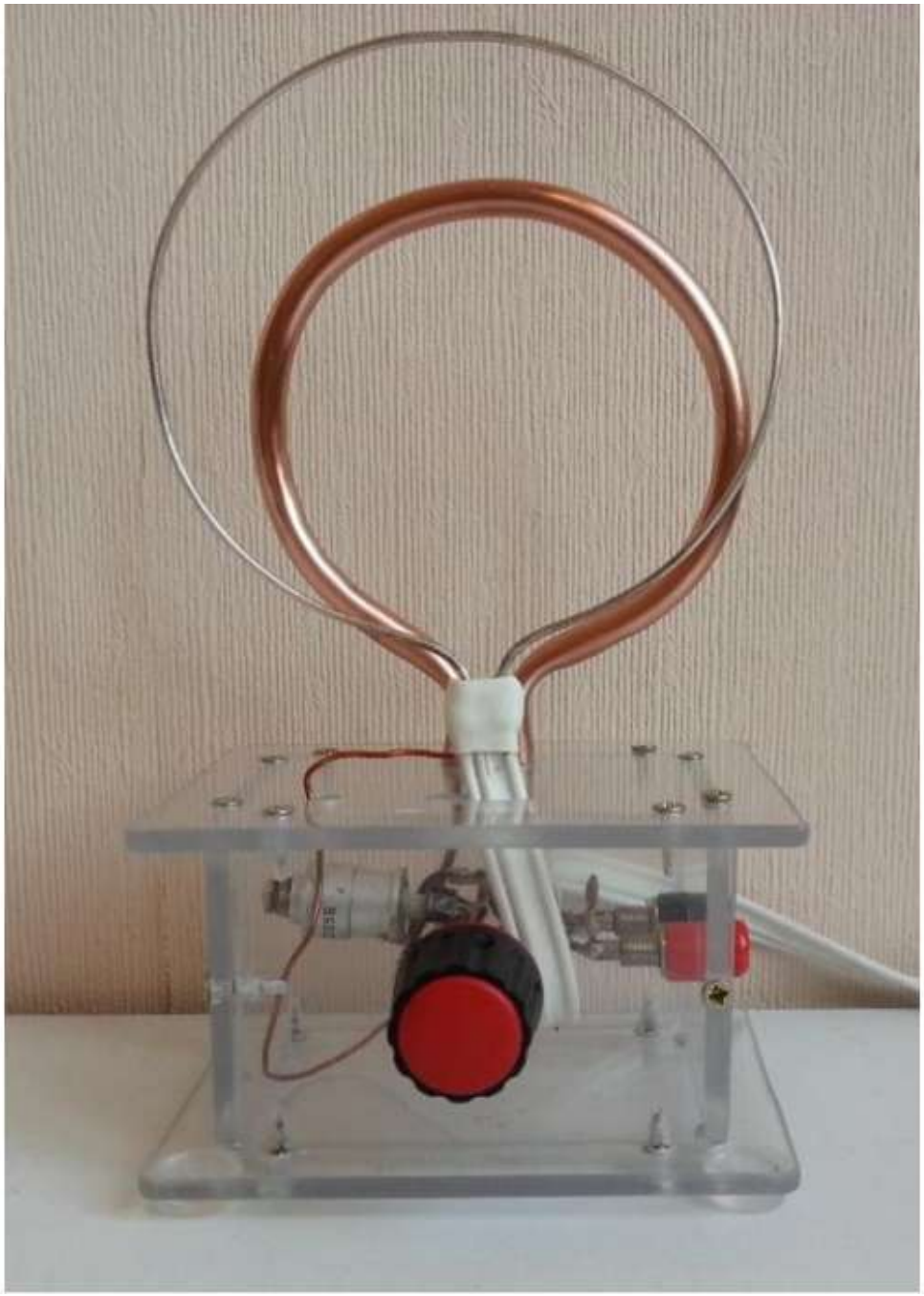


Figura 9: Particolare del diodo sulla basetta millefori.

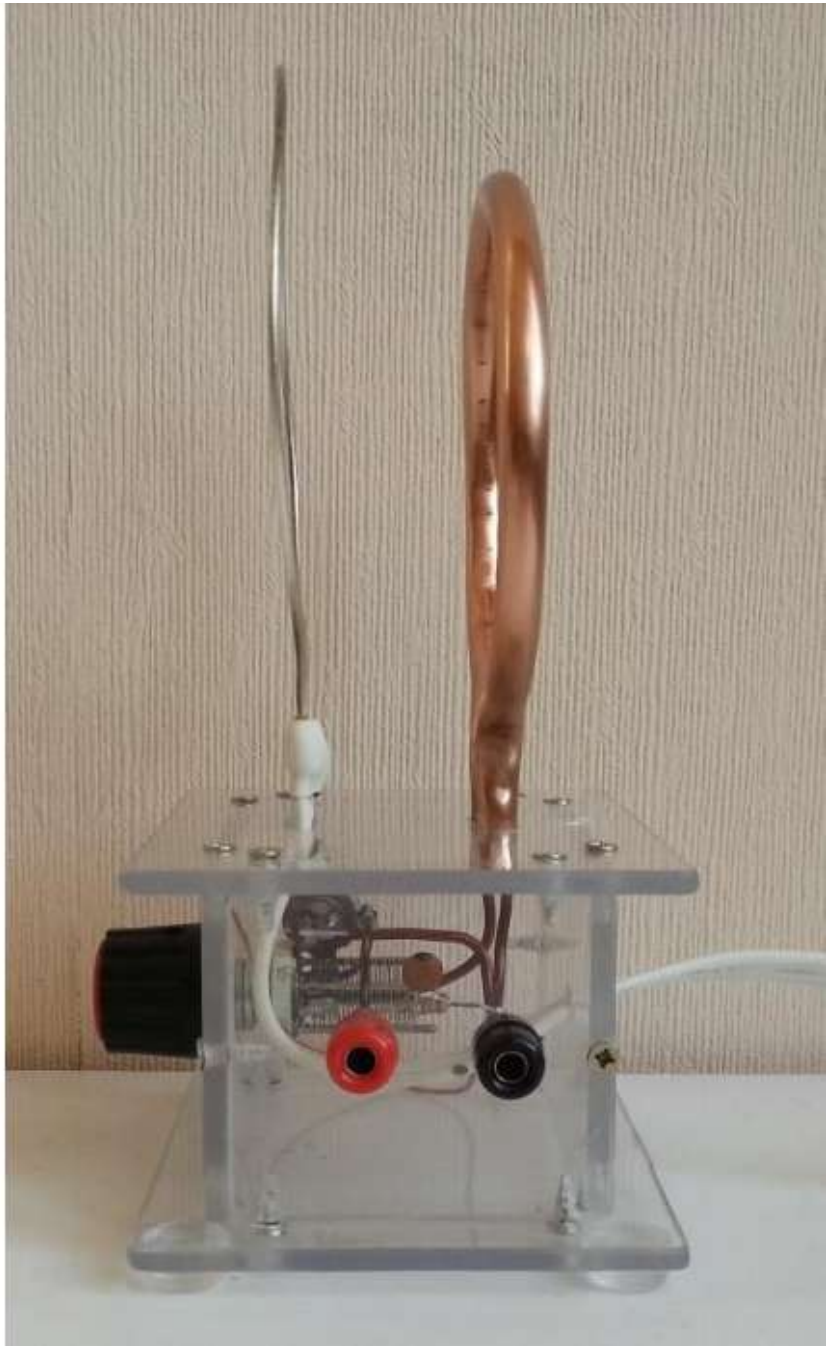


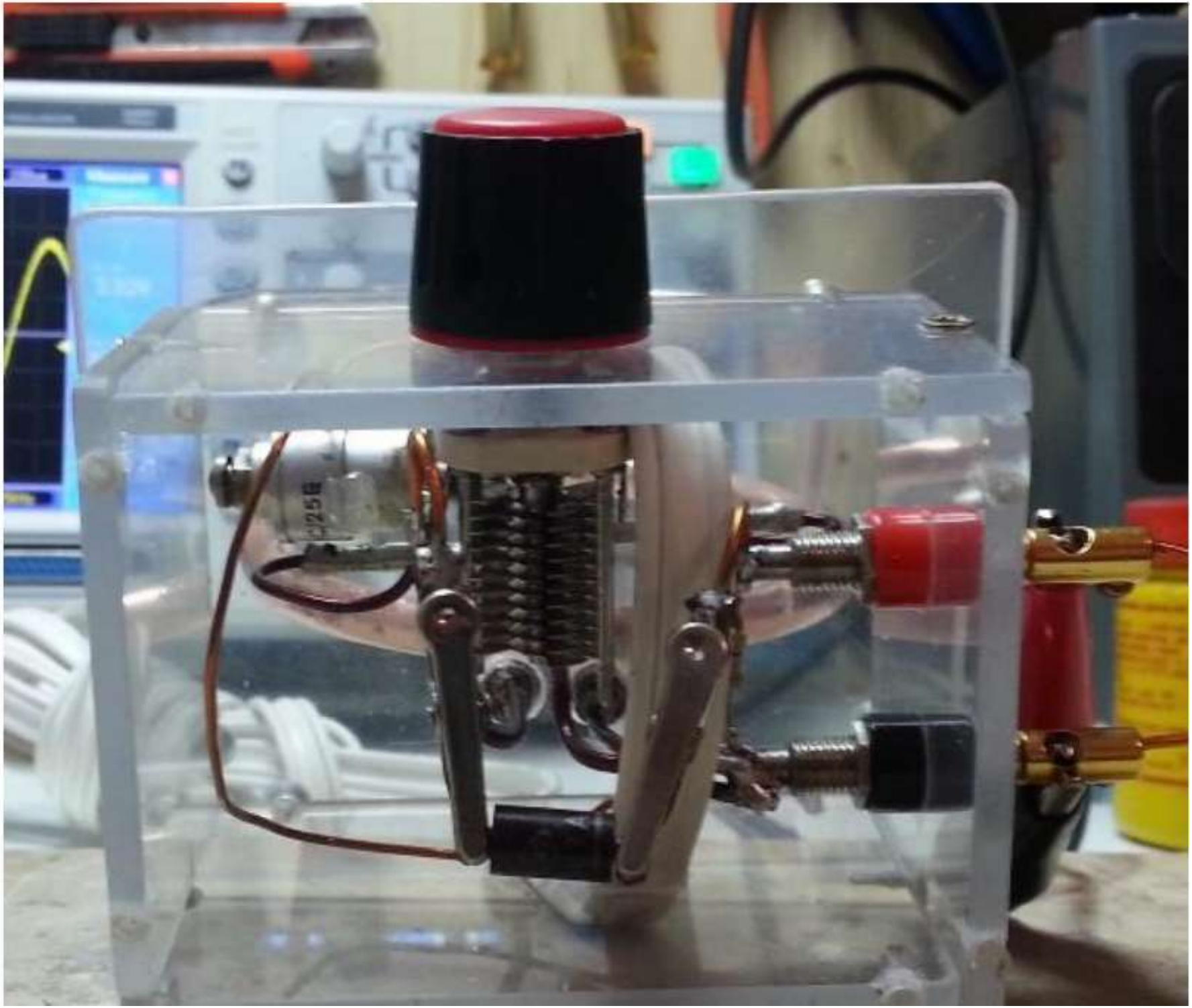
Figura 10: Cablaggio del diodo rivelatore.

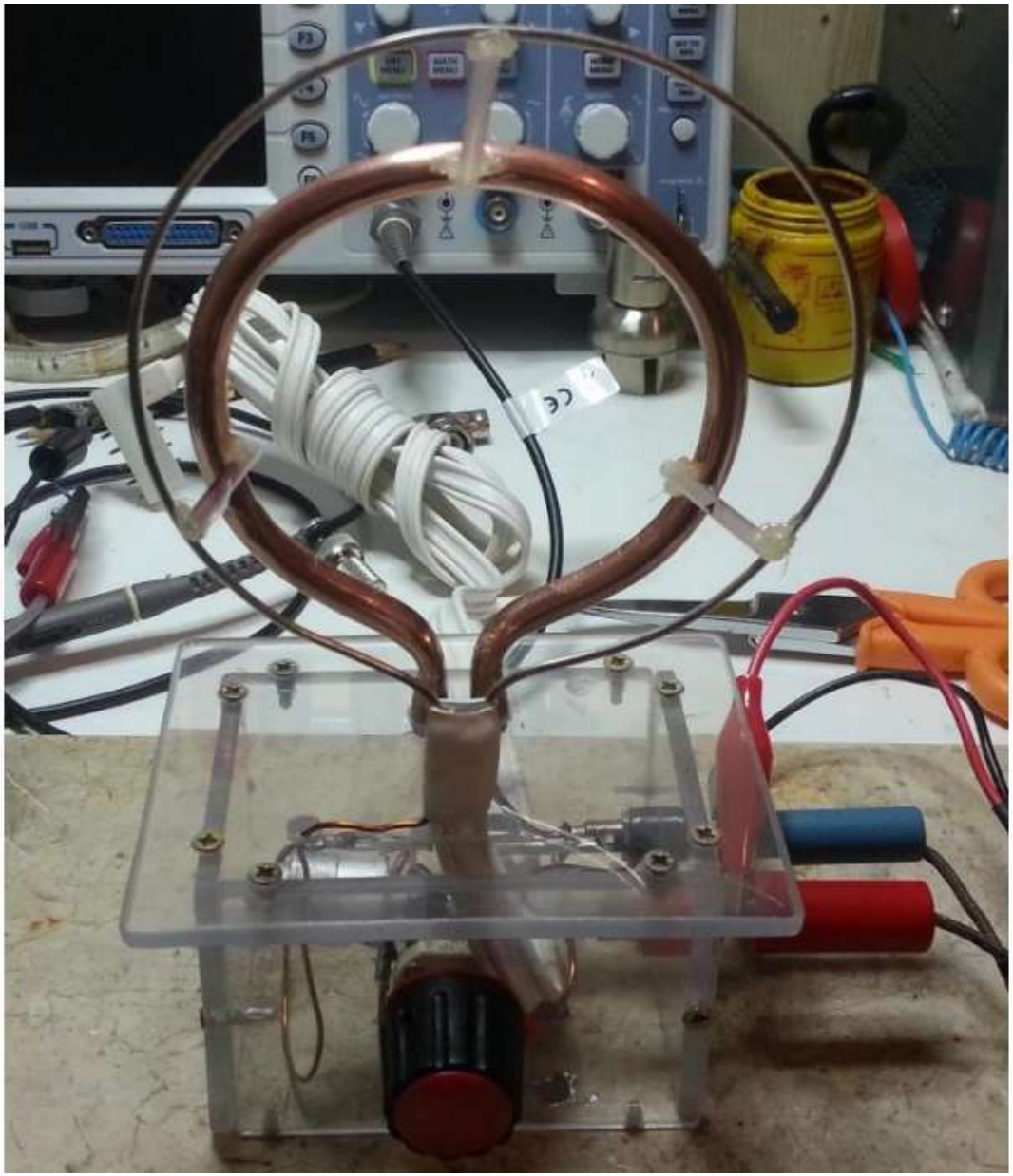


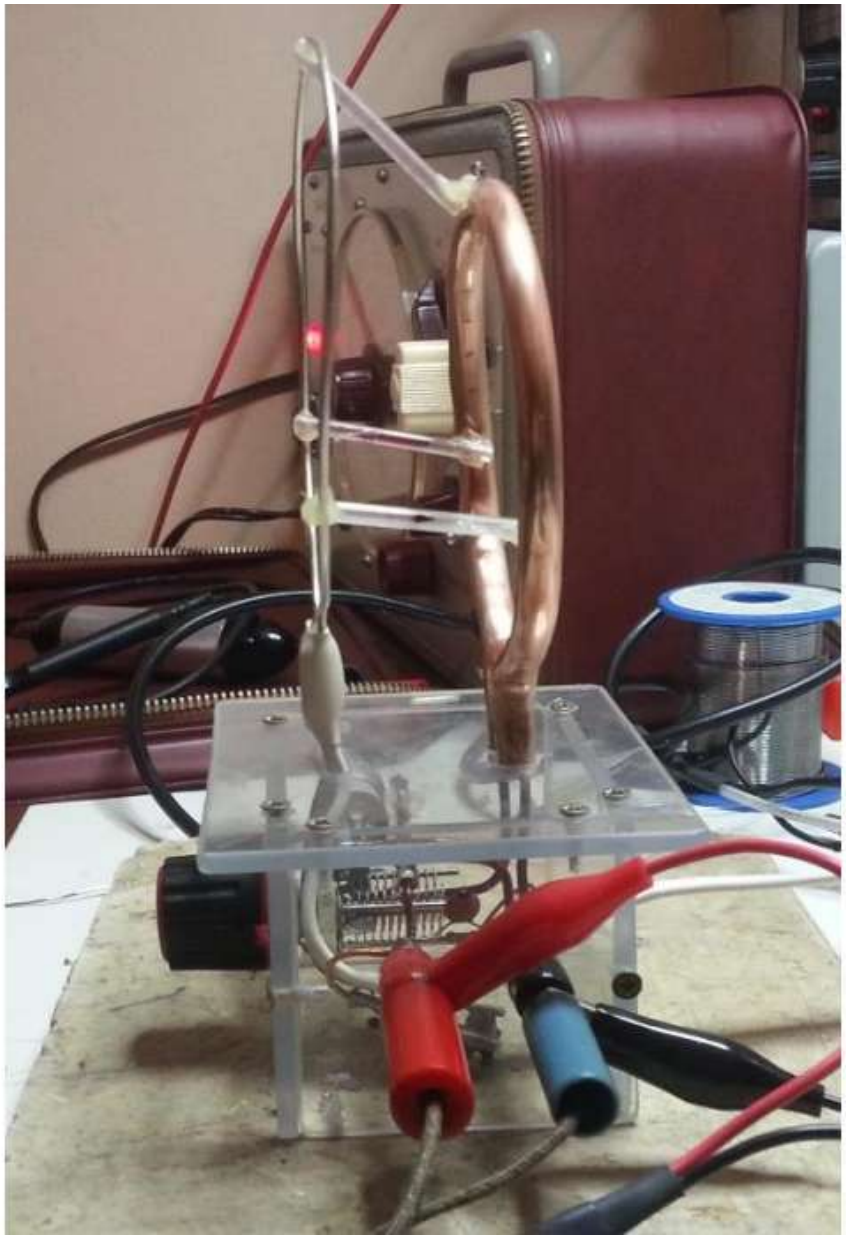


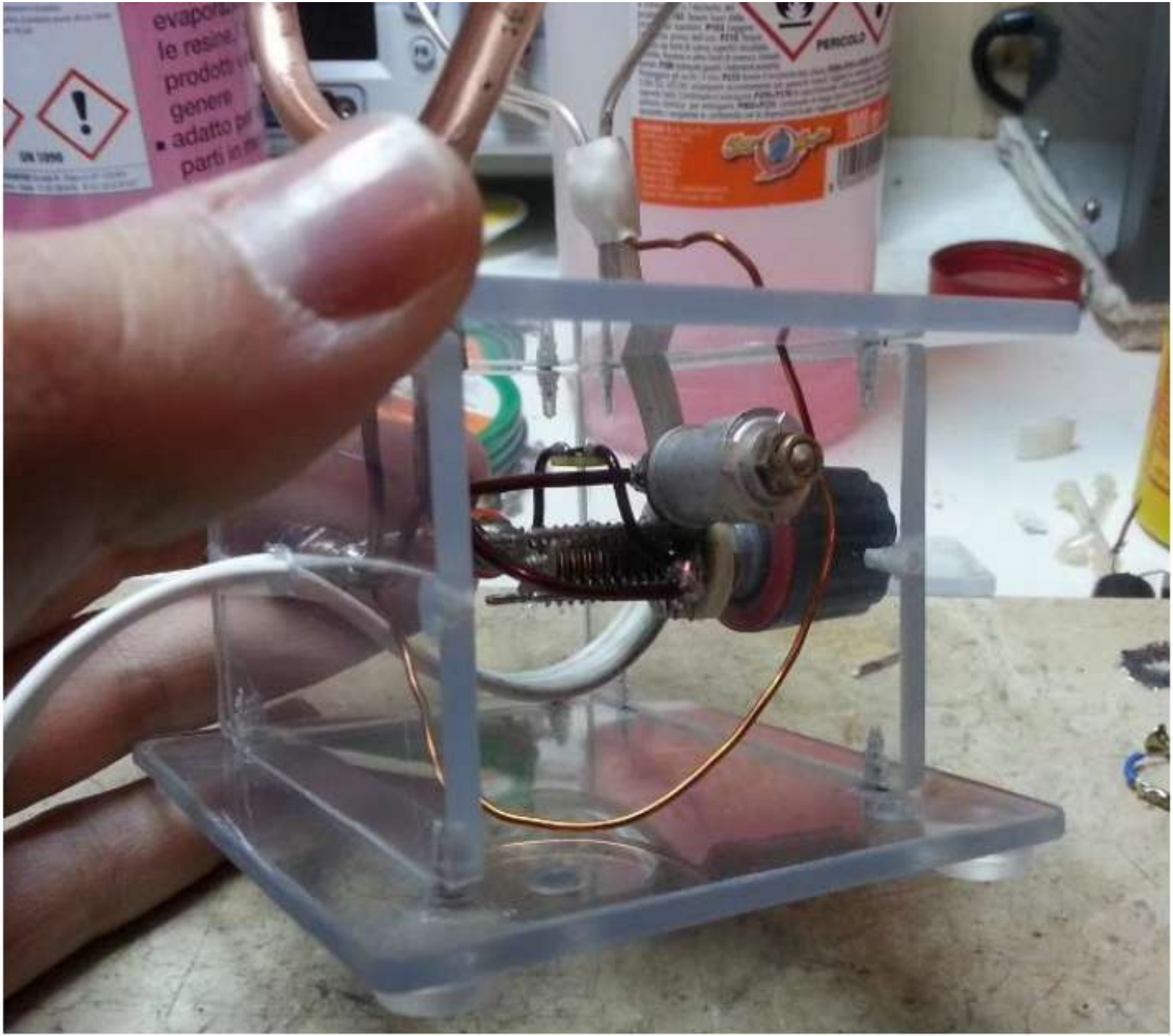


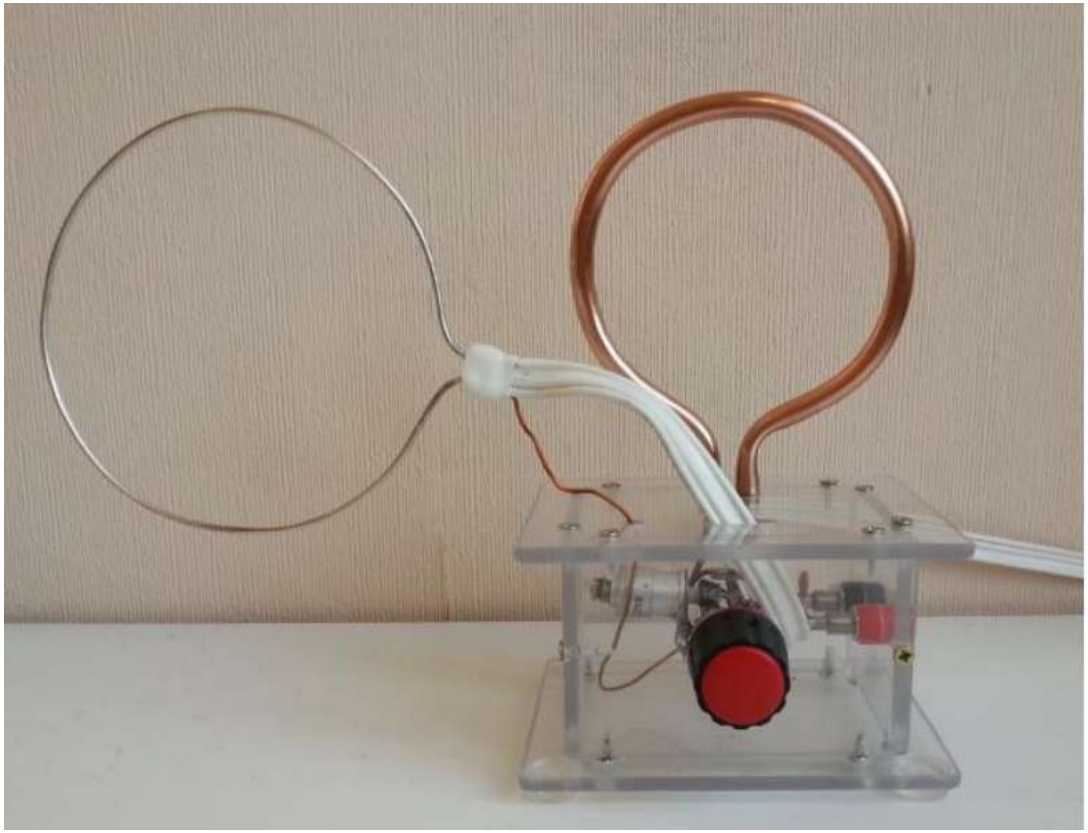


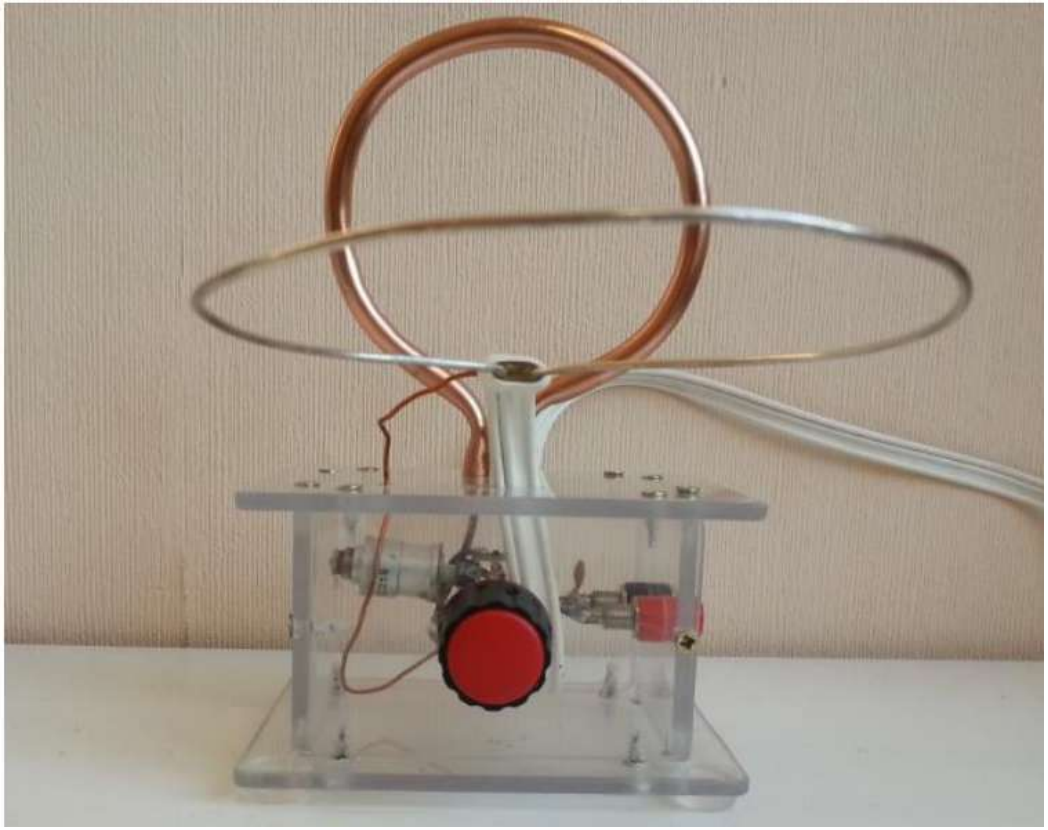


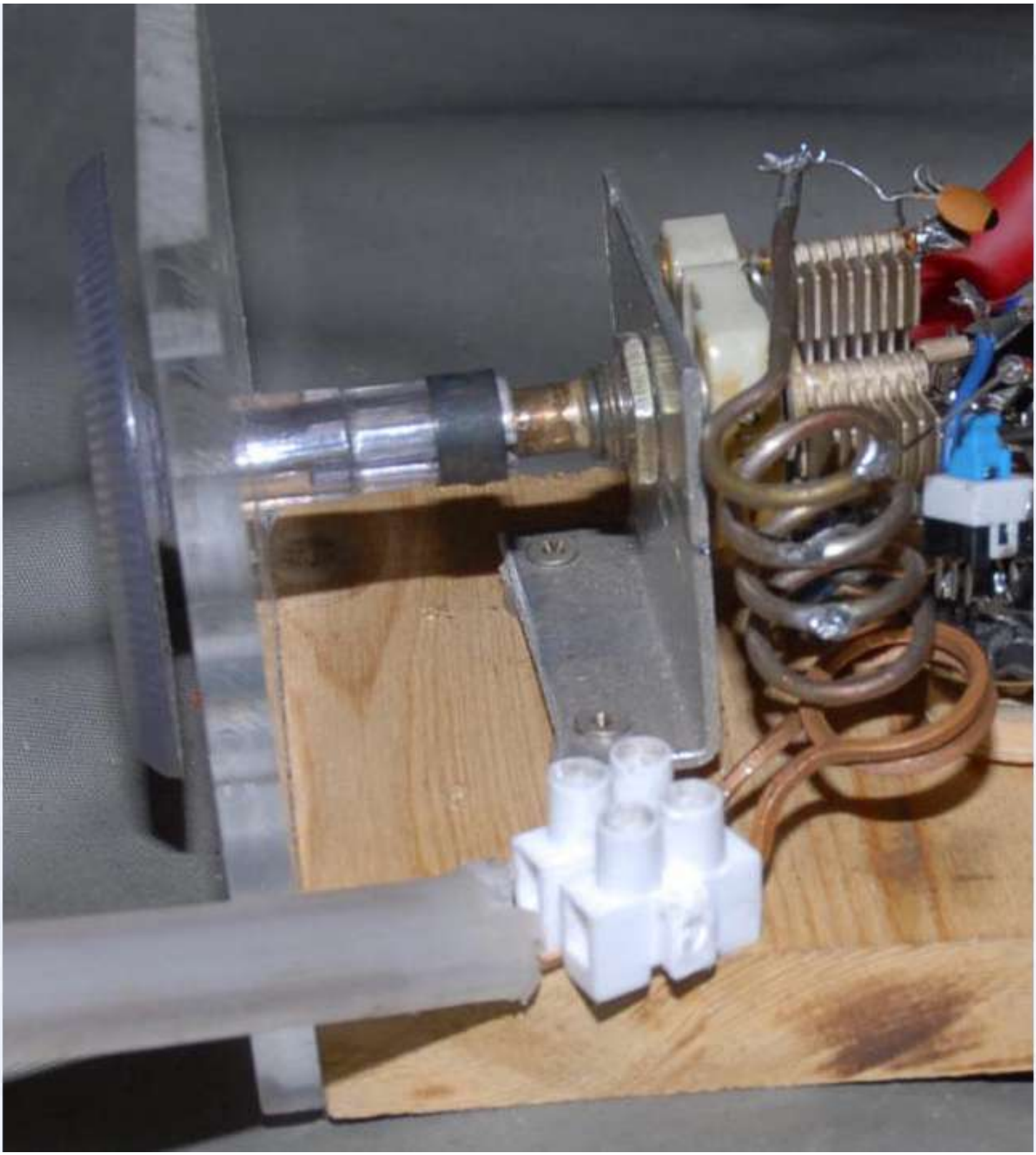


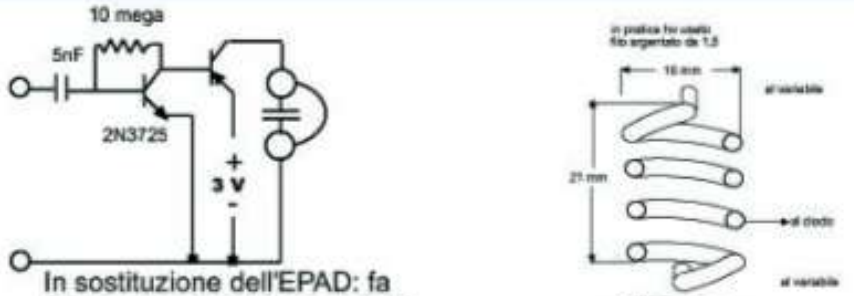



PERICOLO

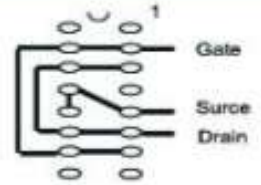




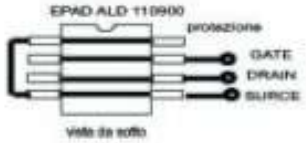


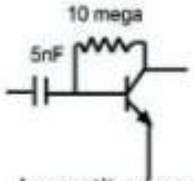


In sostituzione dell'EPAD: fa fortissimo ma occorre una pila



ALD110800vista dal sotto





In sostituzione dell'EPAD, ma richiede almeno 1 V di alimentazione rubata

NOTA
con un buon segnale funziona senza amplificatore

piattina da 300 ohm cortocircuitata sopra e sotto (144 cm per 100 MHz) appesa verticalmente

2 spire

AA143

EPAD

gate

drain

surce

Tenendo staccata la cuffia, col condensatore da 0,1 F si raddop pia la V di aliment.

anche a distanza

tenendo staccata la cuffia

18 pf

2-15 pf

47k

82 pf

diodo a 3,5 spire

0,1 F

82 pf

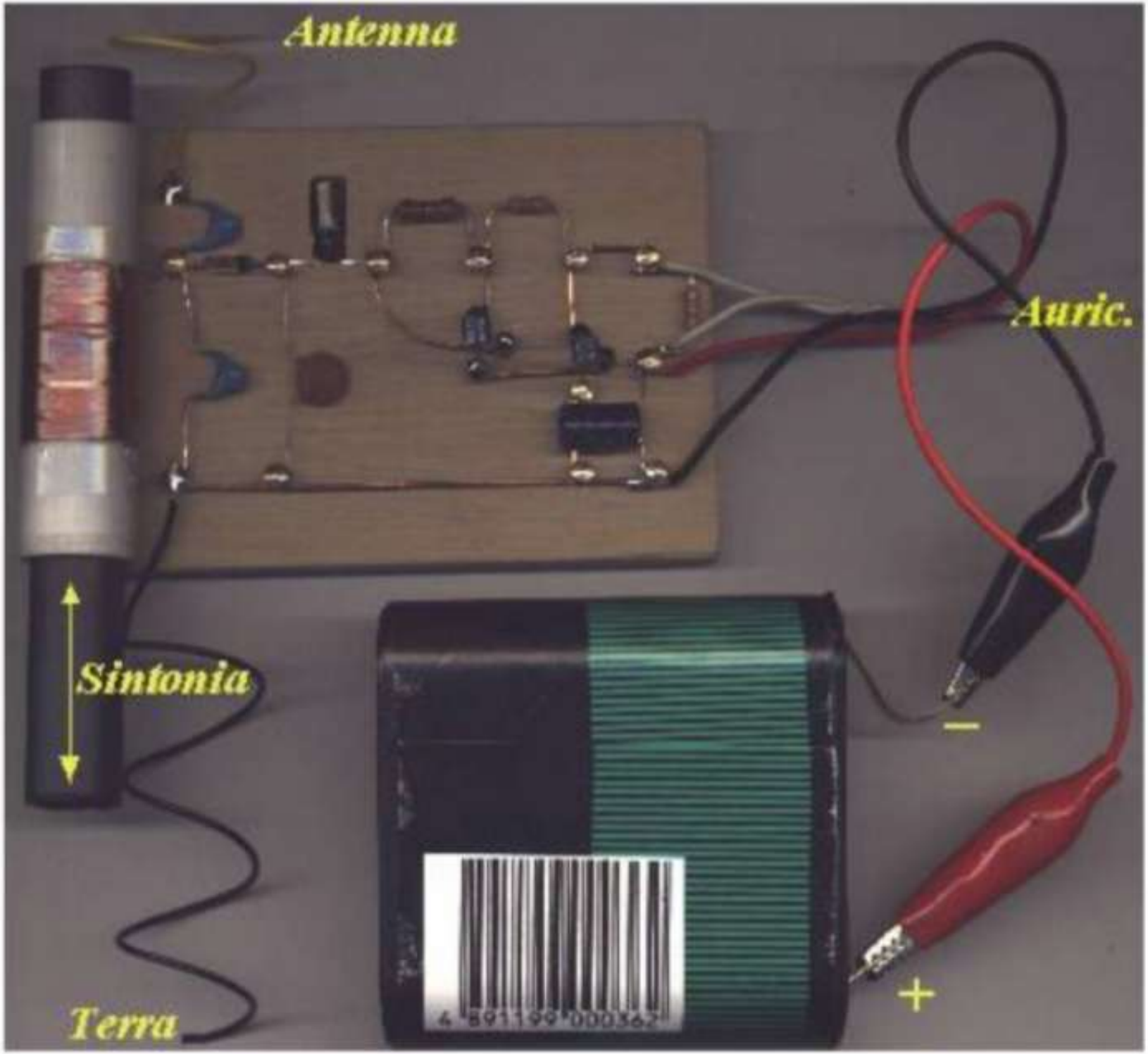
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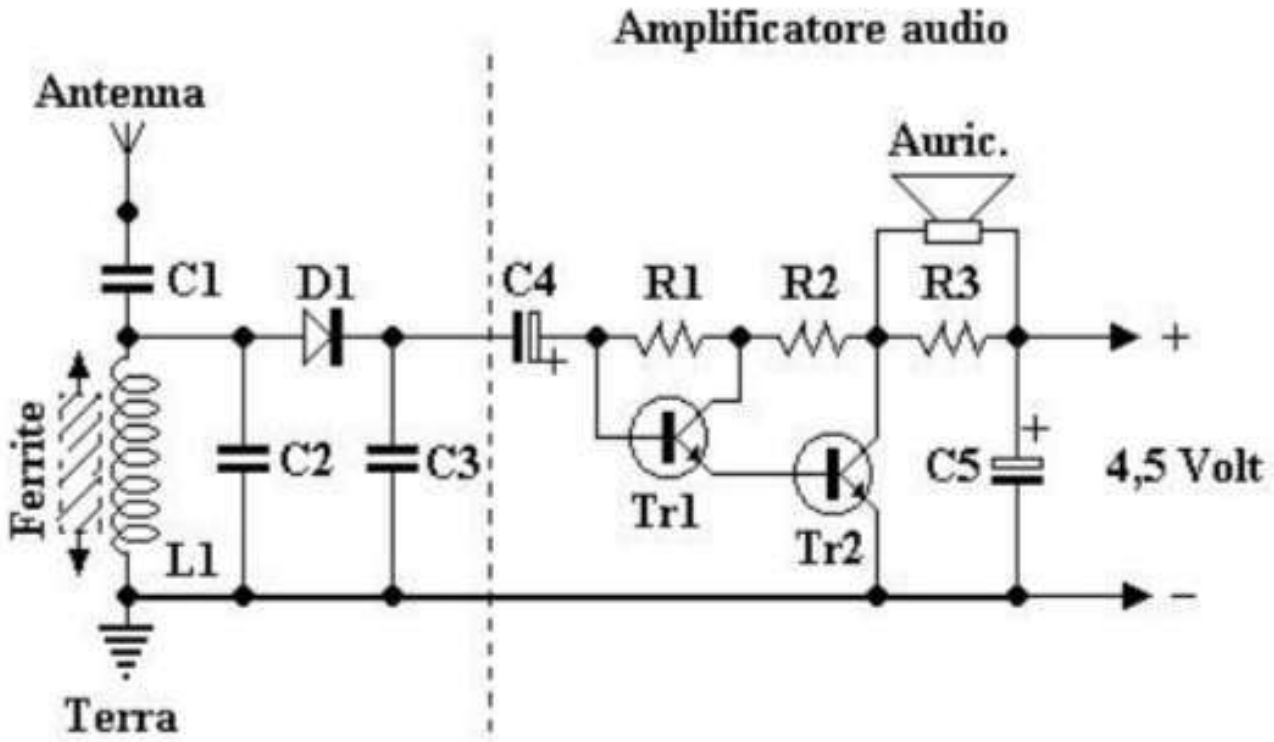
GALENA PER FM AD ALIMENTAZIONE RUBATA
L'EPAD si può trovare presso la MOUSER USA, Monaco, Milano

la piattina è lunga 0,96 lambda ovvero 144 cm per 100 MHz

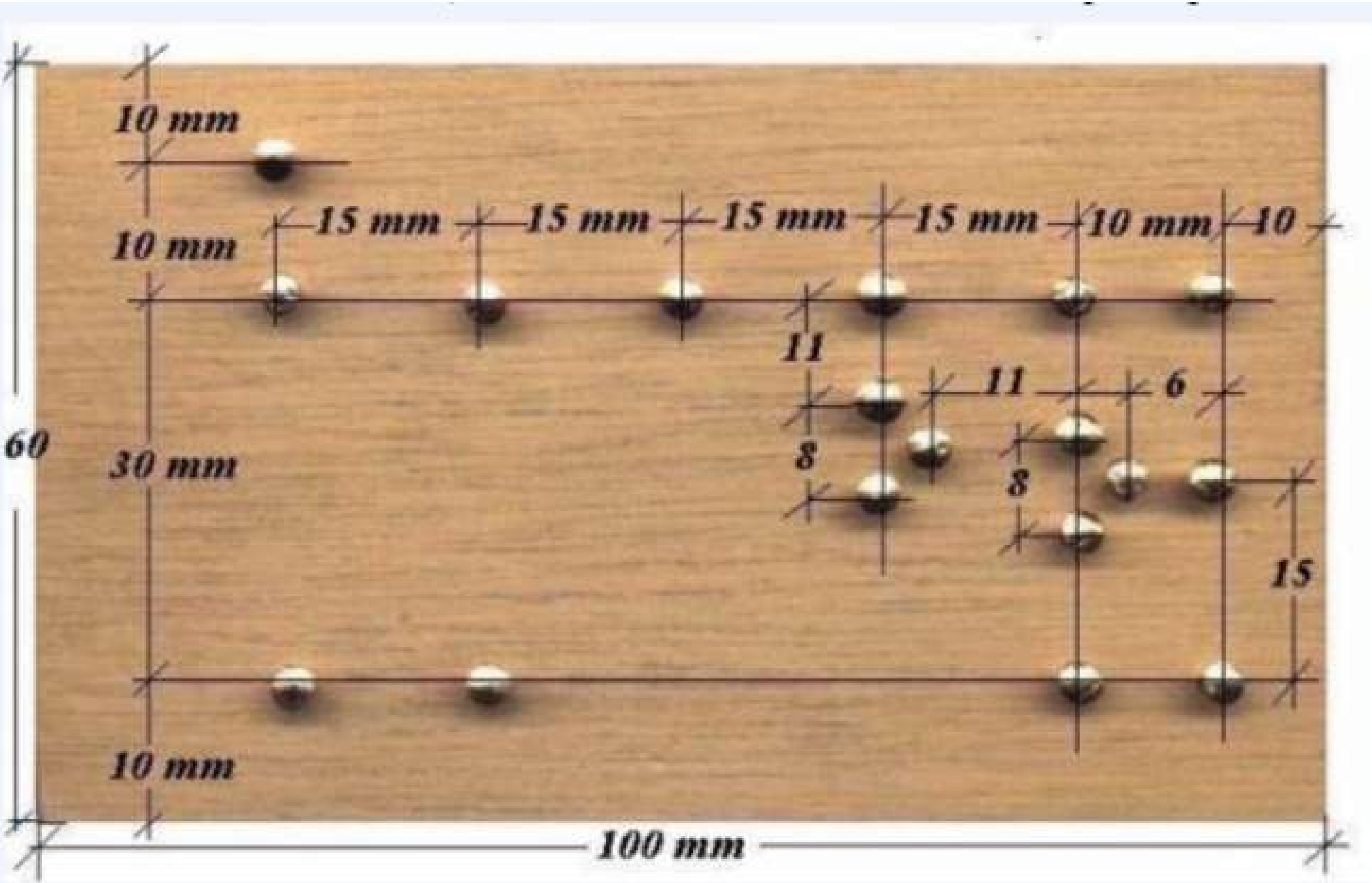
La calata può essere di piattina oppure il diodo subito al dipolo e poi due normali conduttori

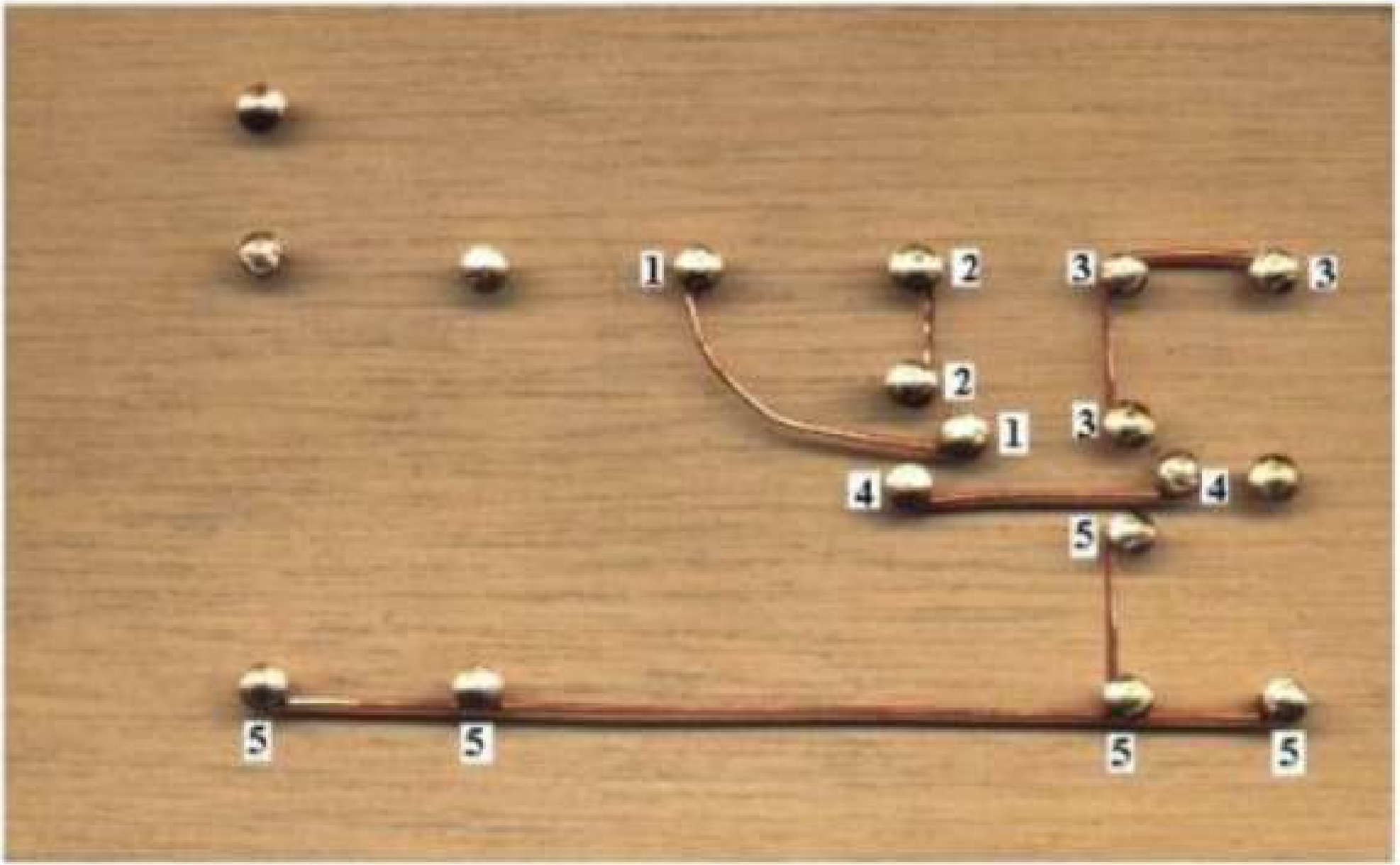

Antenna
Auric.
Sintonia
Terra
–
+

Schema elettrico

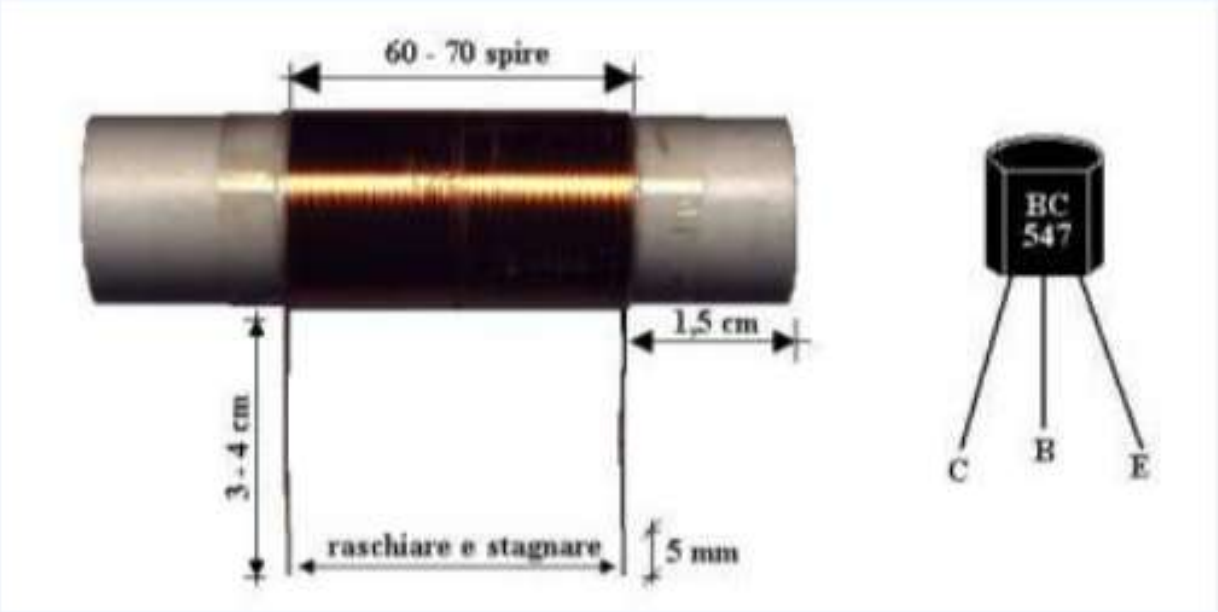


Componenti:
L1 = bobina 60/70 spire
C1 = condensatore 470 pF
C2 = condensatore 220pF
C3 = condensatore 4,7 nF
C4 = condensatore 1 uF elettr.
C5 = condensatore 47 uF elettr.
R1 = resistore 1 Mohm
R2 = resistore 4,7 Kohm
R3 = resistore 2,2 Kohm
D1 = diodo al germanio
Tr1 = transistor NPN BC547
Tr2 = transistor NPN BC547
Auricolare = Z da 100 Kohm
Ferrite = nucleo scorrevole di sintonia

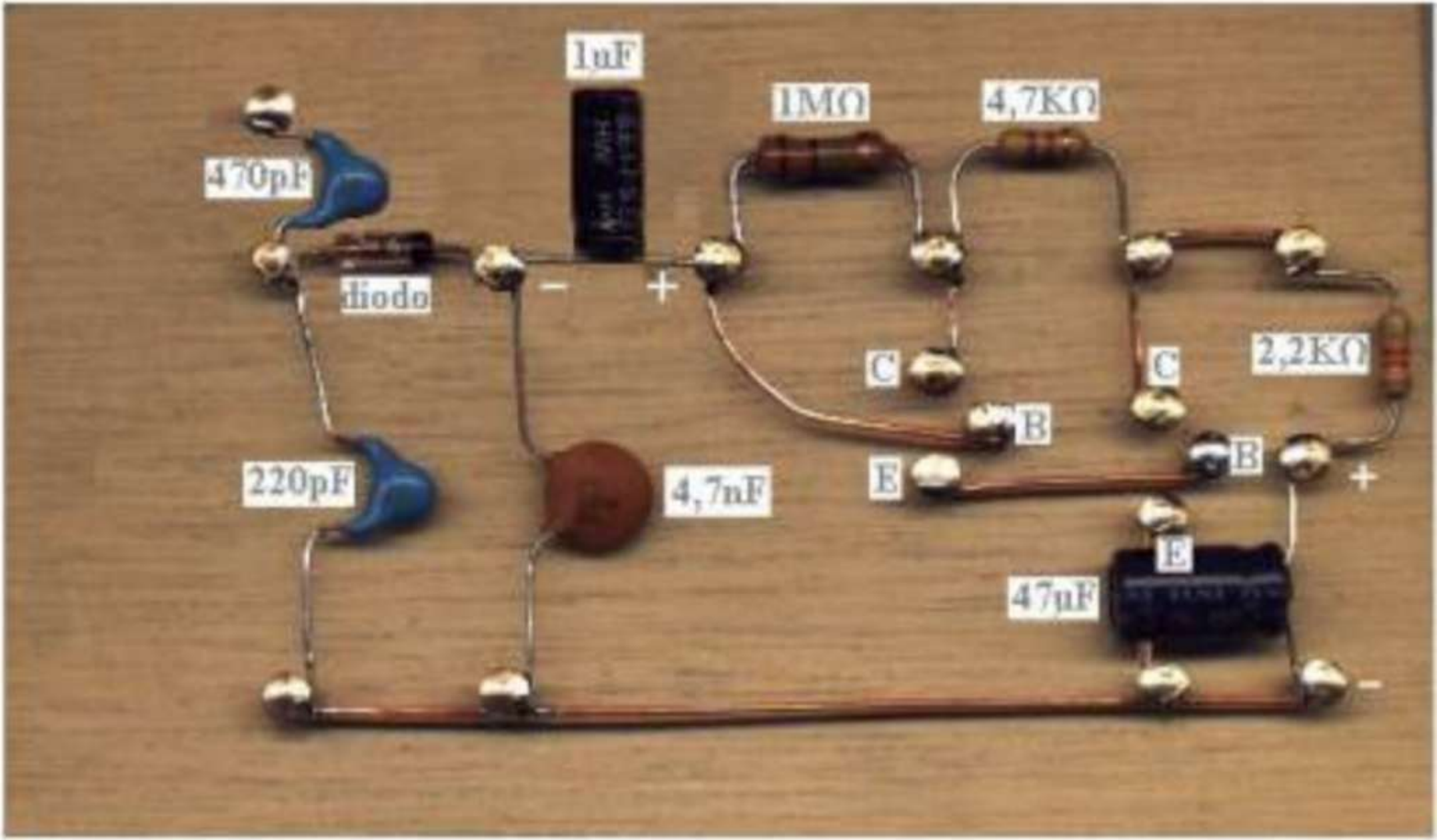

10 mm
10 mm
15 mm
15 mm
15 mm
15 mm
10 mm
10
11
11
6
8
8
60
30 mm
15
10 mm
100 mm


1
2
3
3
2
1
3
4
4
5
5
5
5
5

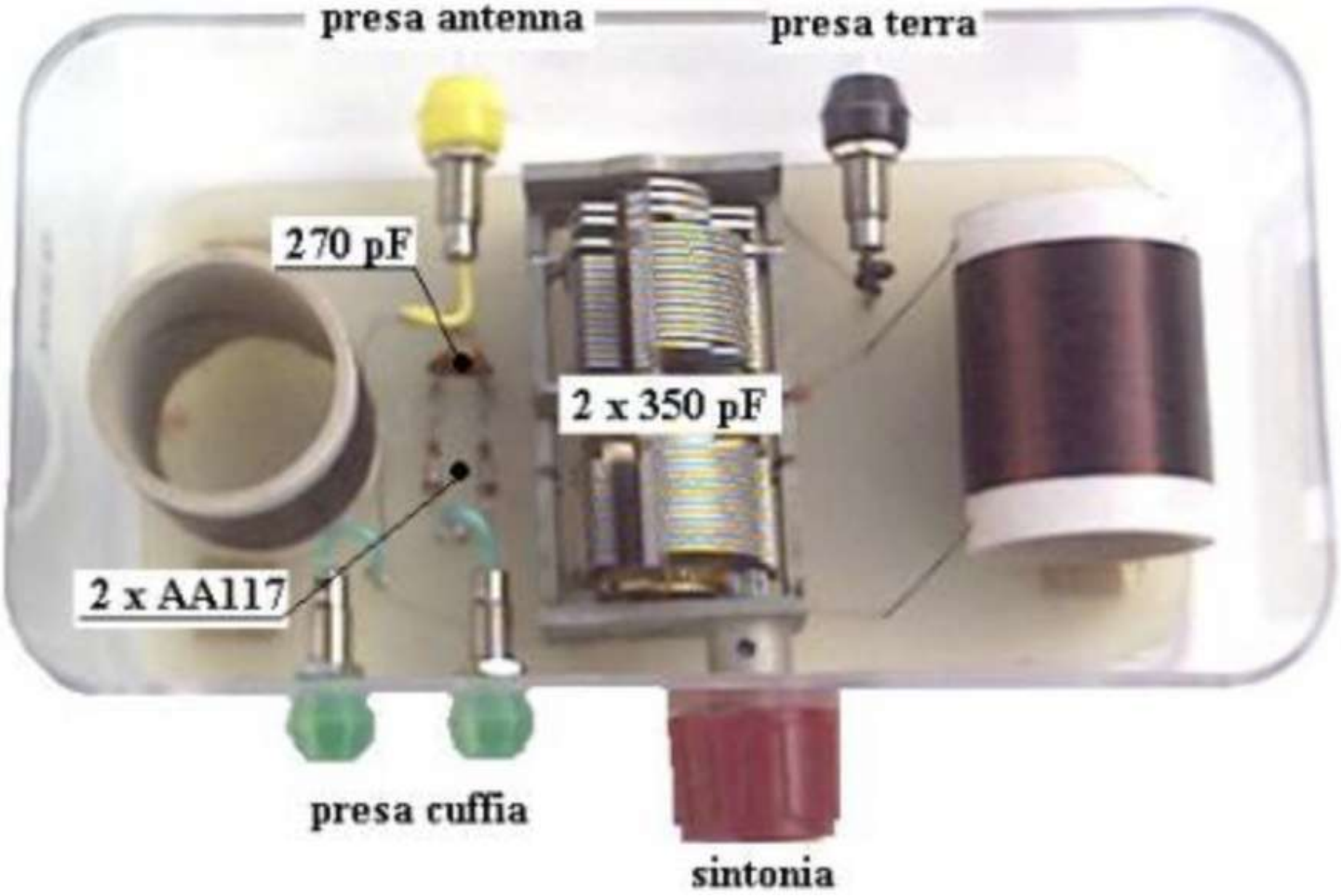
Terminato l'avvolgimento, perché questo non si svolga, sarà bene rivestirlo con un giro di nastro adesivo trasparente, i terminali vanno raschiati dallo smalto e stagnati, la bobina trova spazio sul lato sinistro della basetta e va collegata ai capi del condensatore da 220 pF, due gocce di colla saranno sufficienti a tenerla in posizione, anche la colla a caldo o il silicone sono una buona soluzione.

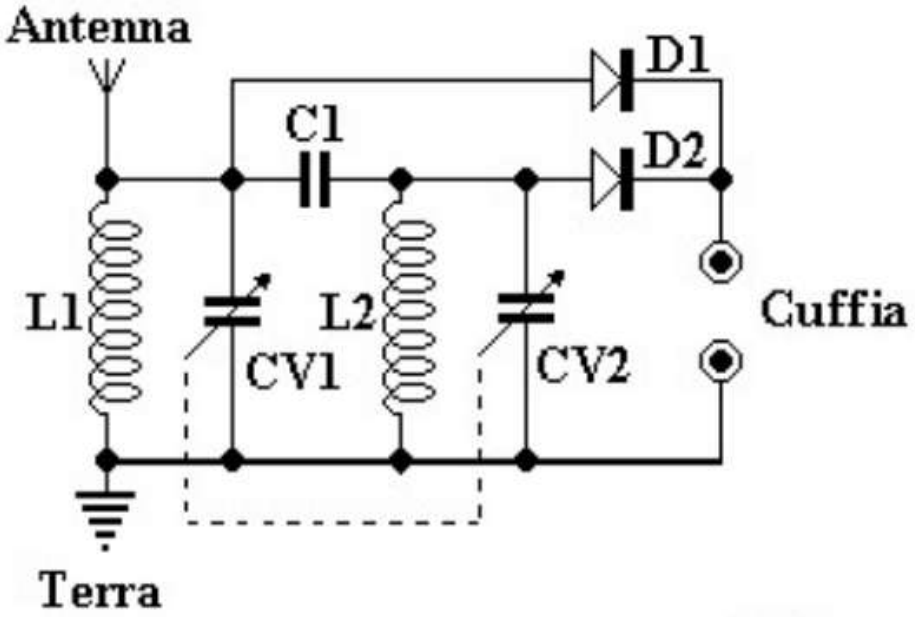


A questo punto si salderanno, al loro posto direttamente sulla testa dei chiodini, i due transistor (occorre fare attenzione per non sbagliare nell'identificare i terminali), i fili rosso-nero provvisti delle pinzette a coccodrillo per il collegamento alla pila, l'auricolare o la cuffia ai capi della resistenza da 2,2 Kohm, il filo d'antenna al terminale del condensatore da 470 pF, il filo per il collegamento di terra al negativo.


1uF
1MΩ
4,7KΩ
470pF
diodo
−
+
C
C
2,2KΩ
B
B
+
220pF
4,7nF
E
E
47nF
−

Un progetto di Luciano Loria

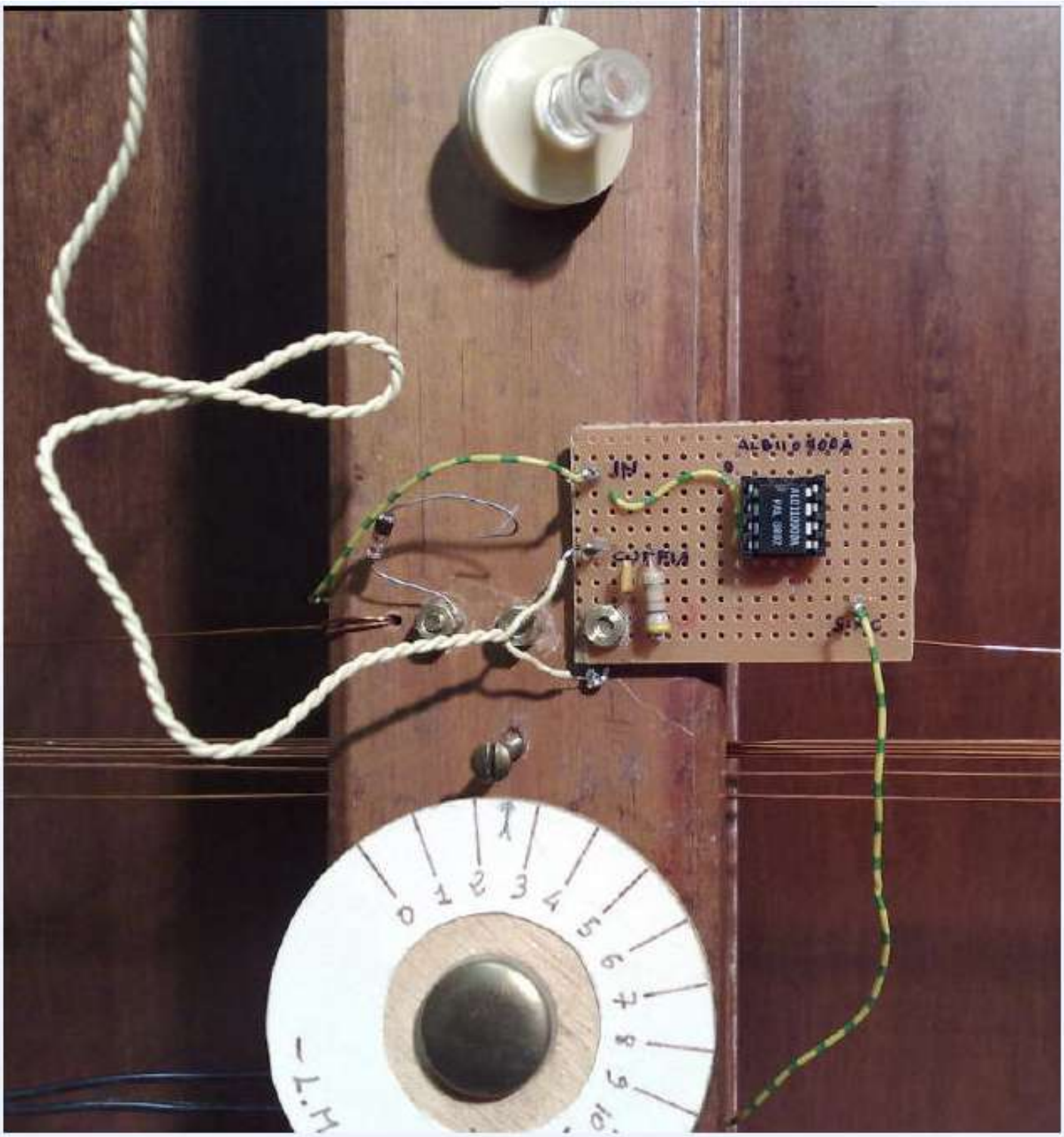




Materiale occorrente

L1; L2 = 90 spire filo rame smaltato Ø 0,3 mm
su tubo isolante Ø 3 cm
CV1; CV2 = variabile in aria 350 + 350 pF
C1 = condensatore ceramico 220÷330 pF
D1; D2 = diodo al germanio (AA117)

Schema elettrico



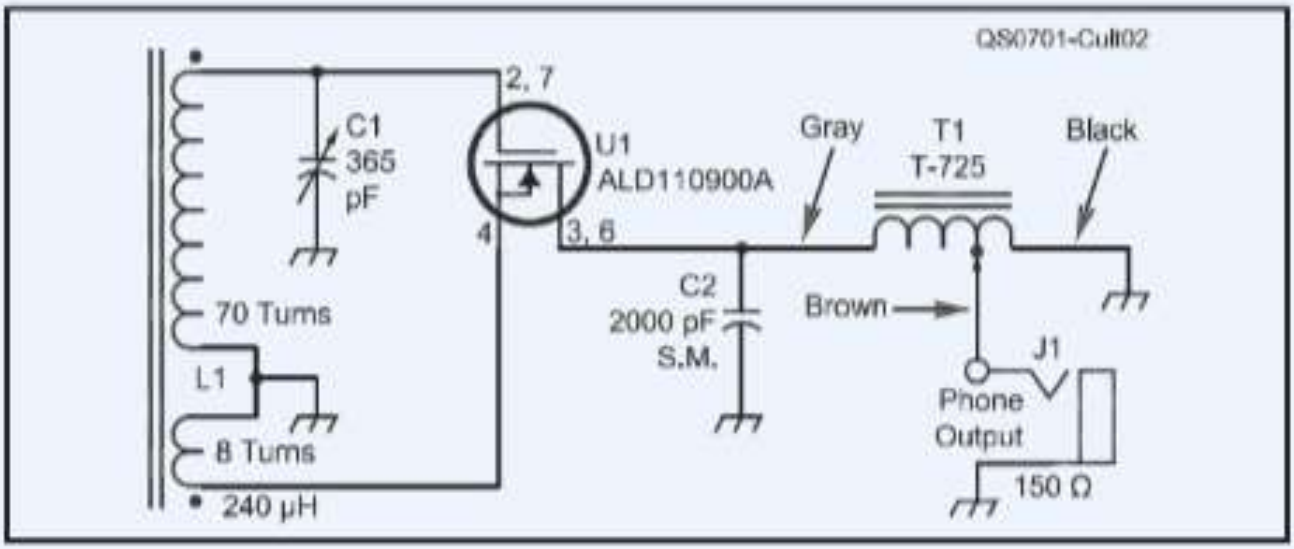
u can see I left the existing 1N34 diode mounted, so that it can be reinserted to make compariso



We increase sensitivity through the use of a modern zero-threshold mosfet, always without power supply

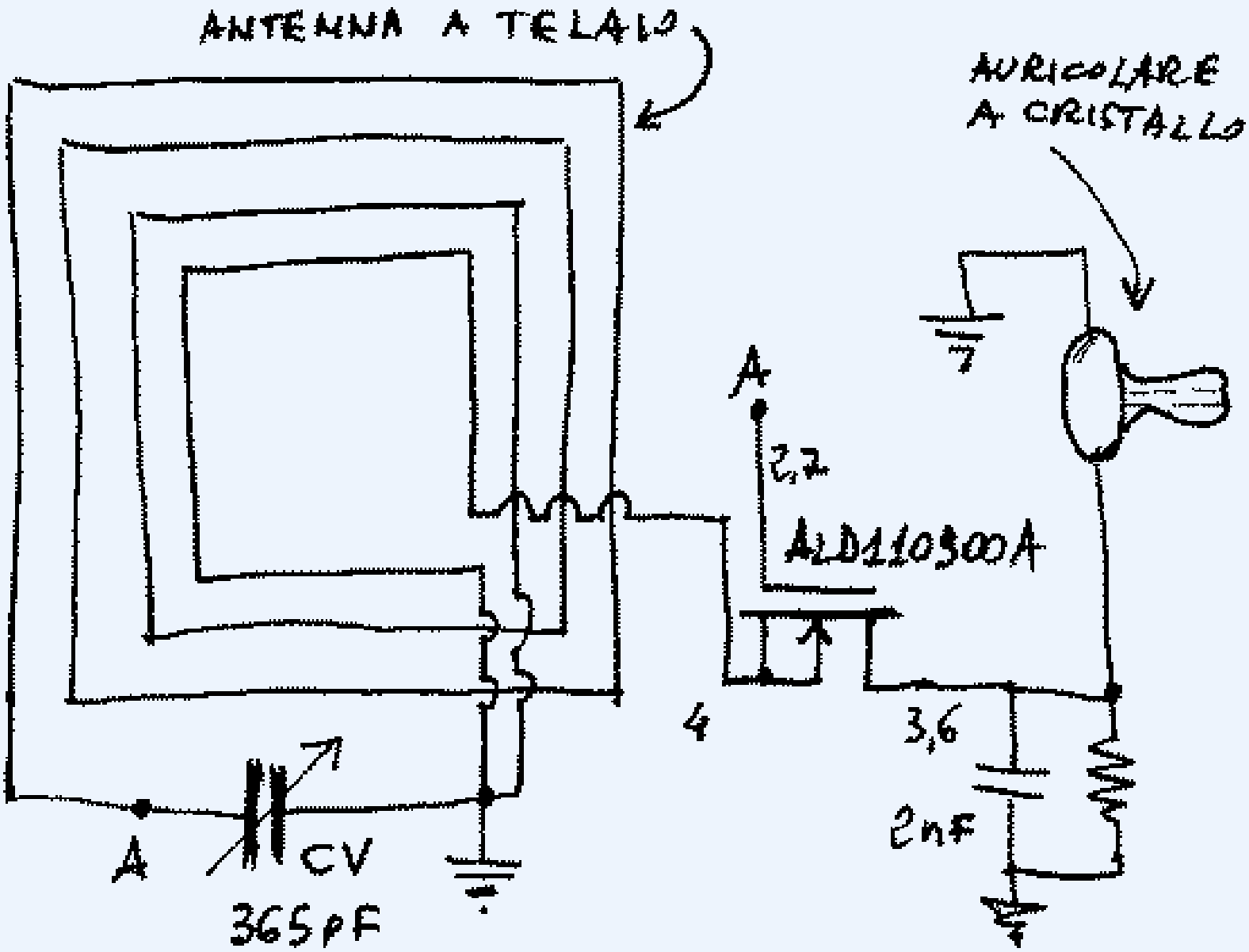
Principle of operation

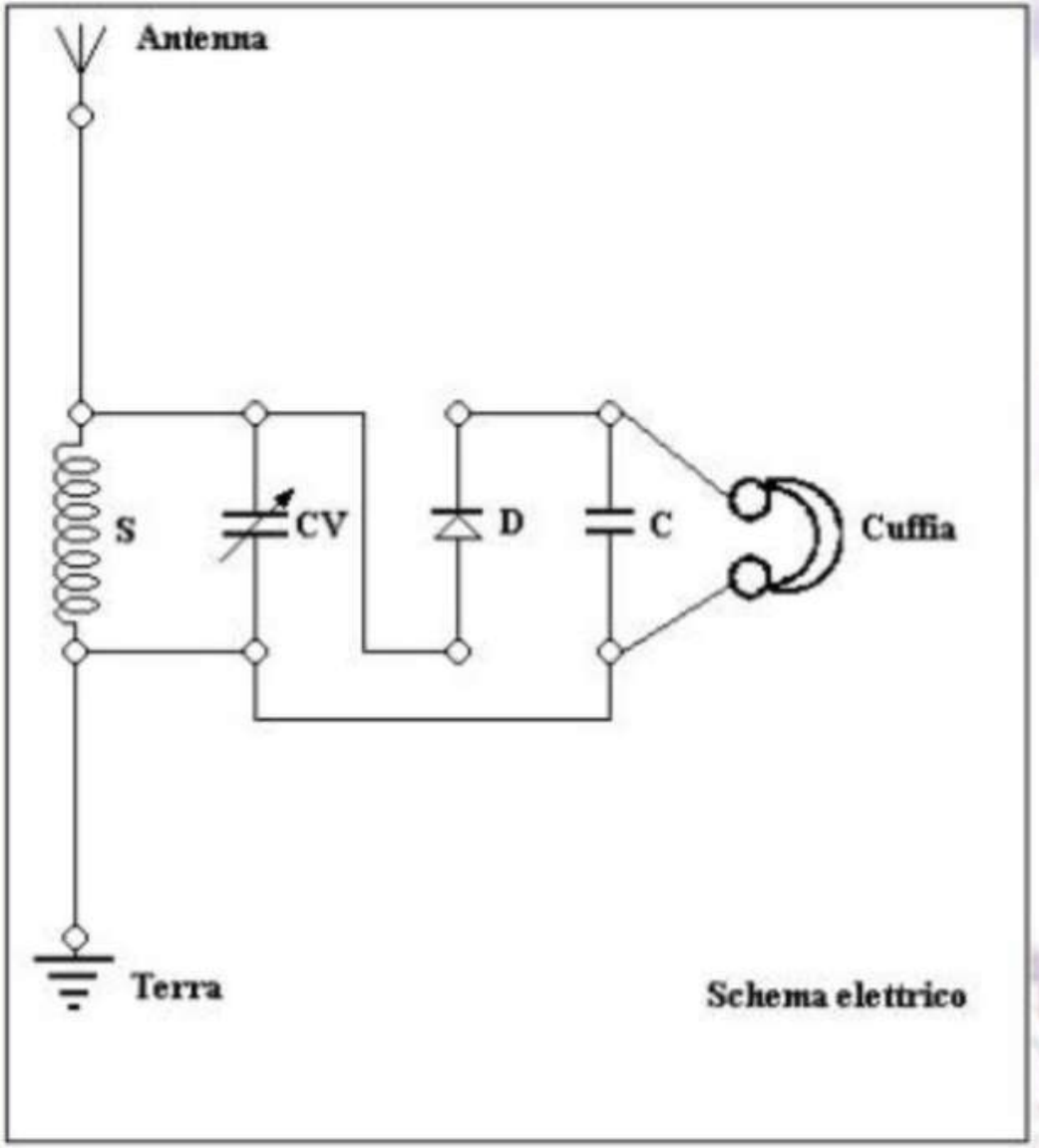
From time to time, some new devices appear on the market for electronic components, suitable for experimentation in a "crystal" reception circuit. It happened a few years ago with low-fall "schottky" diodes (BAT46 etc.), which were proposed as good substitutes for old germanium diodes. Recently I have read this article by Peter Hobbs, in which a recently released device is presented, the ALD110900A , mounted in a "high sensitivity" crystal receiver. This is a double mosfet with **a conduction threshold equal to zero**, ideal for detecting without loss a very weak signal like the one that is formed in a crystal receiver. The author proposes the realization of a scheme similar to the following one, which turns out to be of the synchronous detection type.



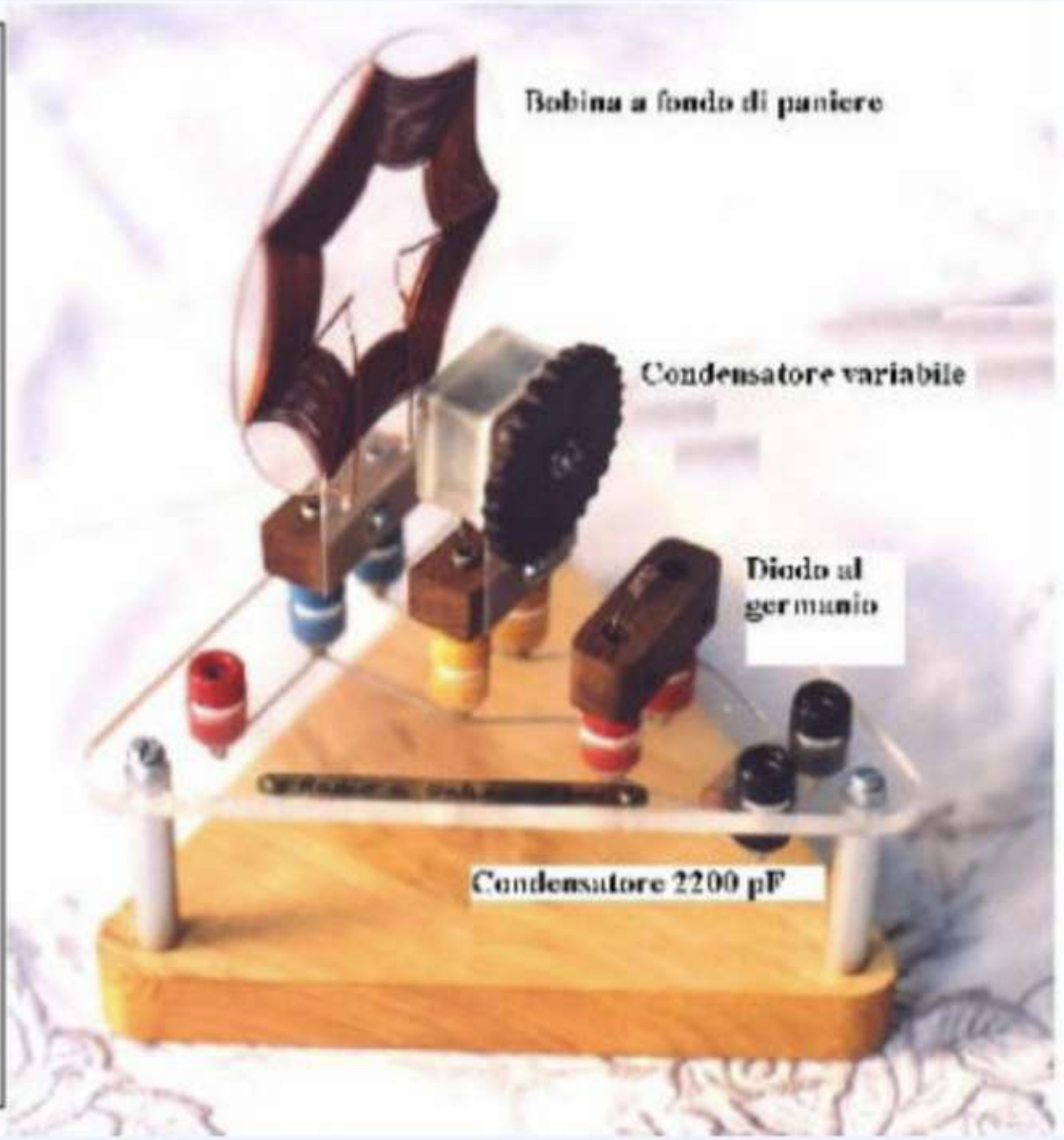
According to the author, the sensitivity is so high as to allow the realization of a receiver without an external antenna, based on the use of only the ferrite antenna, like that of transistor receivers. Its scheme uses as a transducer a telephone capsule coupled to the receiver by an adaptation transformer (this solution deserves to be better investigated).

For the tests I used my receiver with a panel antenna , experimented with great satisfaction a few years ago. To adapt the reception circuit I had to make some small changes, obtaining a scheme like the one below:





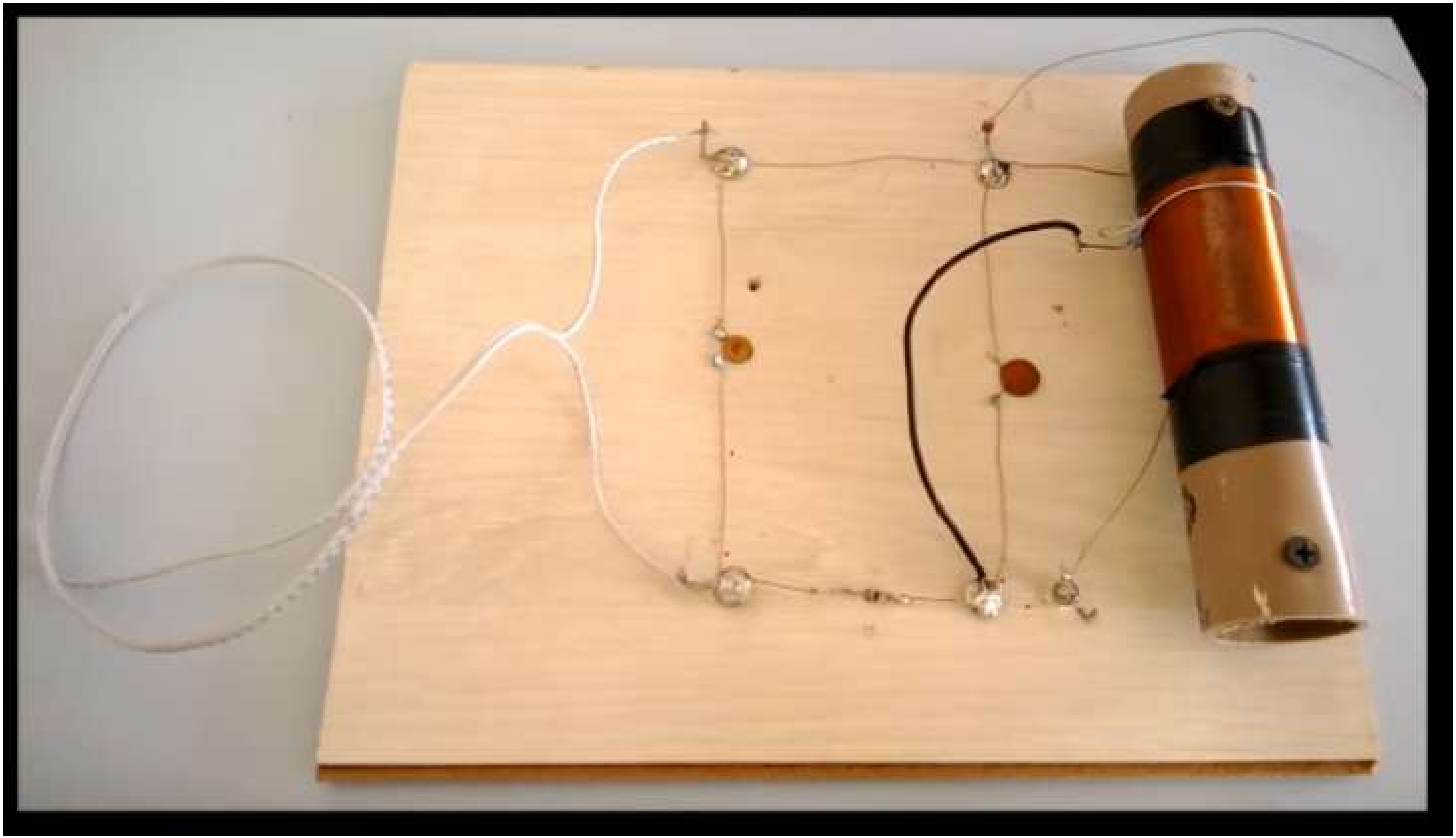
Schema elettrico




DIODO 1N270
WWW.RADIODX.QSL.BR

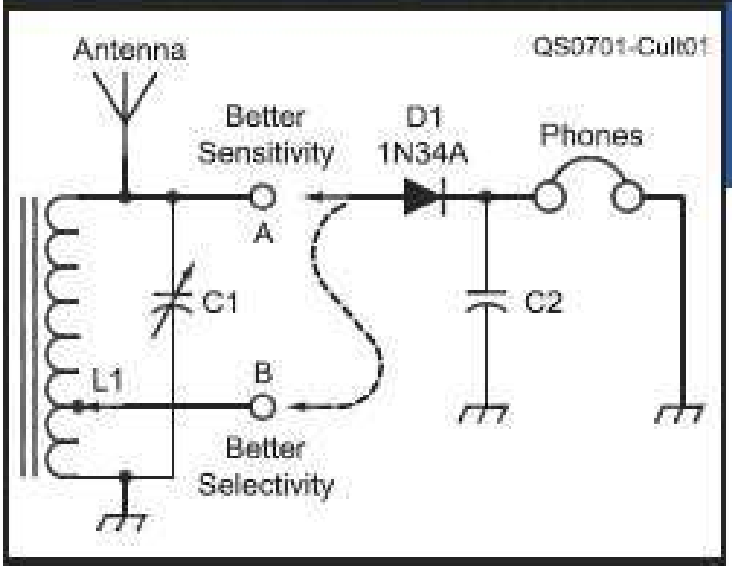


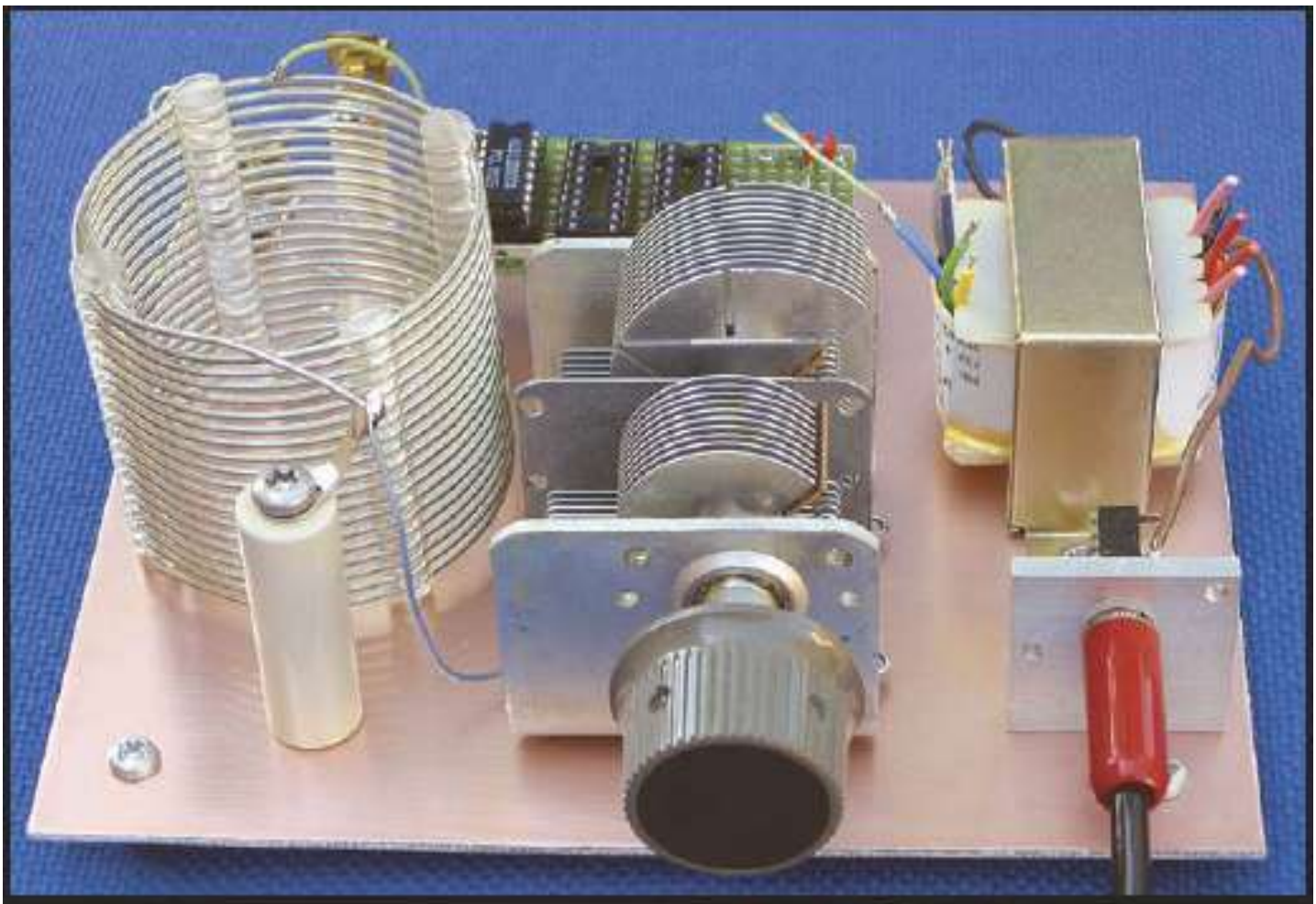

Fone Crista
DIODO
UTOR
WWW.RADIODX.QSL.



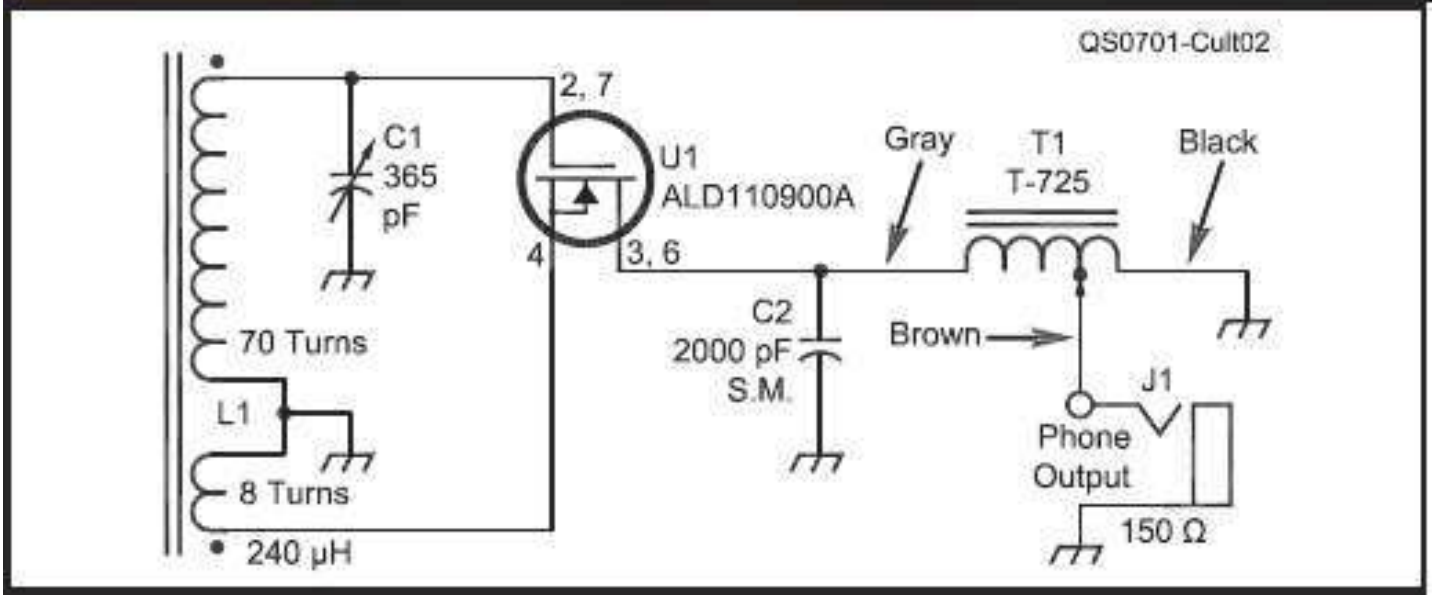

Emergency Receiver
Tune
Earth
Phones
Aerial
L1
D1
©
Power Free Radio
24738AP187-8

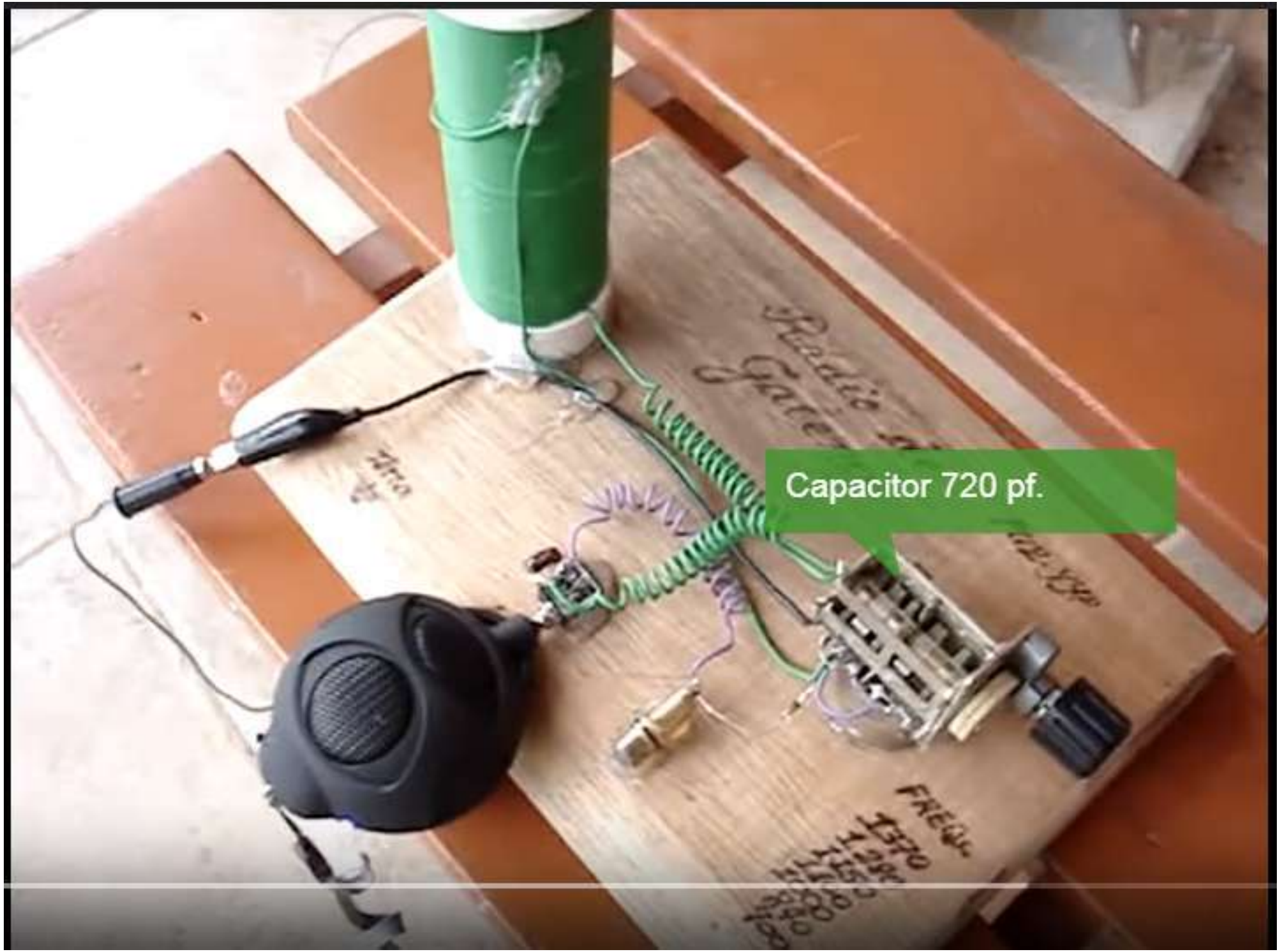


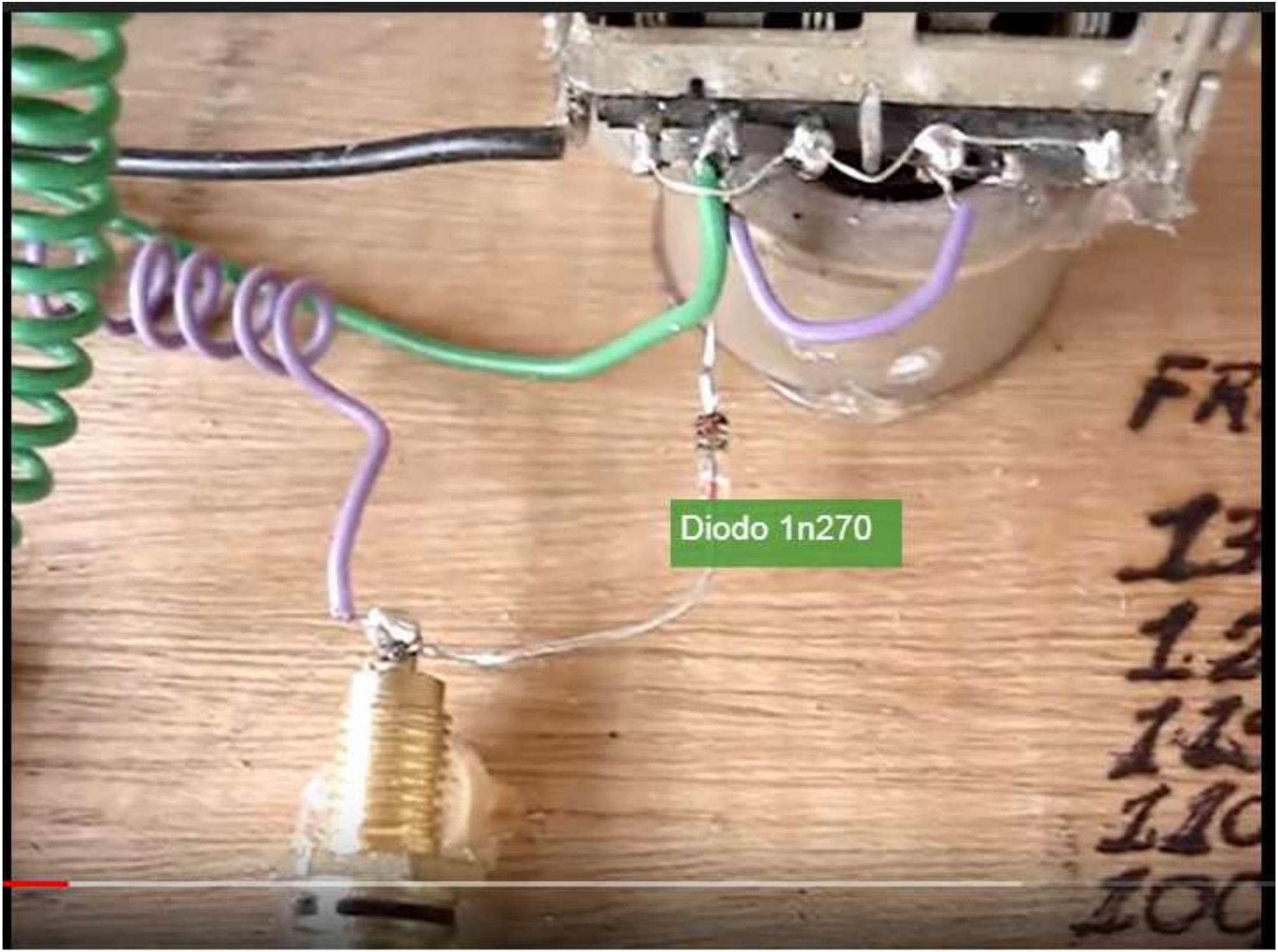

Antenna
QS0701-Cult01
Better
Sensitivity
D1
1N34A
Phones
A
C1
C2
L1
B
Better
Selectivity





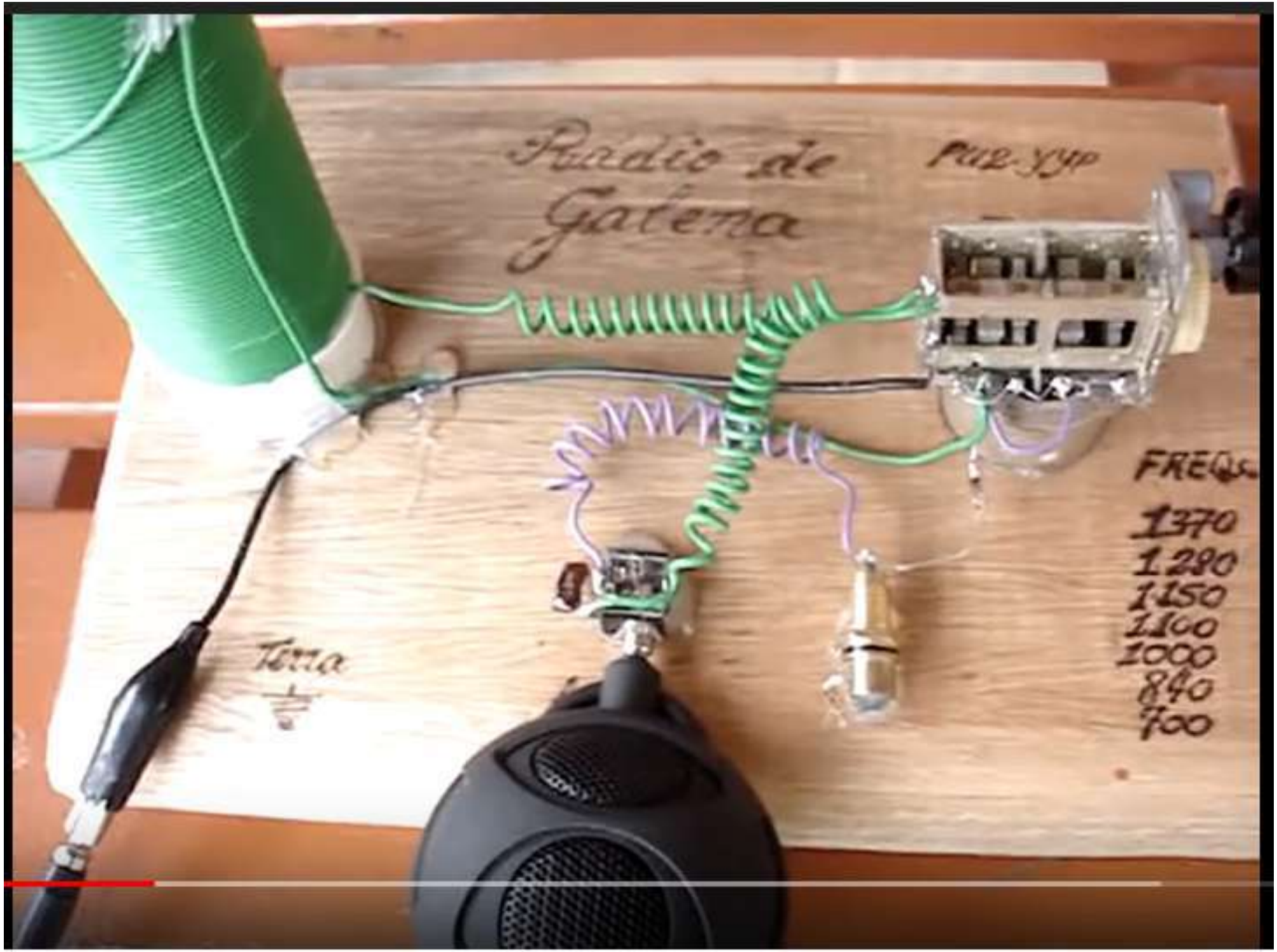

QS0701-Cult02
2, 7
C1
365
pF
U1
ALD110900A
4
3, 6
Gray
T1
T-725
Black
70 Turns
L1
8 Turns
240 µH
C2
2000 pF
S.M.
Brown
J1
Phone
Output
150 Ω

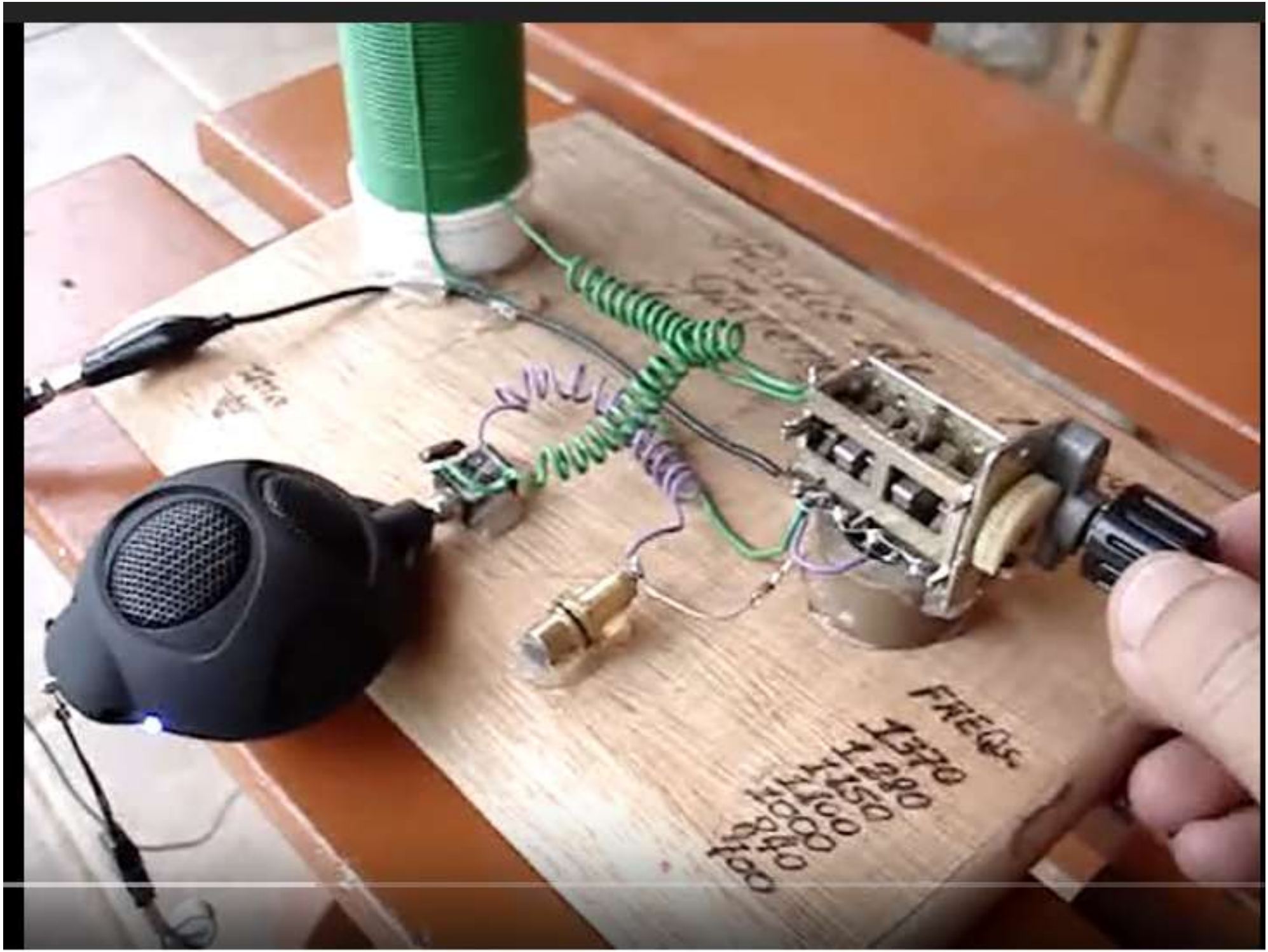

Capacitor 720 pf.

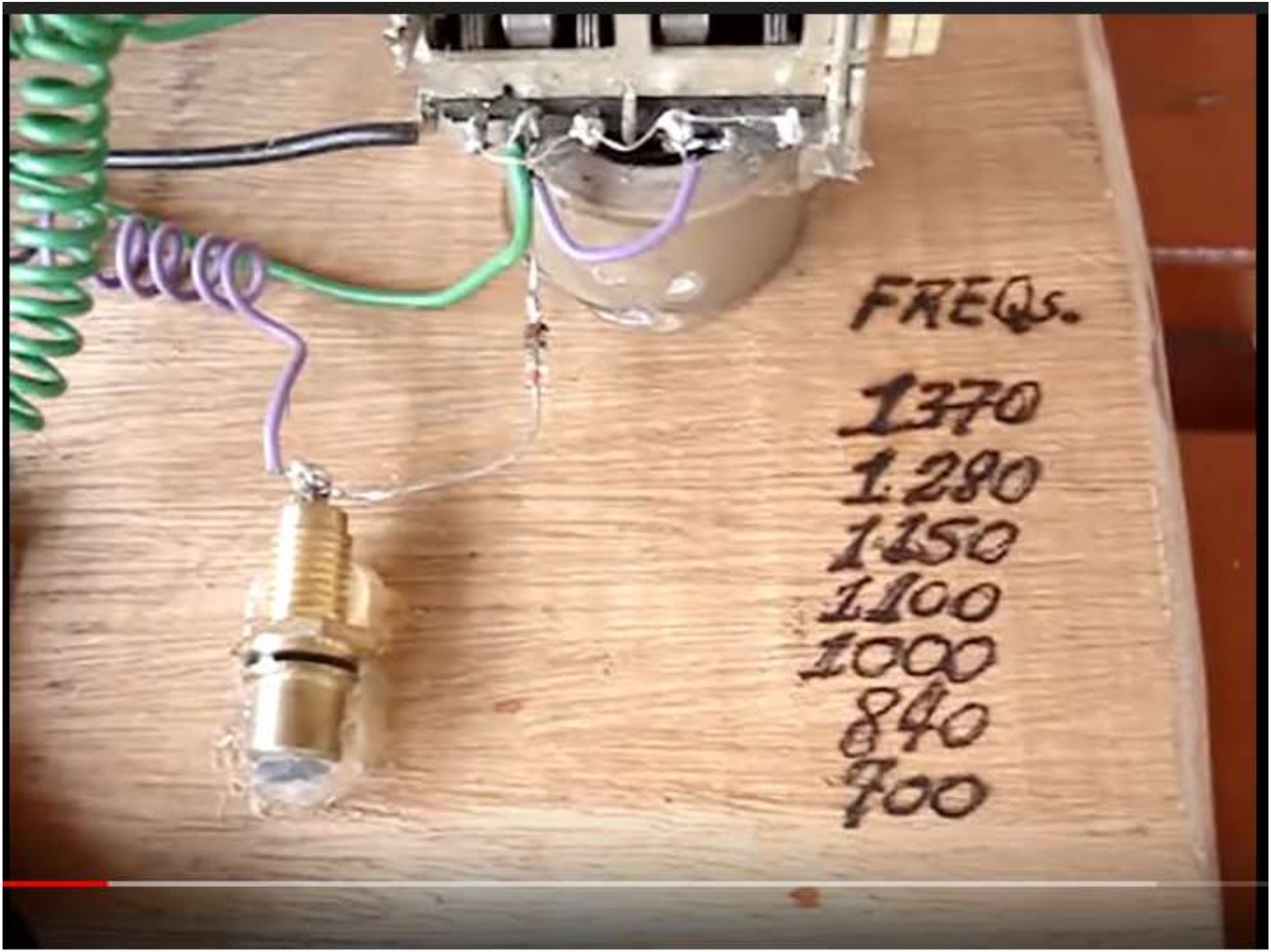

Diodo 1n270


Terra

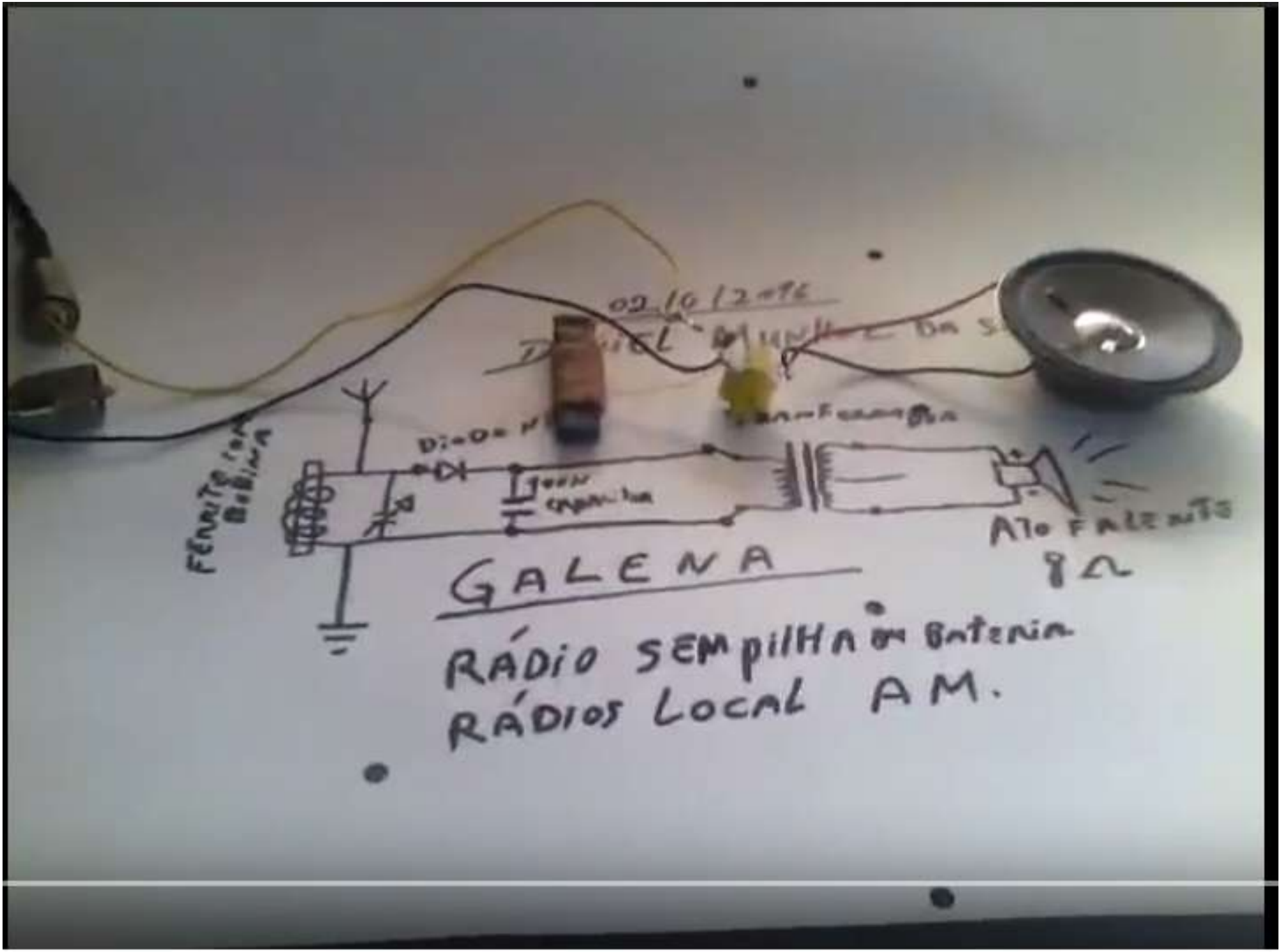

Radio de
Galena


Radio de
Galena
FREQs
1370
1280
1150
1100
1000
840
700
Terra


FREQS
1370
1280
1250
1200
1000
840
700

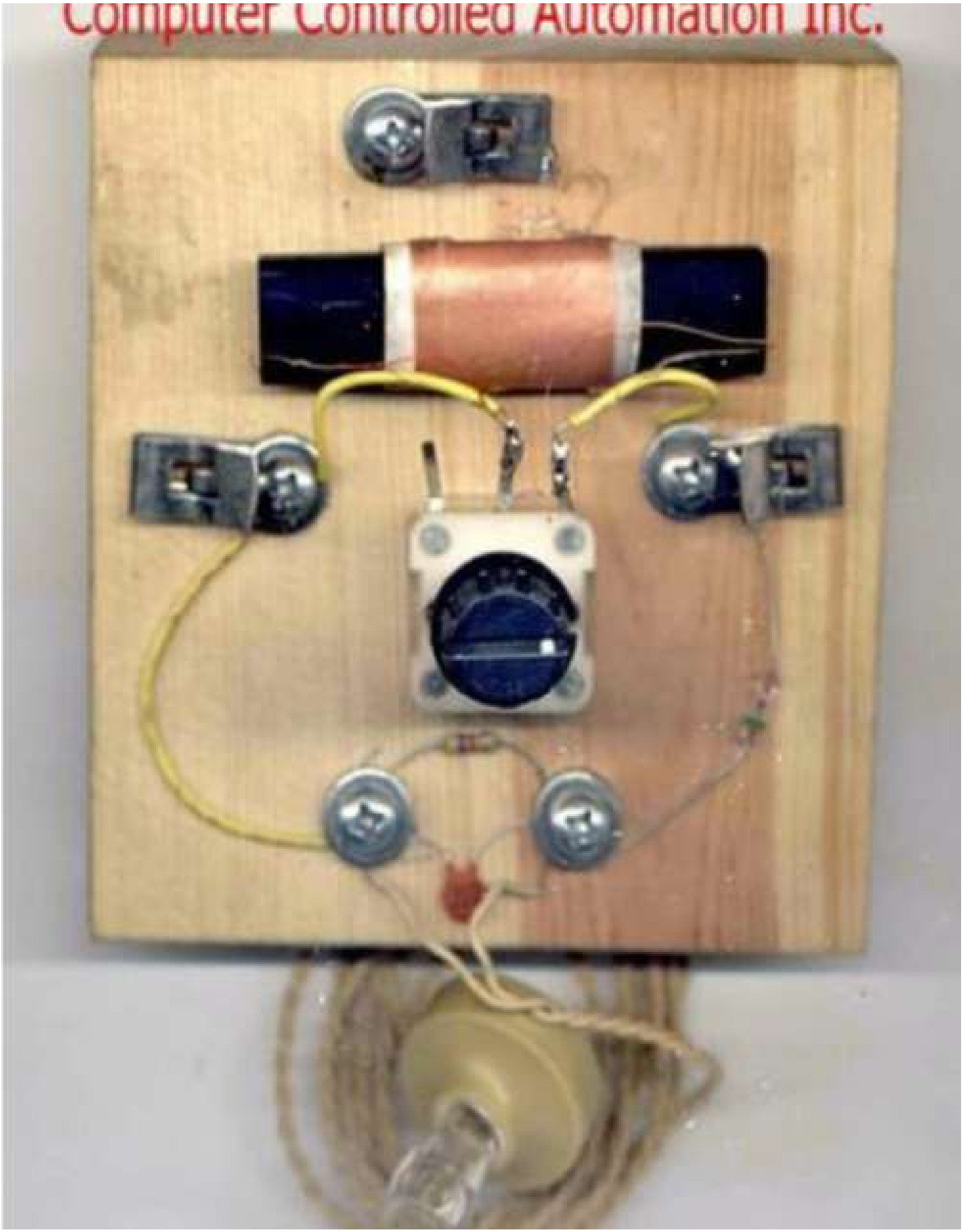

FREQs.
1370
1280
1150
1100
1000
840
700


02/6/2016
DANIEL MUNHOZ
DIODO
100K


02/10/2016
GALENA
RÁDIO SEM pilHA ou Bateria
RÁDIOS Local AM.


02/6/2016
DIODO
100N
GALENA
8Ω

Computer Controlled Automation Inc.



1. Mahlon Lumis (США) уже в середине XIX века применил пламенные ионизаторы для питания атмосферным электричеством телеграфной связи в Западной Вирджинии

2. Walter Pennock (США) предложил систему для собирания атмосферного заряда на сетки, подвешенные к аэростатам из металлизированной ткани. Энергия накапливалась в лейденских банках

3. Herman Plauson (Германия) впервые предложил полную систему для получения и преобразования атмосферного электричества в энергию обычного стандарта. Электрический заряд, накапливаемый поверхностью приемников, с помощью инвертора превращался в ток промышленного стандарта. Мощность опытных установок от 0,72 до 3,4 кВт.

4. Современная установка для питания от атмосферного электричества метеорологической аппаратуры. Россия. Патент RU 2245606 (2003 г.)



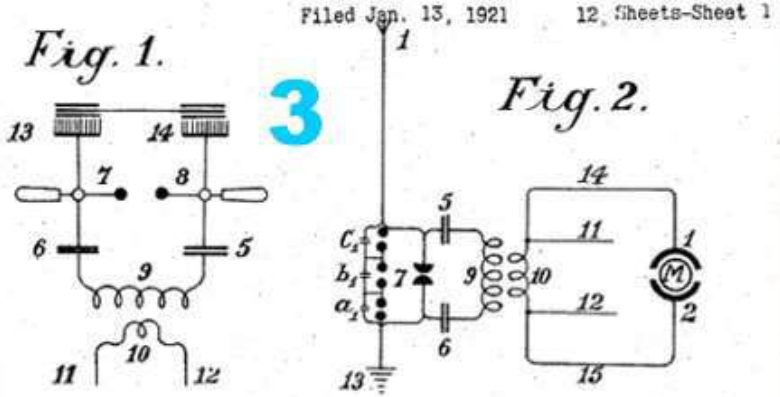
1

June 9, 1925. 1,540,998

H. PLAUSON

CONVERSION OF ATMOSPHERIC ELECTRIC ENERGY

Filed Jan. 13, 1921 12 Sheets-Sheet 1



3

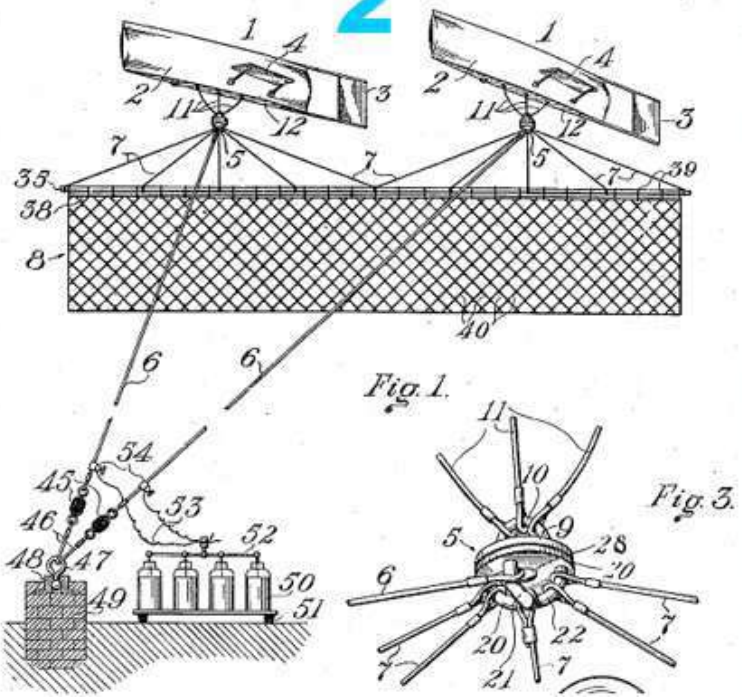
W. I. PENNOCK.

APPARATUS FOR COLLECTING ELECTRICAL ENERGY.

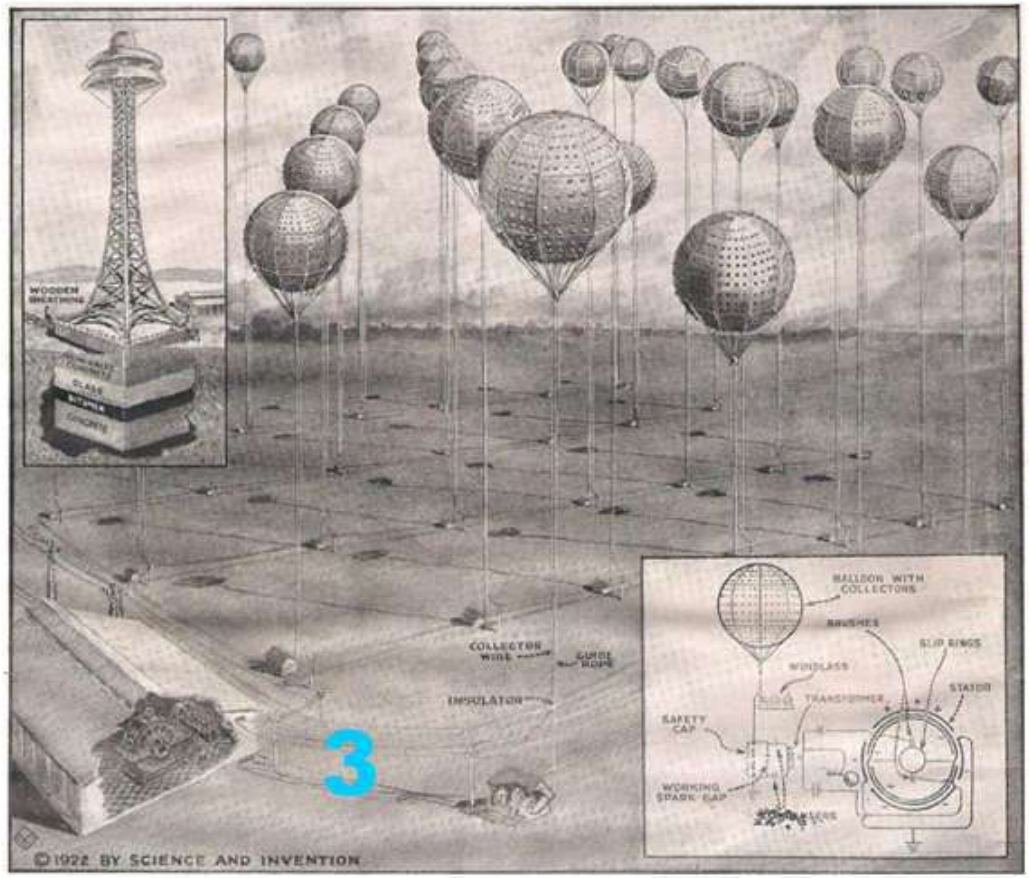
APPLICATION FILED JAN. 6, 1911.

1,014,719. Patented Jan. 16, 1912.

2 SHEETS-SHEET 1.



2



3



4

(A) comprises of an electronic data storage unit and pulse generator in one unit. The monostatic 1.5 GHz antenna (B) is encased within a broom-like device (C), which includes a survey wheel essential for horizontal spatial control. The monitor display (D) allows for on-site cursory analysis. A hundred foot cable (E) attaches the antenna to the control unit. A direct current (DC) power conversion unit (F) may also be necessary if the power source originates from a 110-volt alternating current source. More recent radar systems are now available that are more compact for field portability.



Figure 1 – Ground Penetrating Radar System Components

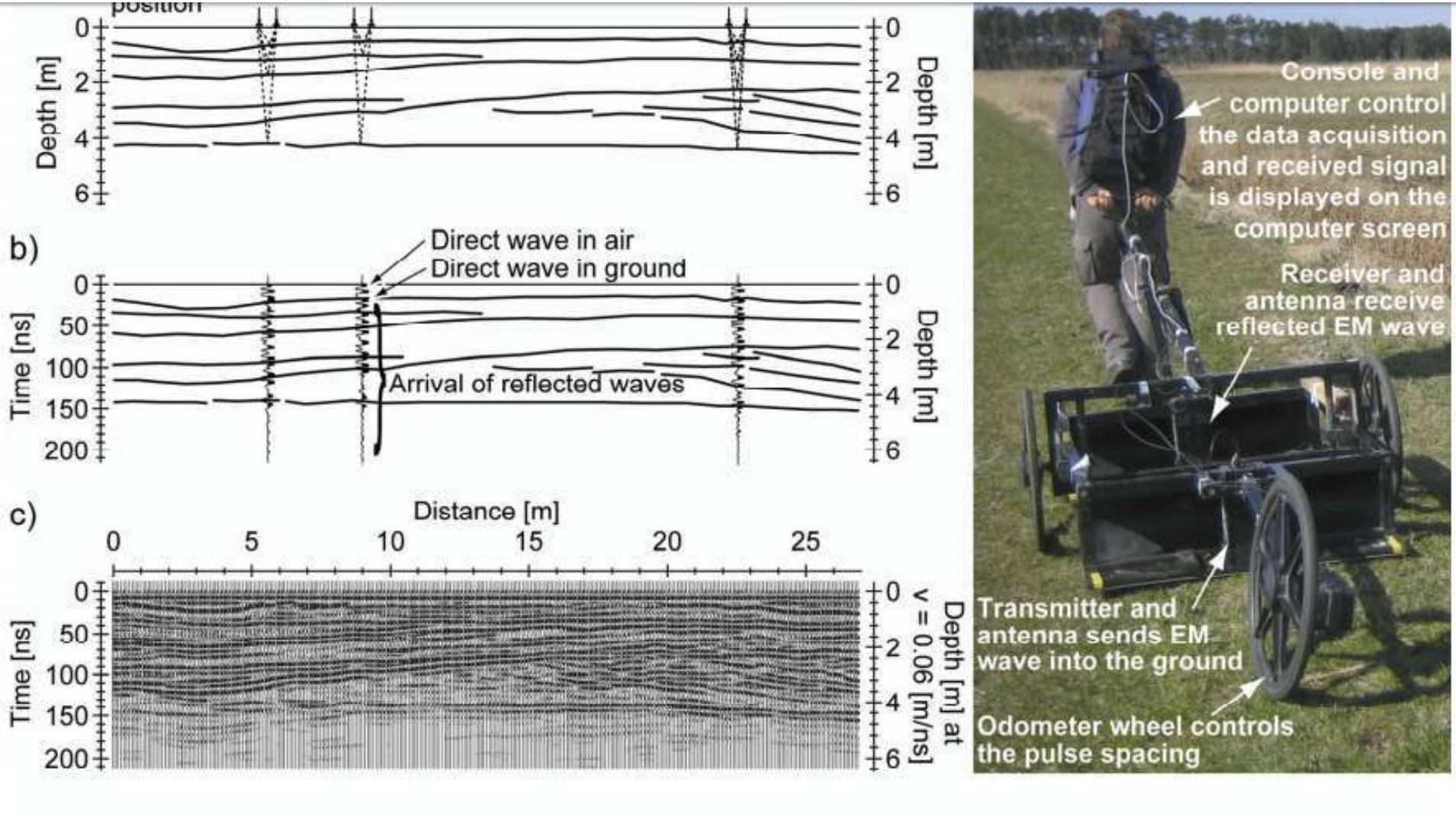


Fig. 4.7.1: Principles of GPR in reflection profiling mode. a) In reflection profiling a set of transmitting antenna and receiving antenna with constant separation is moved along the profile. The path of some of the reflected waves is sketched for antenna position 56, 91 and 226 of the GPR profile in (c). b) The received signal of these antenna positions is displayed in wiggle mode. c) GPR profile acquired with 200 MHz system in a coastal environment. The horizontal axis displays the distance along the profile. The vertical axis to the left displays the two-way travel time and the axis to the right displays the converted depth. d) Photo of a GPR system equipped with 100 MHz antenna. The text on the photo explains the different part of the system.

Fig. 4.7.2: Principles of GPR in CMP mode. a) In CMP mode a set of a transmitting antenna (Tx) and a receiving antenna (Rx) are moved away from each other. The six first antenna positions are shown with the path of the reflected wave from the first reflector. b) Sketch of the path of the most common waves that is present in a CMP. c) Diagram of the received signals in a CMP. The horizontal axis displays the distance between the transmitting and the receiving antenna. The vertical axis displays the two-way travel time. d) Photo of a GPR system that is ready for a CMP sounding.



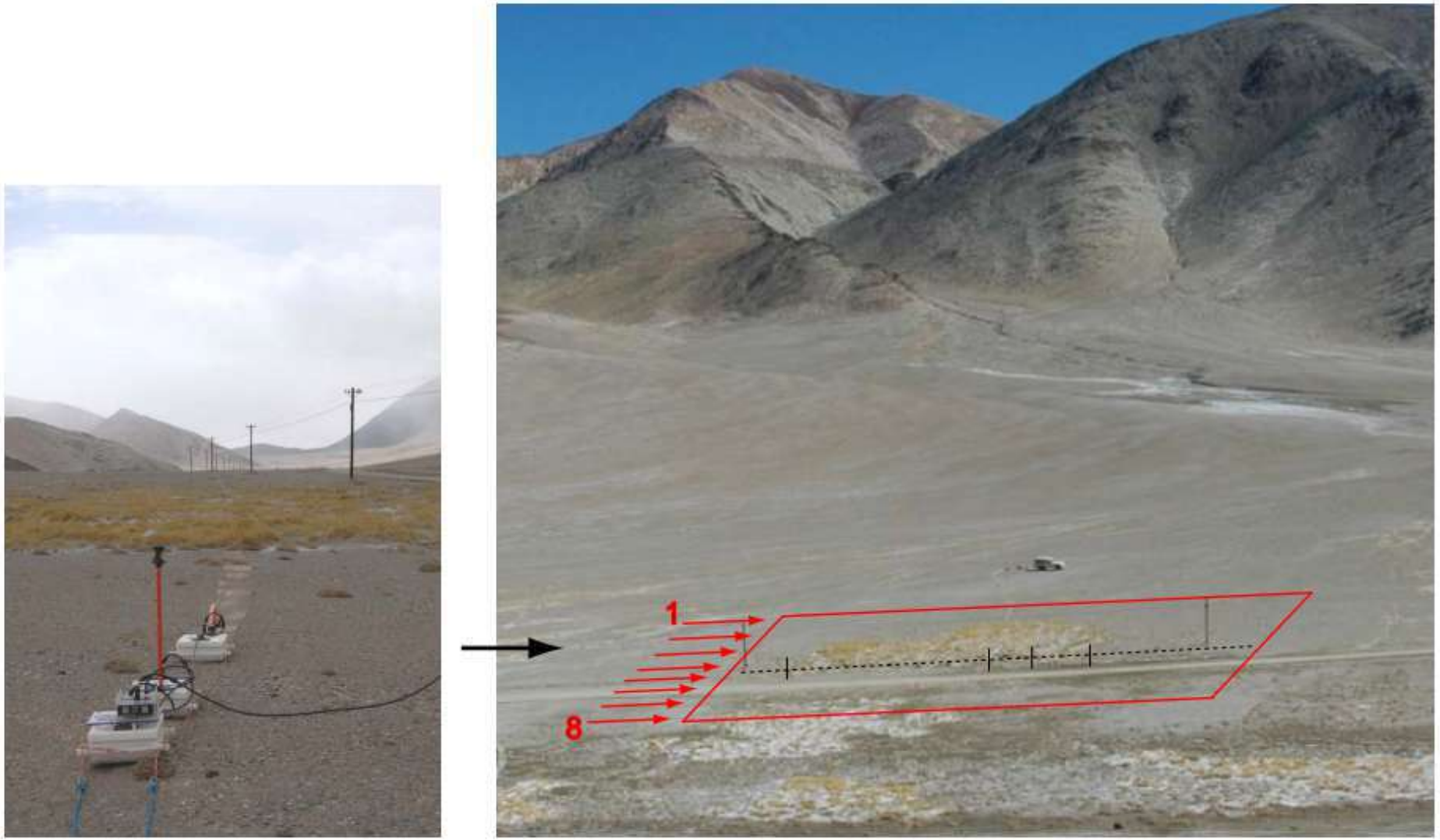
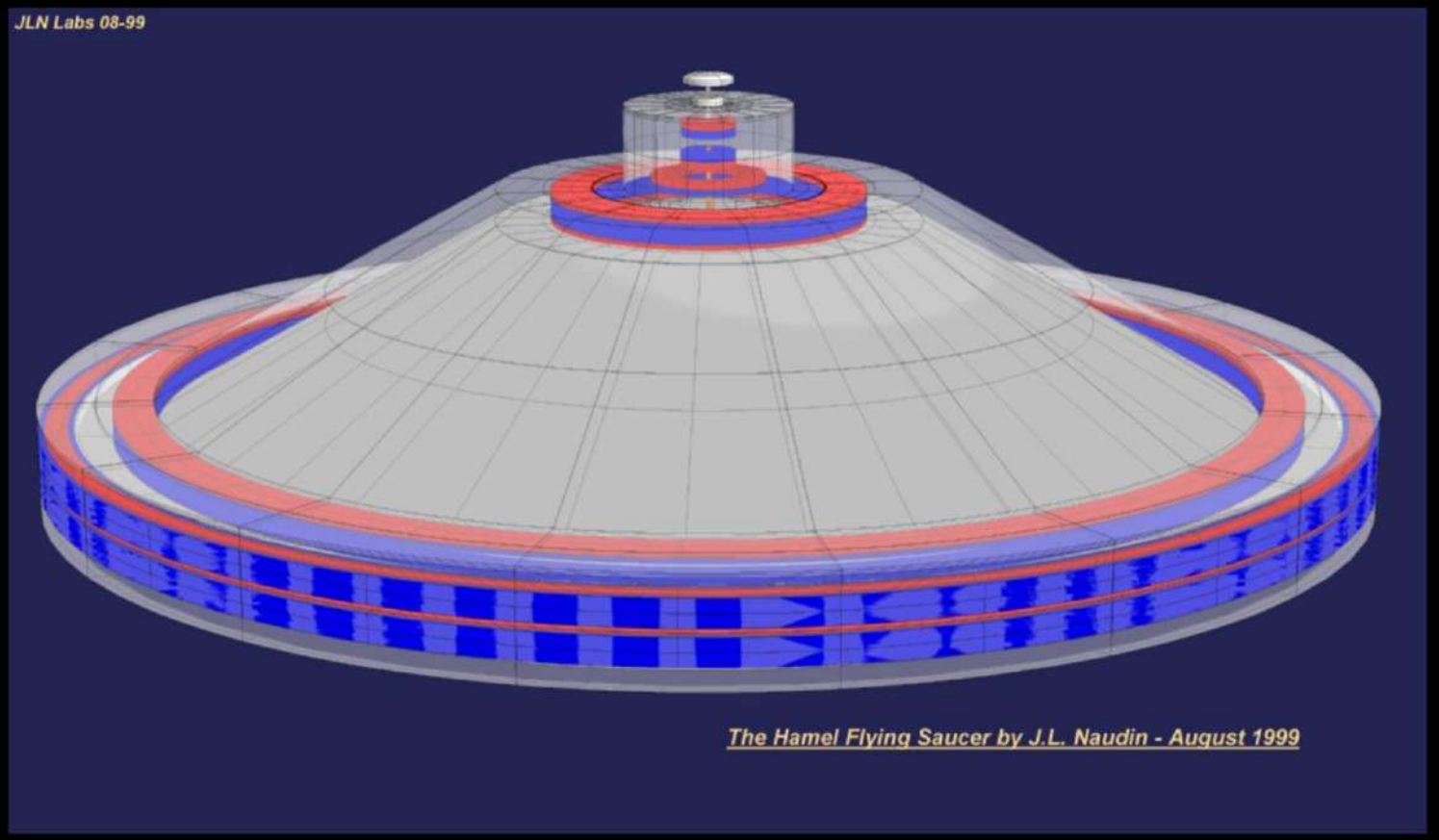


Fig. 2. Photographs of the study area: GPR measurements were acquired at the foot of an alluvial fan, partly across bare soil, a small vegetated area and the roadbed of the Xinjiang-Tibet Highway (red box; arrows indicate the direction of GPR lines as shown in Fig. 4; thin dashed line: transect discussed in Sect. 4.1, Figs. 4 to 6, transitions between vegetated and non-vegetated areas are marked separately). A detailed photograph of the vegetated area and the adjacent bare soil is provided on the left photograph, the black arrow indicates the location and viewing direction of the photograph at the left.



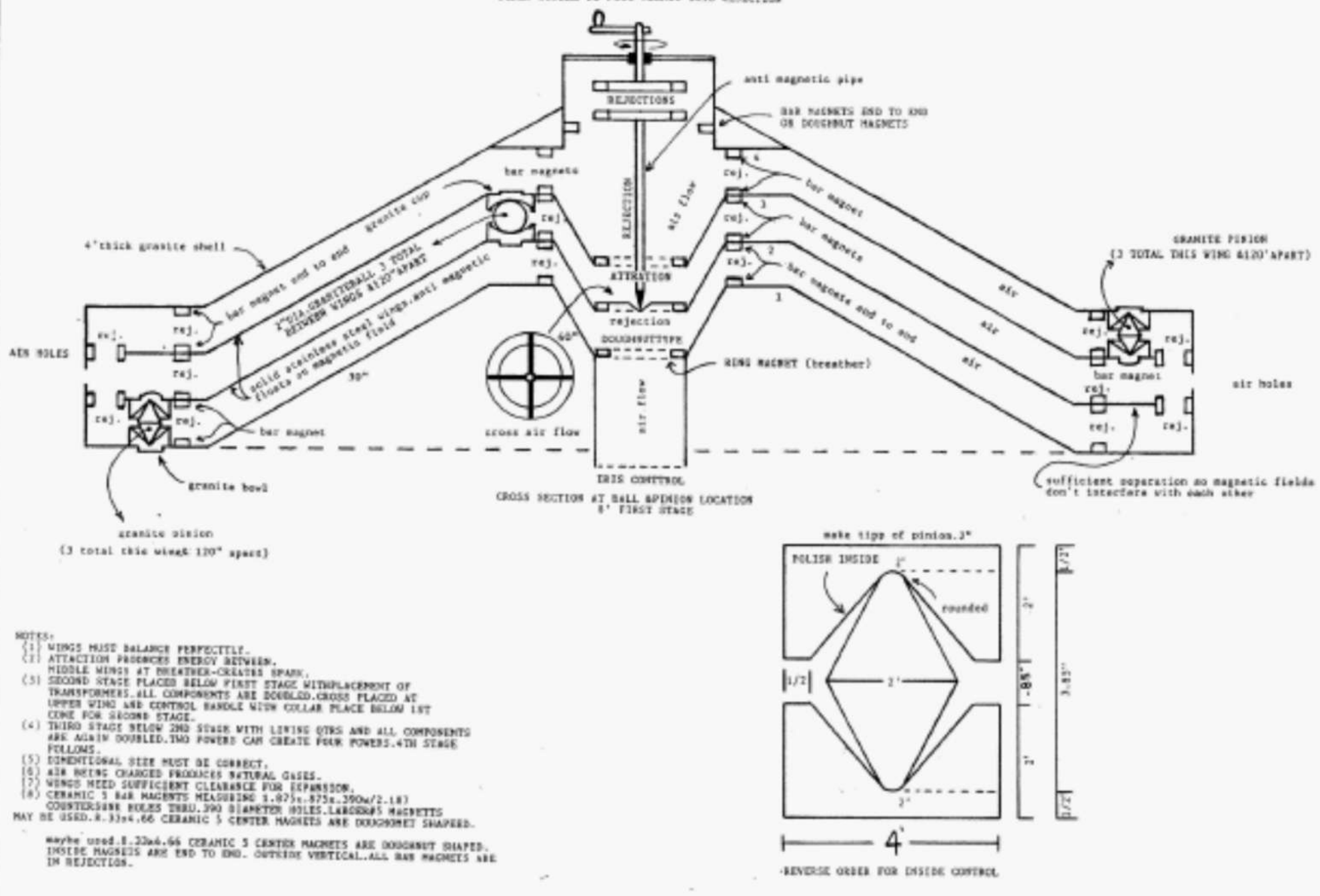
The David Hamel's Pictures Album

Courtesy of **Tracy** from the ***Hamel's Teamwork***

*created on September 18th, 1999 - **JLN Labs** - Last update September 21th, 1999*

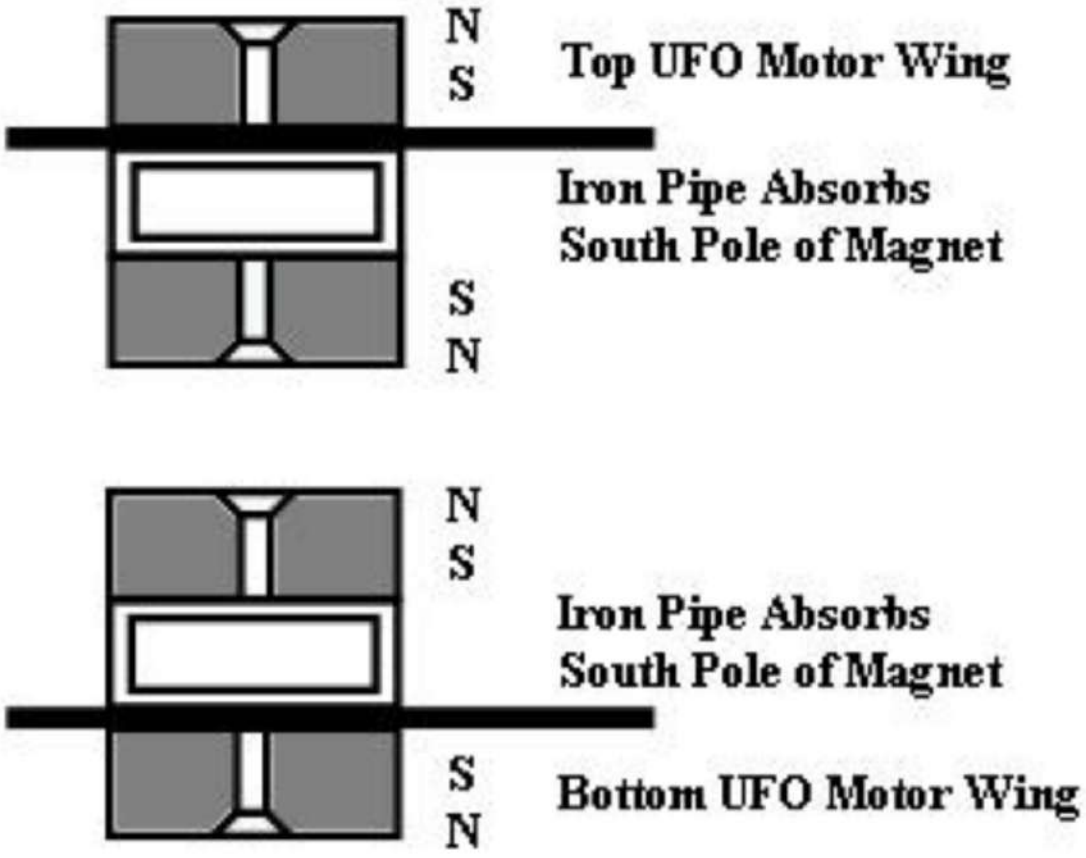
The Hamel's Flying Saucer (HFS) under construction

GRAVITOMAGNETIC DRIVE



NOTES:
(1) WINGS MUST BALANCE PERFECTLY.
(2) ATTACTION PRODUCES ENERGY BETWEEN. MIDDLE WINGS AT BREATHER-CREATES SPARK.
(3) SECOND STAGE PLACED BELOW FIRST STAGE WITHPLACEMENT OF TRANSFORMERS.ALL COMPONENTS ARE DOUBLED.CROSS PLACED AT UPPER WING AND CONTROL HANDLE WITH COLLAR PLACE BELOW 1ST CONE FOR SECOND STAGE.
(4) THIRD STAGE BELOW 2ND STAGE WITH LIVING QTRS AND ALL COMPONENTS ARE AGAIN DOUBLED.TWO POWERS CAN CREATE FOUR POWERS.4TH STAGE FOLLOWS.
(5) DIMENTIONAL SIZE MUST BE CORRECT.
(6) AIR BEING CHARGED PRODUCES NATURAL GASES.
(7) WINGS NEED SUFFICIENT CLEARANCE FOR EXPANSION.
(8) CERAMIC 5 BAR MAGENTS MEASURING 1.87)x.875x.390x/2.18) COUNTERSUNK HOLES THRU.390 DIAMETER HOLES.LARGERP5 MAGNETTS MAY BE USED.8.33x4.66 CERAMIC 5 CENTER MAGNETS ARE DOUGHNUT SHAPED.

maybe used.8.33x4.66 CERAMIC 5 CENTER MAGNETS ARE DOUGHNUT SHAPED. INSIDE MAGNETS ARE END TO END. OUTSIDE VERTICAL.ALL BAR MAGNETS ARE IN REJECTION.



Use All North Poles In UFO Motor

(Except where the two wings are in attraction)











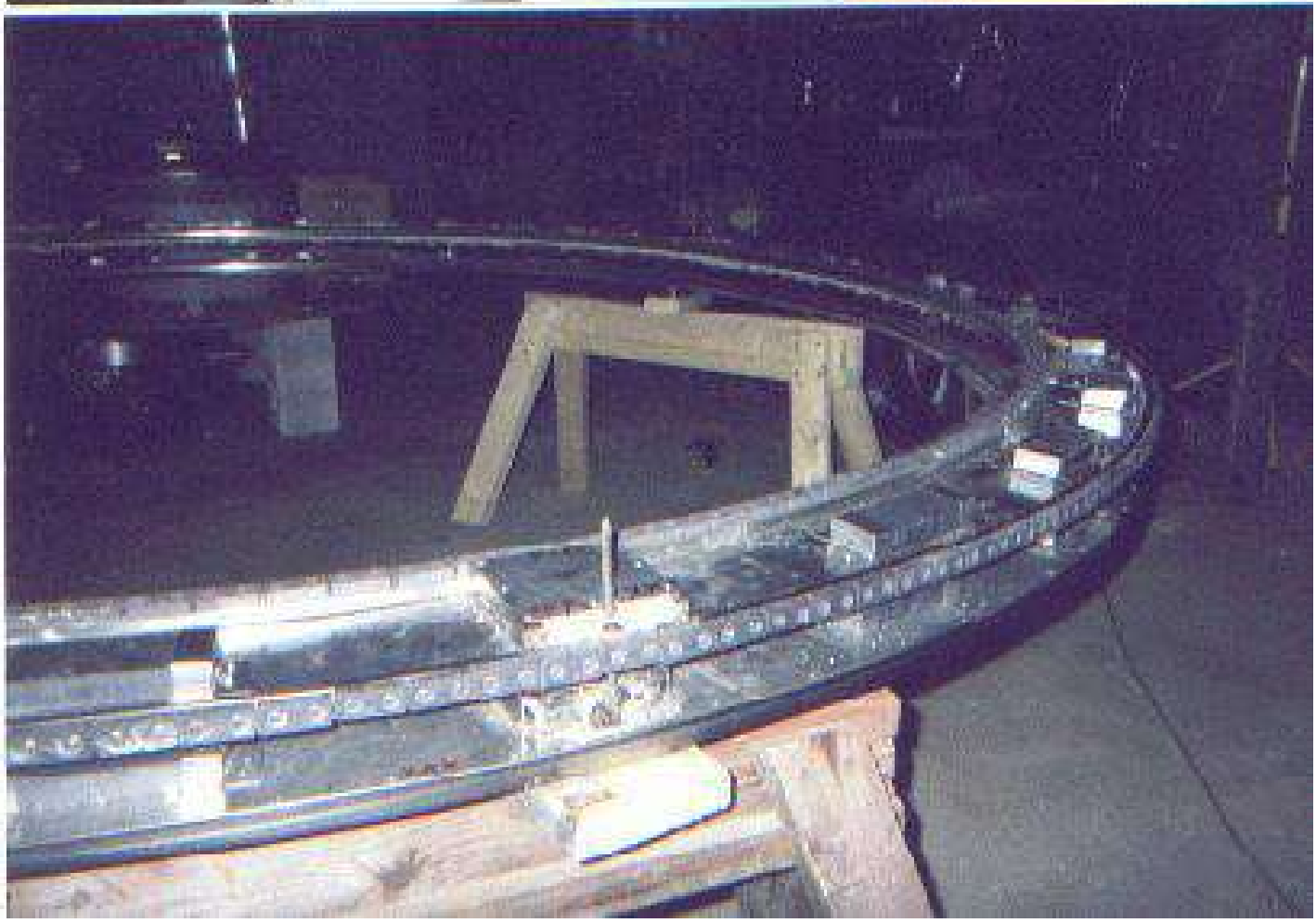




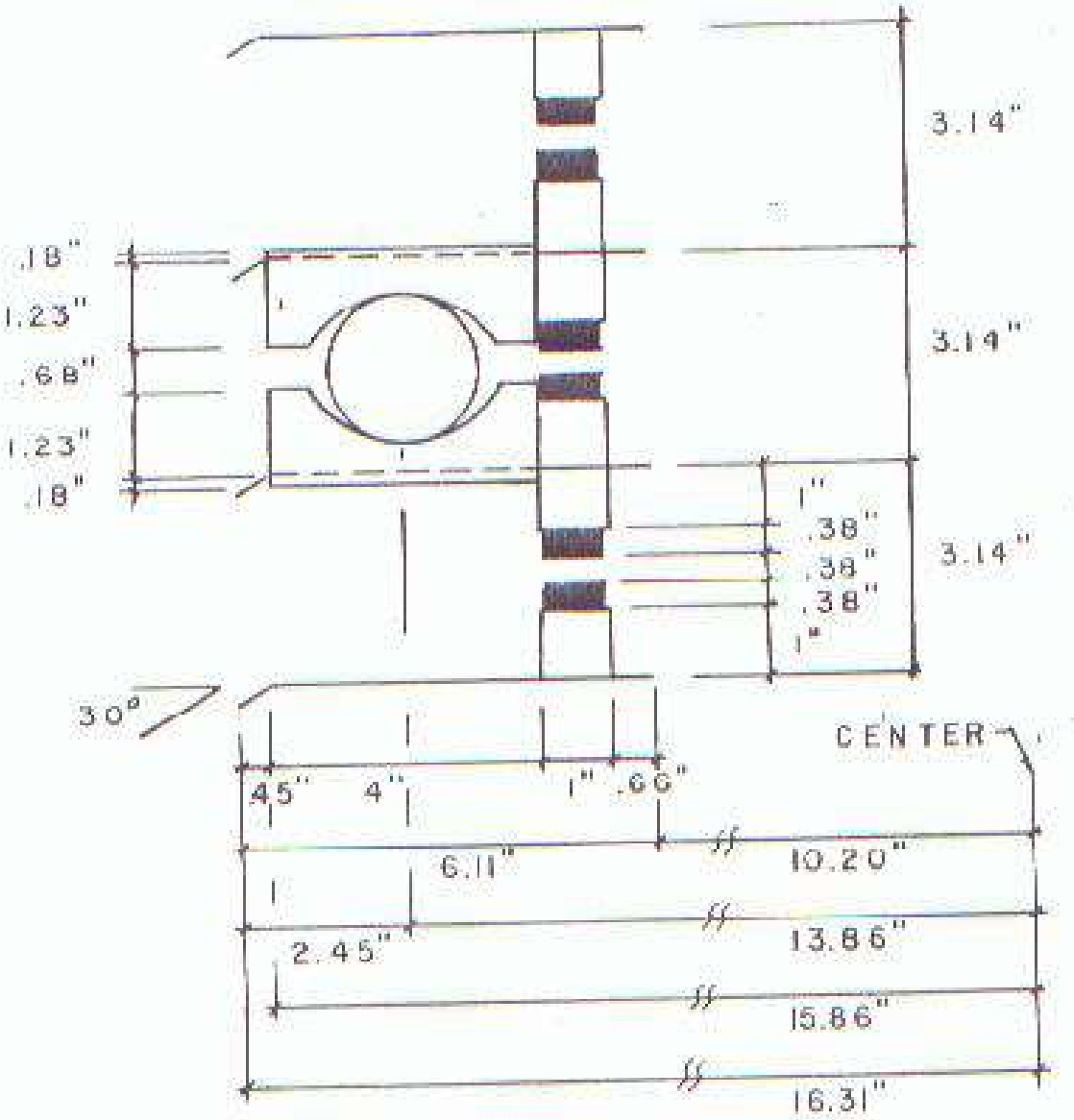









Lower Ring

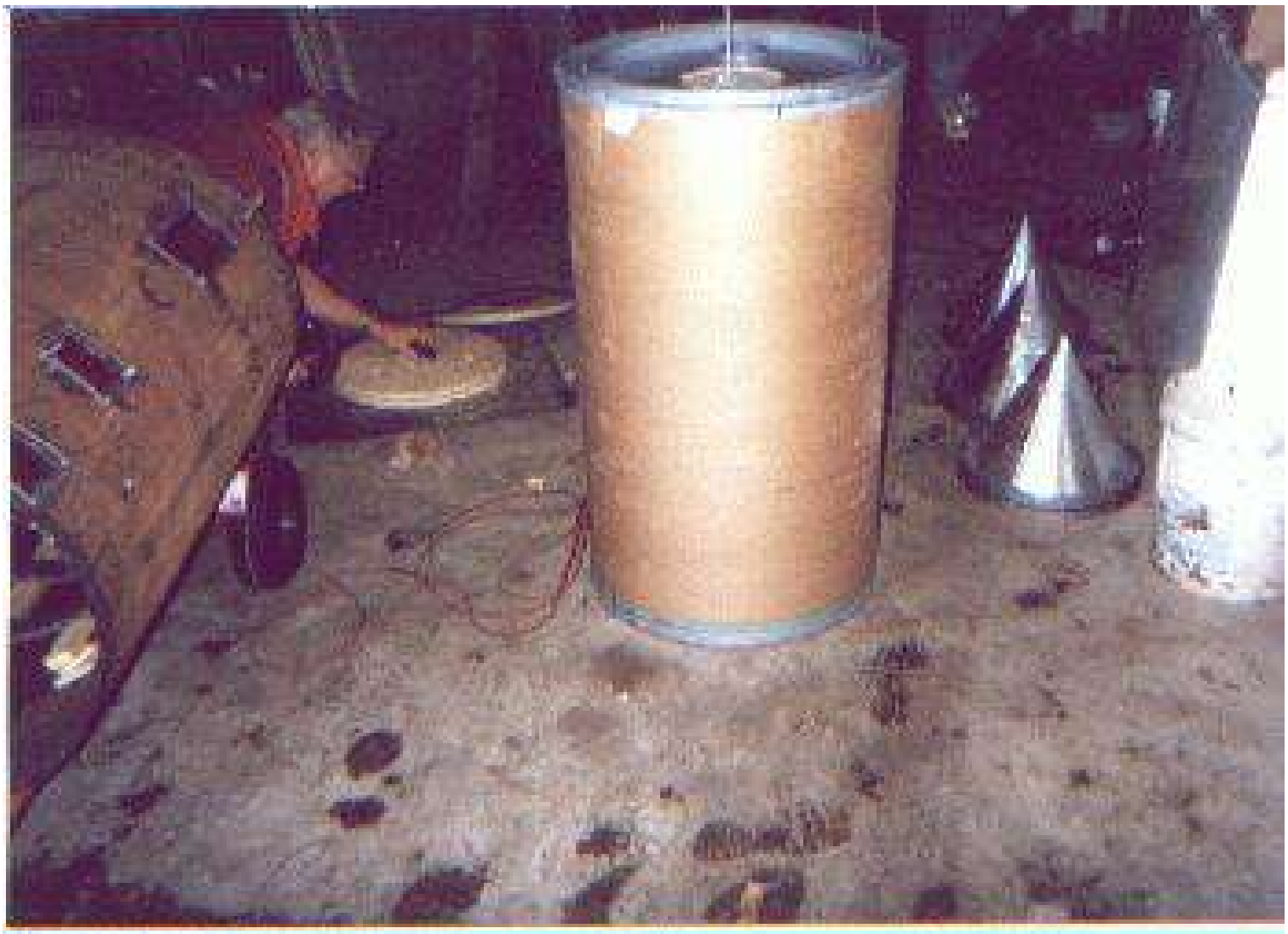

3.14"
.18"
1.23"
.68"
1.23"
.18"
3.14"
1"
.38"
.38"
.38"
1"
3.14"
30°
CENTER
.45"
4"
1"
.66"
6.11"
10.20"
2.45"
13.86"
15.86"
16.31"









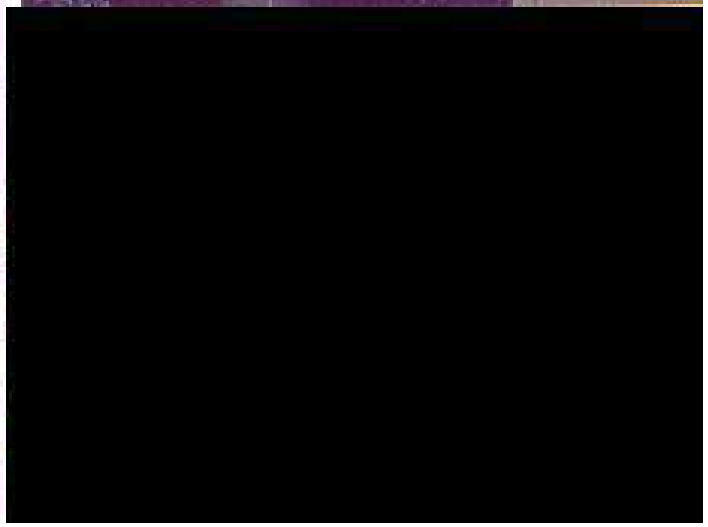




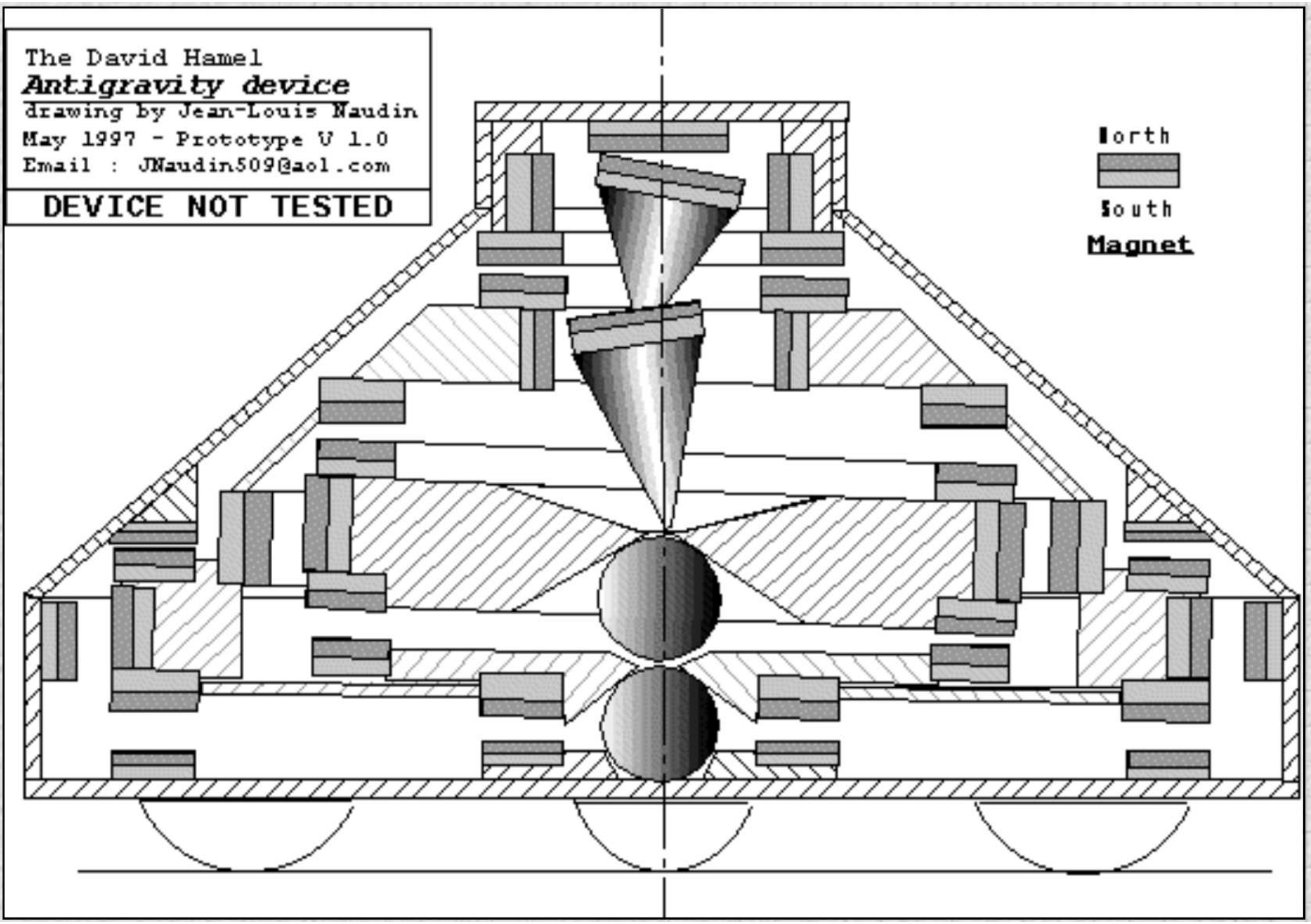

Reynolds Wrap

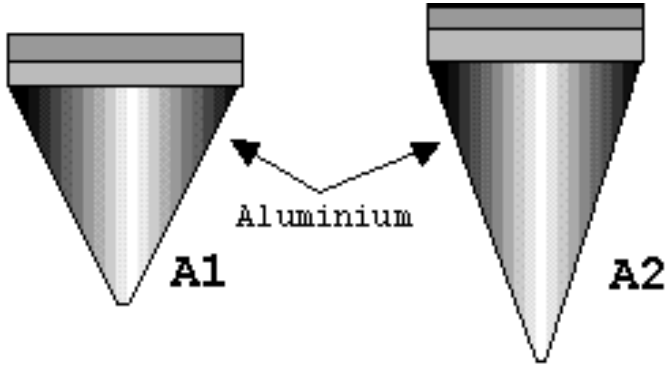


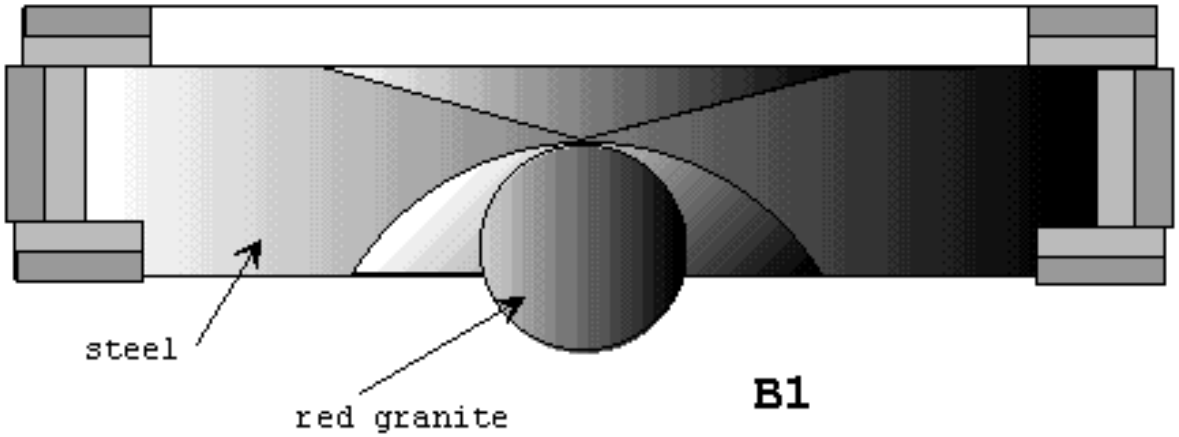







The David Hamel
Antigravity device
drawing by Jean-Louis Naudin
May 1997 - Prototype V 1.0
Email : JNaudin509@aol.com
DEVICE NOT TESTED
North
South
Magnet





The David Hamel

Antigravity device

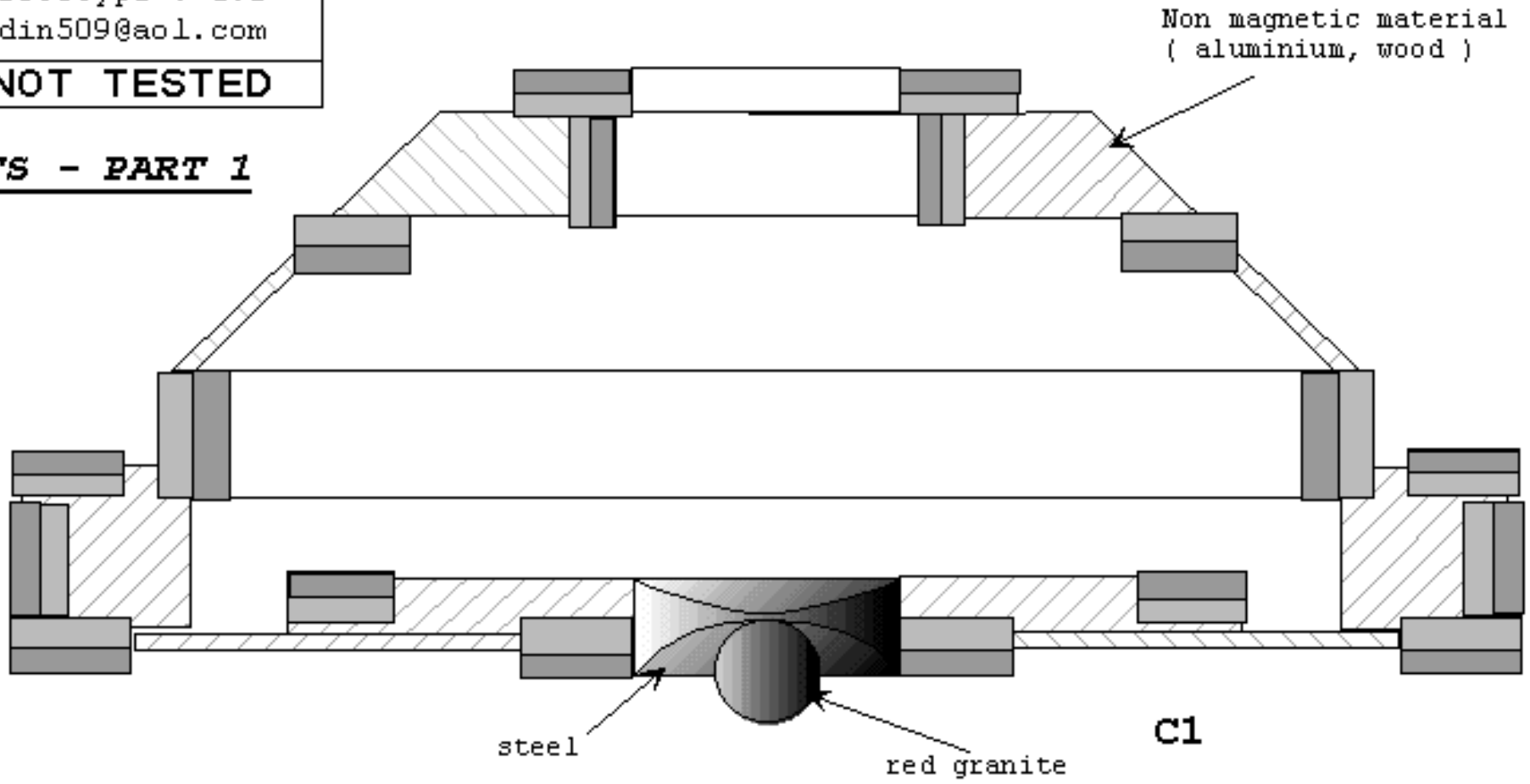
drawing by Jean-Louis Naudin

May 1997 - Prototype V 1.1

Email : JNaudin509@aol.com

DEVICE NOT TESTED

COMPONENTS - PART 1



The David Hamel

Antigravity device

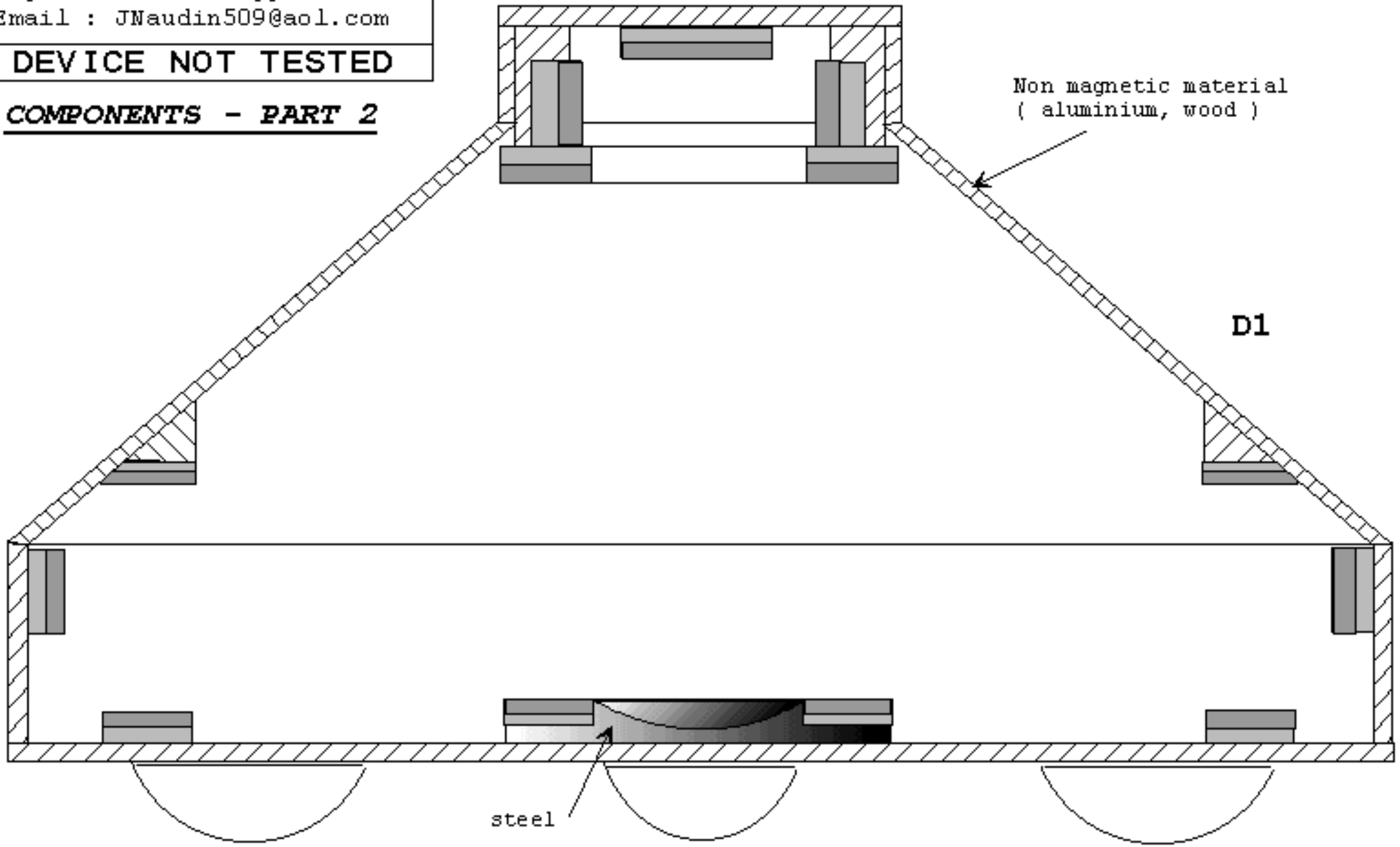
drawing by Jean-Louis Naudin

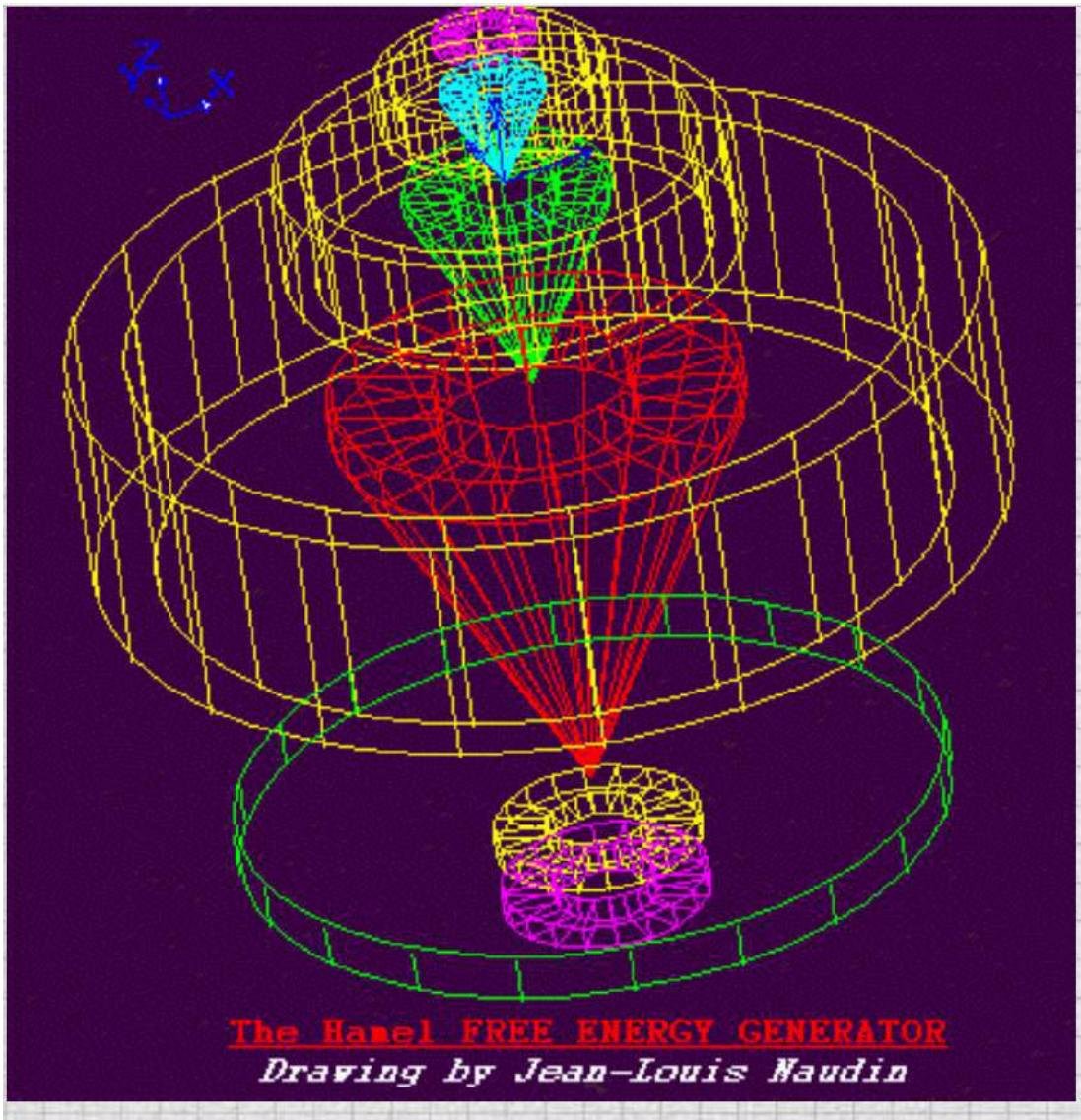
May 1997 - Prototype V 1.1

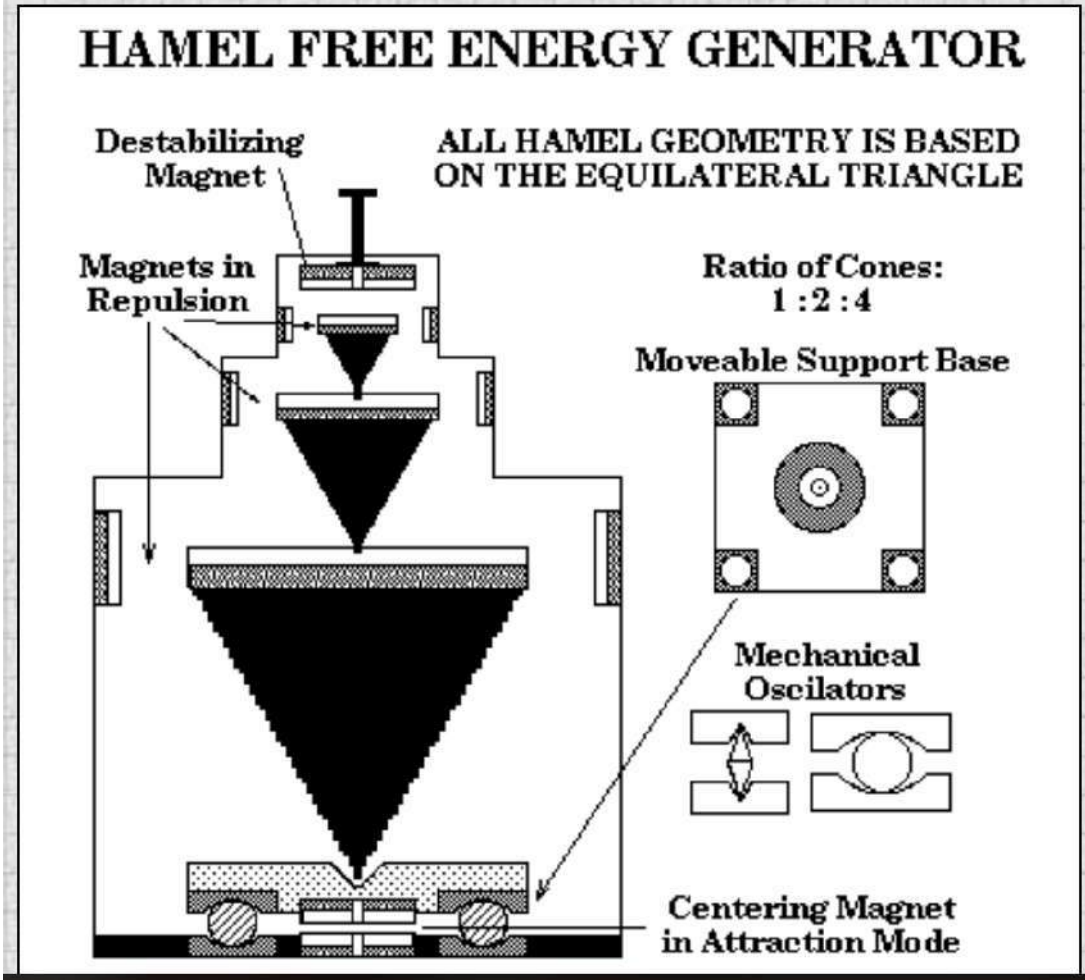
Email : JNaudin509@aol.com

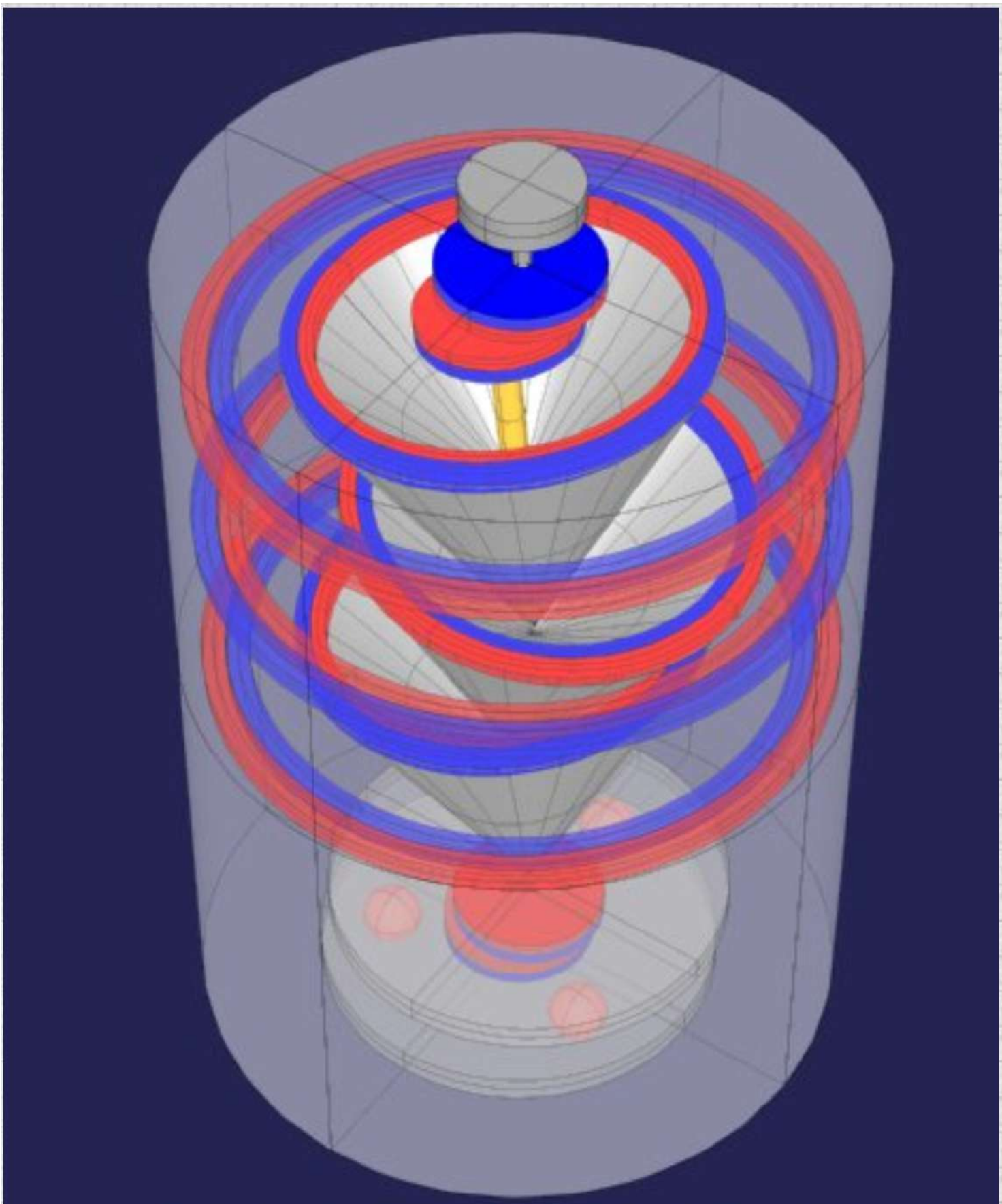
DEVICE NOT TESTED

COMPONENTS - PART 2



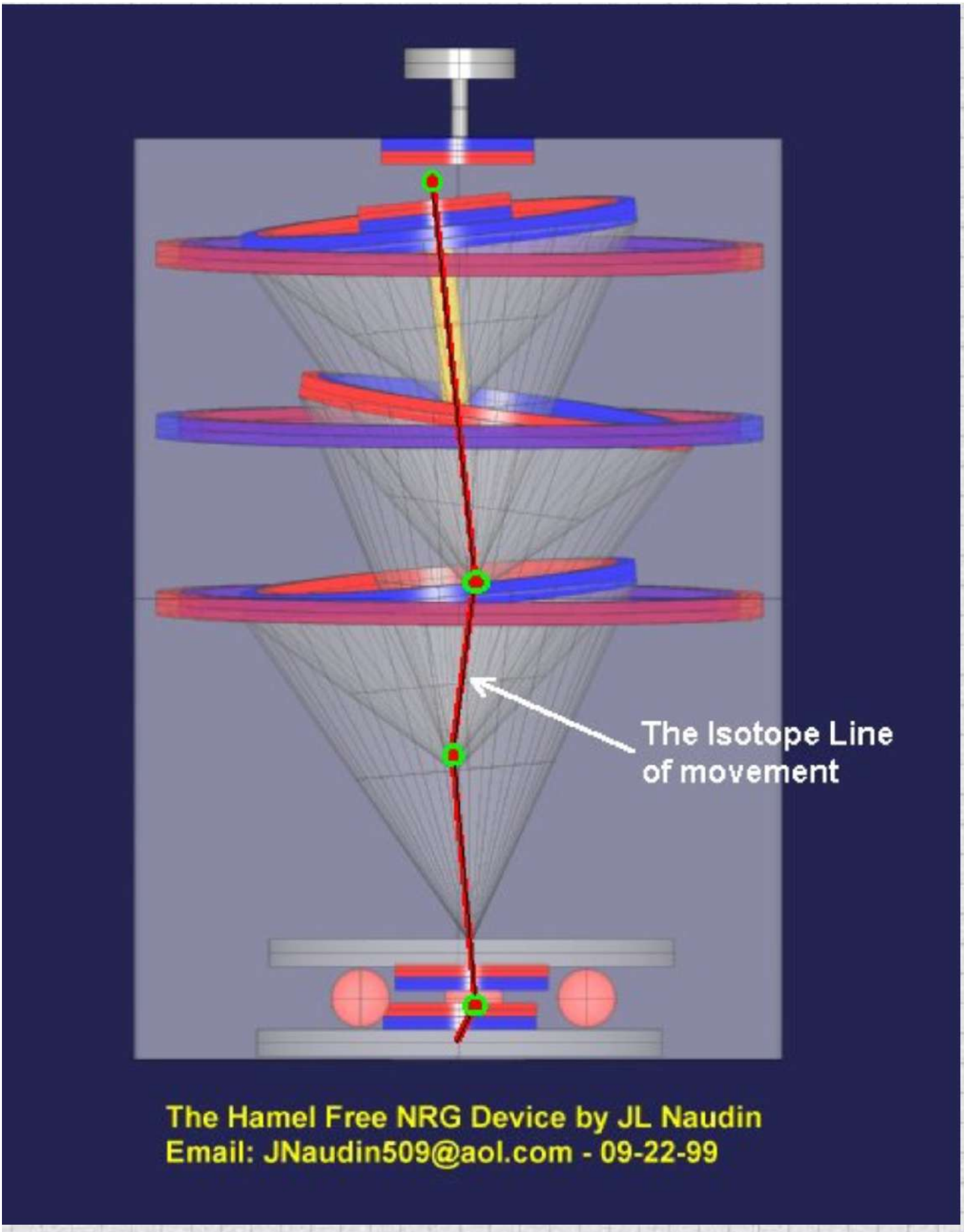

The Hamel FREE ENERGY GENERATOR
Drawing by Jean-Louis Naudin


HAMEL FREE ENERGY GENERATOR
Destabilizing Magnet
ALL HAMEL GEOMETRY IS BASED ON THE EQUILATERAL TRIANGLE
Magnets in Repulsion
Ratio of Cones: 1 : 2 : 4
Moveable Support Base
Mechanical Oscilators
Centering Magnet in Attraction Mode

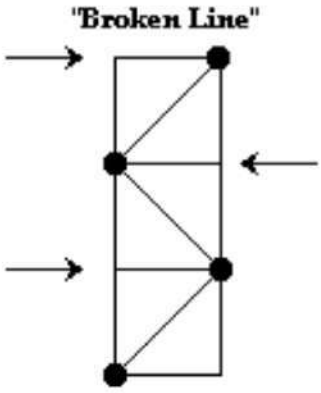


The Hamel Free NRG Device by JL Naudin

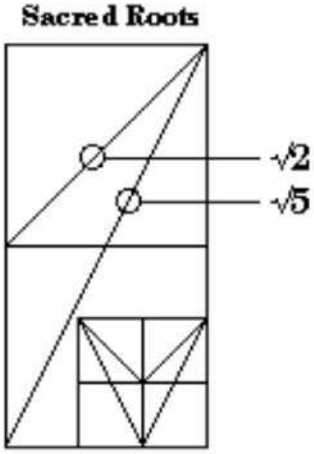
Email: JNaudin509@aol.com - 09-22-99



The Hamel Free NRG Device by JL Naudin
Email: JNaudin509@aol.com - 09-22-99

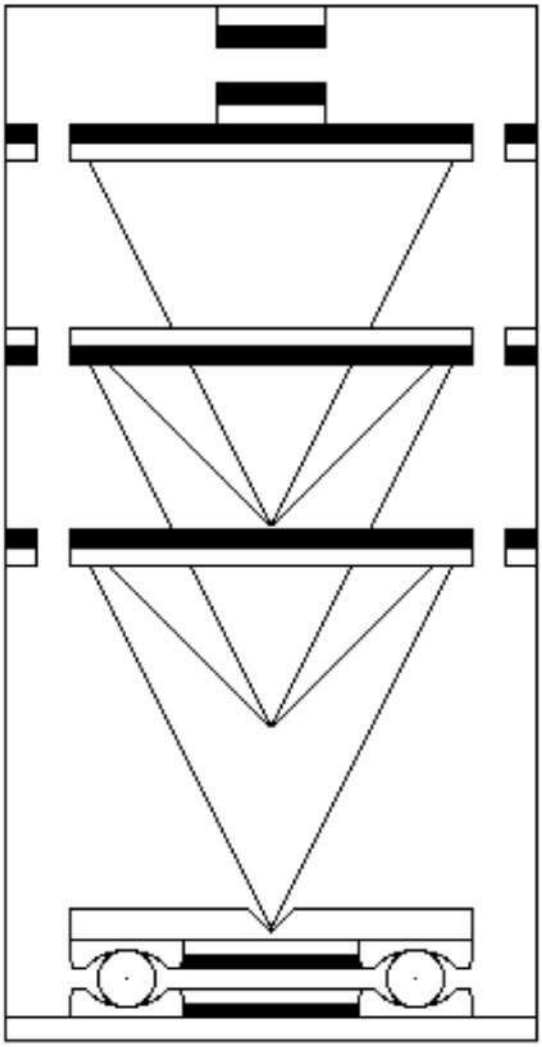


Oscillating Movement of Cones



Epyptian Djed







This device is based on Hamel magnetic motor demonstration. The Magnetic gate is build with 13 ferrite magnets 40x25x10 mm stacked outside a 100 mm PVC tube. The Hamel spinning disc is build with a ring magnet (outer diam.70 mm, inner diam. 33 mm, 8 mm thick) sticked on a 67 mm steel ball (490 gr weight).

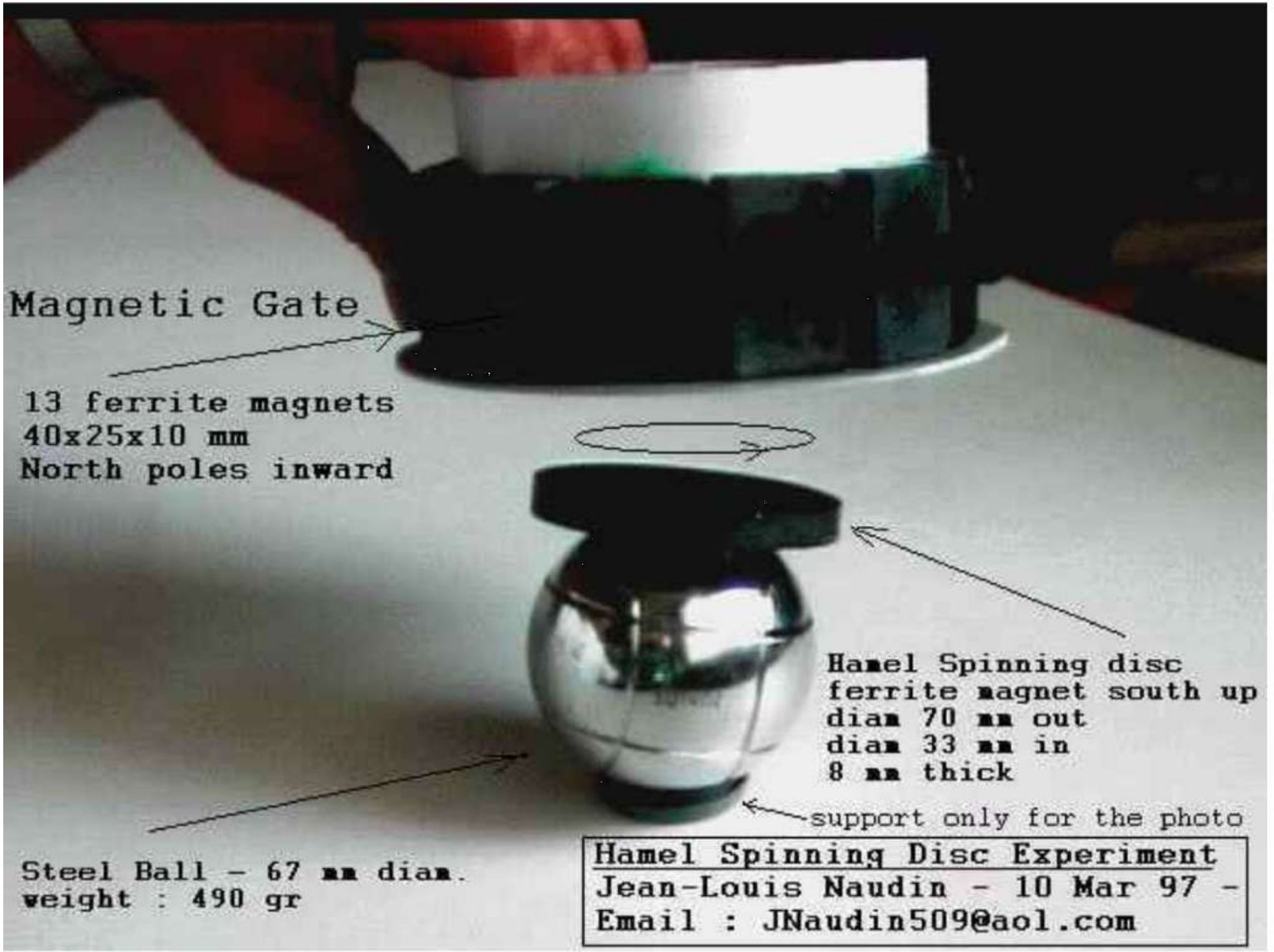
Operation :

Take your magnetic gate in hands under the Hamel spinning device. The ring magnet start to spin fast like a top, if you tune correctly the distance between the magnetic gate and the ring magnet. The magnetic gate above must be tilted and slightly offset axially... poles arranged so the magnets attract, not repel.

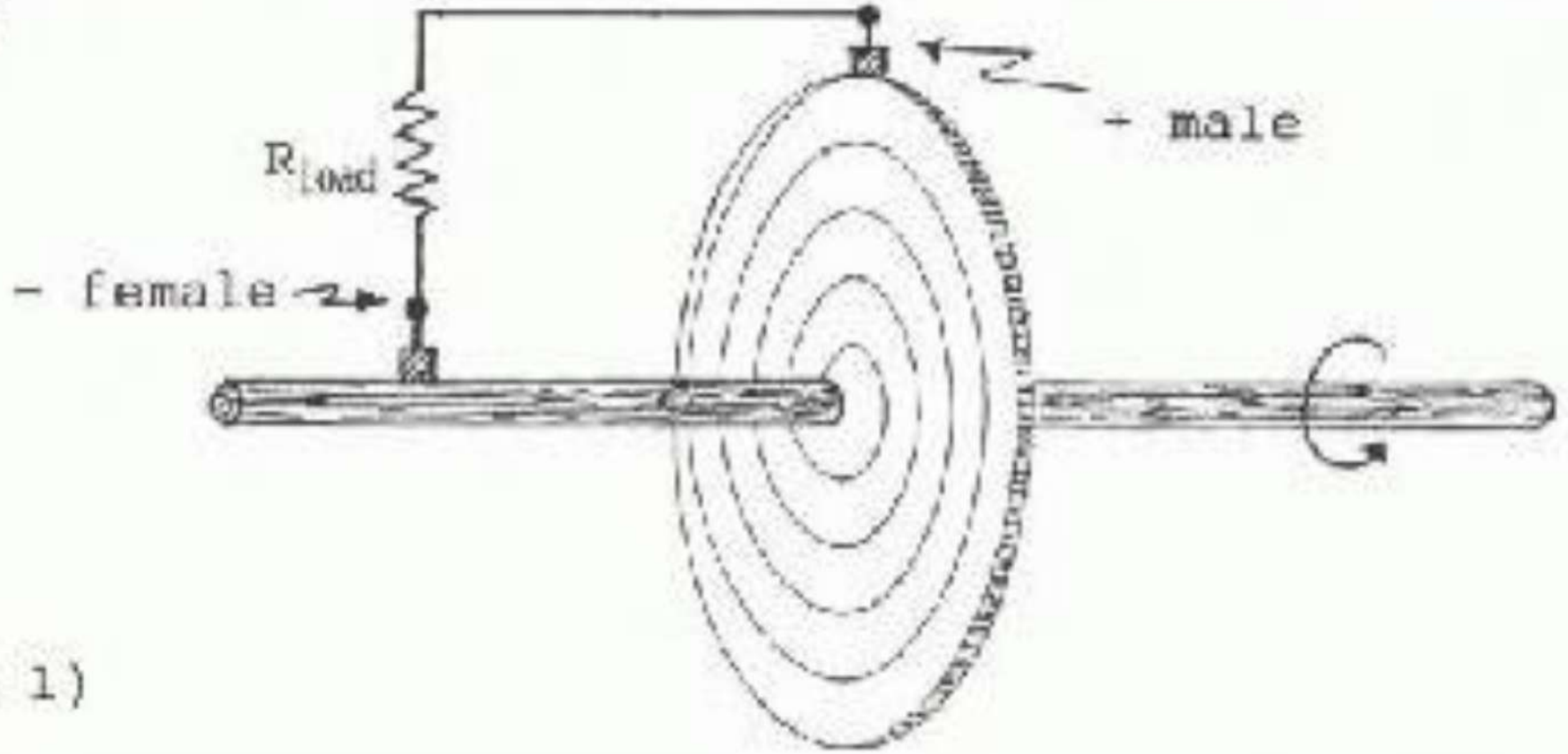
Comments :

I can keep it spinning by moving and tilting the upper assy slowly from side to side. This changes the force vector to one side of the ring/ball and precession takes over. This MANUAL ALTERATION (with hands !!) of the force vector and precession is the reason of the result spin. If you put the magnetic gate in a fixed position, the Hamel spinner disc begin to spin but stops after a short time.....

(For more informations about "magnetic gate" see at : John Bedini's Magnetic Gate)

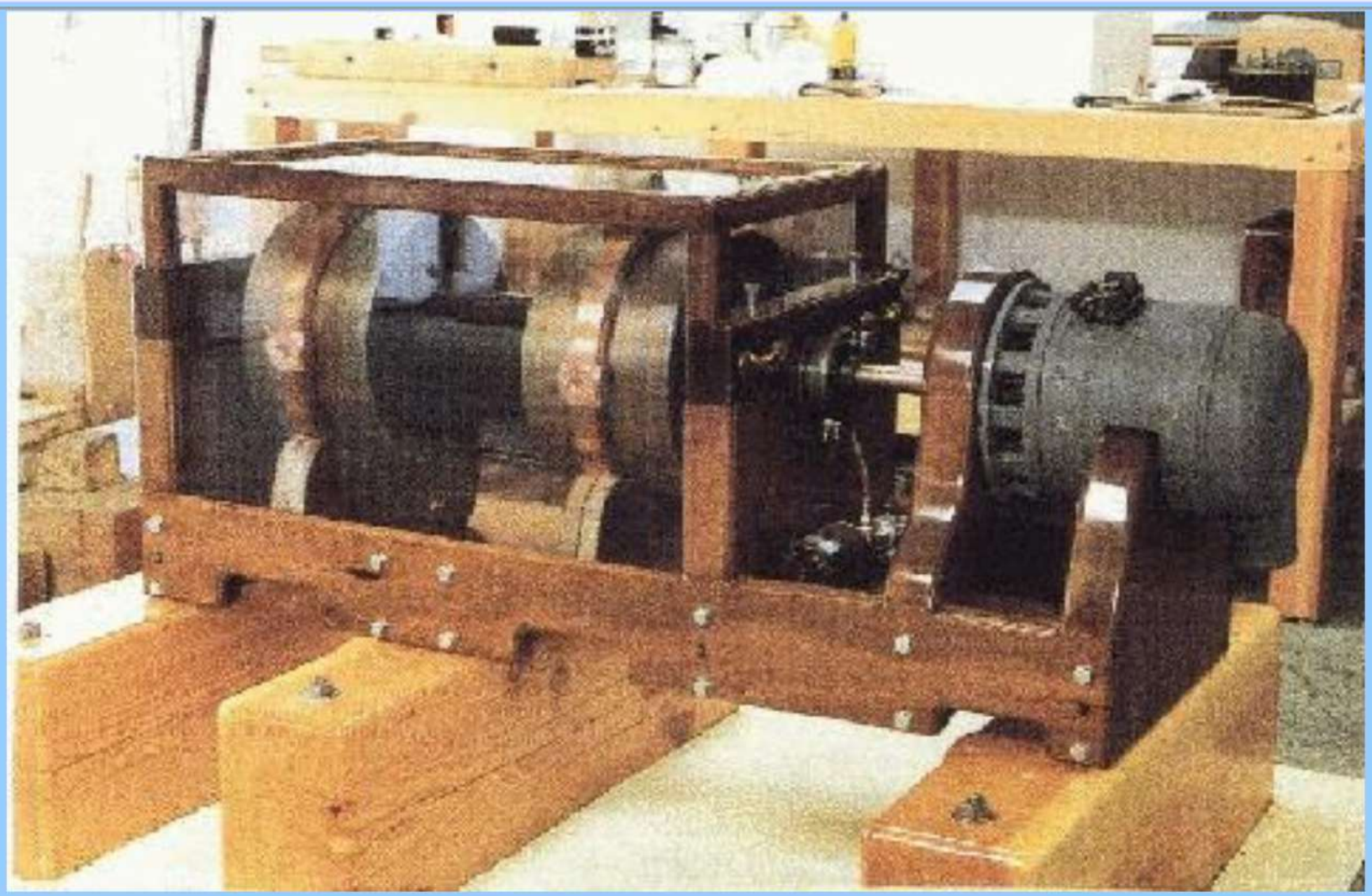

Magnetic Gate
13 ferrite magnets
40x25x10 mm
North poles inward
Hamel Spinning disc
ferrite magnet south up
diam 70 mm out
diam 33 mm in
8 mm thick
support only for the photo
Steel Ball - 67 mm diam.
weight : 490 gr
Hamel Spinning Disc Experiment
Jean-Louis Naudin - 10 Mar 97 -
Email : JNaudin509@aol.com

potentials is a rotating, magnetised, electrically c
spiral.



(figure 1)

PRIMORDIAL ENERGY



N-1 Homopolar Generator

"If you can imagine it, it's imaginable -
if it's imaginable, it must be real."
- Bruce DePalma, 1997



Quadra pole N-machine

under test condition in 1995



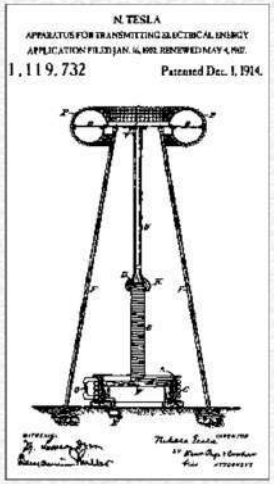
Avramenko's Free Electrons Pump (AFEP v1.0)

By Jean-Louis Naudin

*created on November 1st, 1999 - **JLN Labs** - Last update November 3rd, 1999*

Toutes les informations et schémas sont publiés gratuitement (freeware) et sont destinés à un usage personnel et non commercial
All informations and diagrams are published freely (freeware) and are intended for a private use and a non commercial use.

The AFEP experiment is based on the russian patent application filed on May 10th, 1993 by Stanislav and Konstantin Avramenko (PCT/GB93/00960). This a staight-forward application of the single-wire electrical energy transmission based upon the principle of longitudinal electrostatic waves as described by Nikola Tesla in the 1890s.


N. TESLA.

APPARATUS FOR TRANSMITTING ELECTRICAL ENERGY.

APPLICATION FILED JAN. 16, 1902. RENEWED MAY 4, 1907.

1,119,732. Patented Dec. 1, 1914.

The AFEP device will use two main effects :

- The Avramenko's single-wire transmission line system
- The capacitance coupling with the earth atmosphere for tapping free electrons in the air medium.

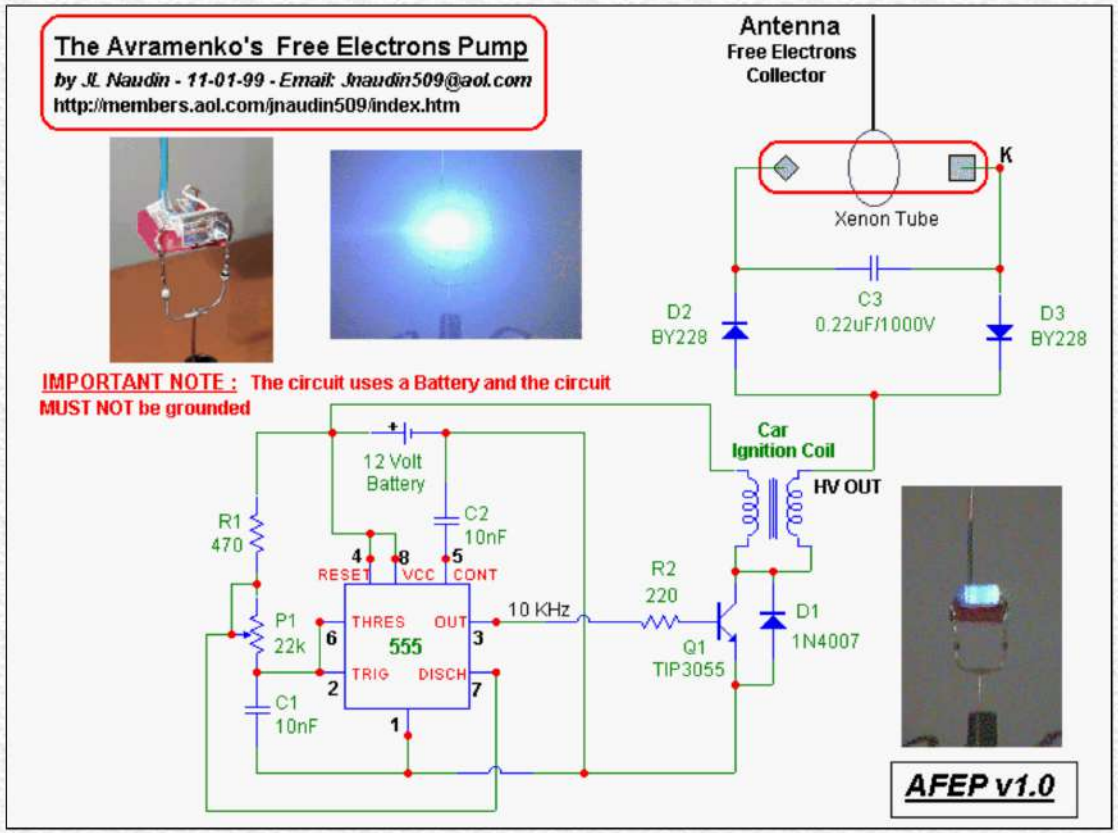
Something devices and experiments have already been done successfully by Stefan Hartmann with the "Car ignition coil experiments with Avramenko-plug" and freely released on the Web on October 26th, 1999 (thanks Stefan...).

So, today, I have reproduced successfully the Hartmann's setup with some improvements :

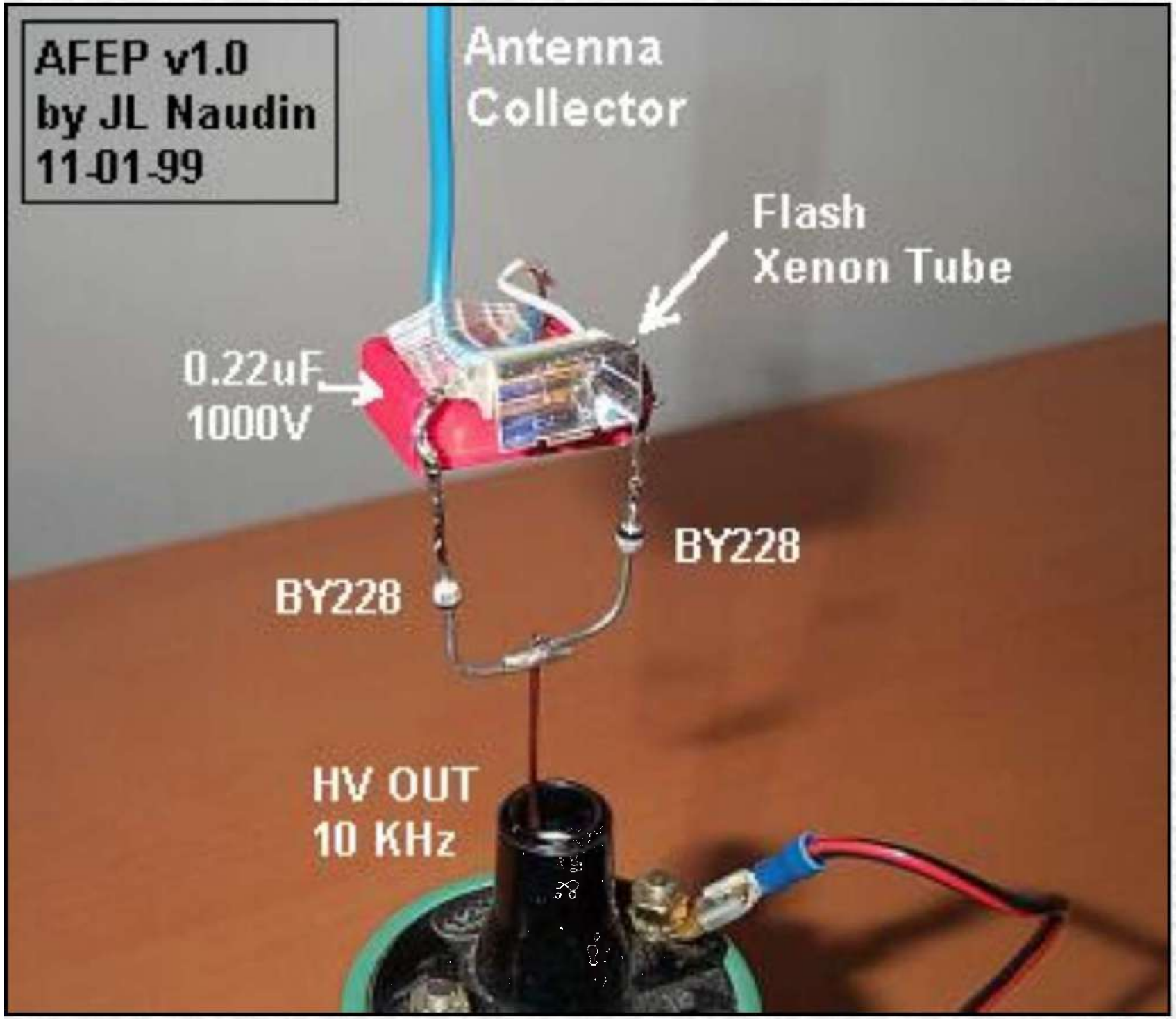
- The electronic generator (aka the Avramenko's monovibrator) runs at a higher frequency (100KHz),
- I have used a xenon flash tube instead of a simple spark gap,
- I have used a copper wire as an antenna for the coupling with the earth atmosphere (and not with the ground as in the Stefan's test), the sucked free electrons act as a trigger for the xenon flash.

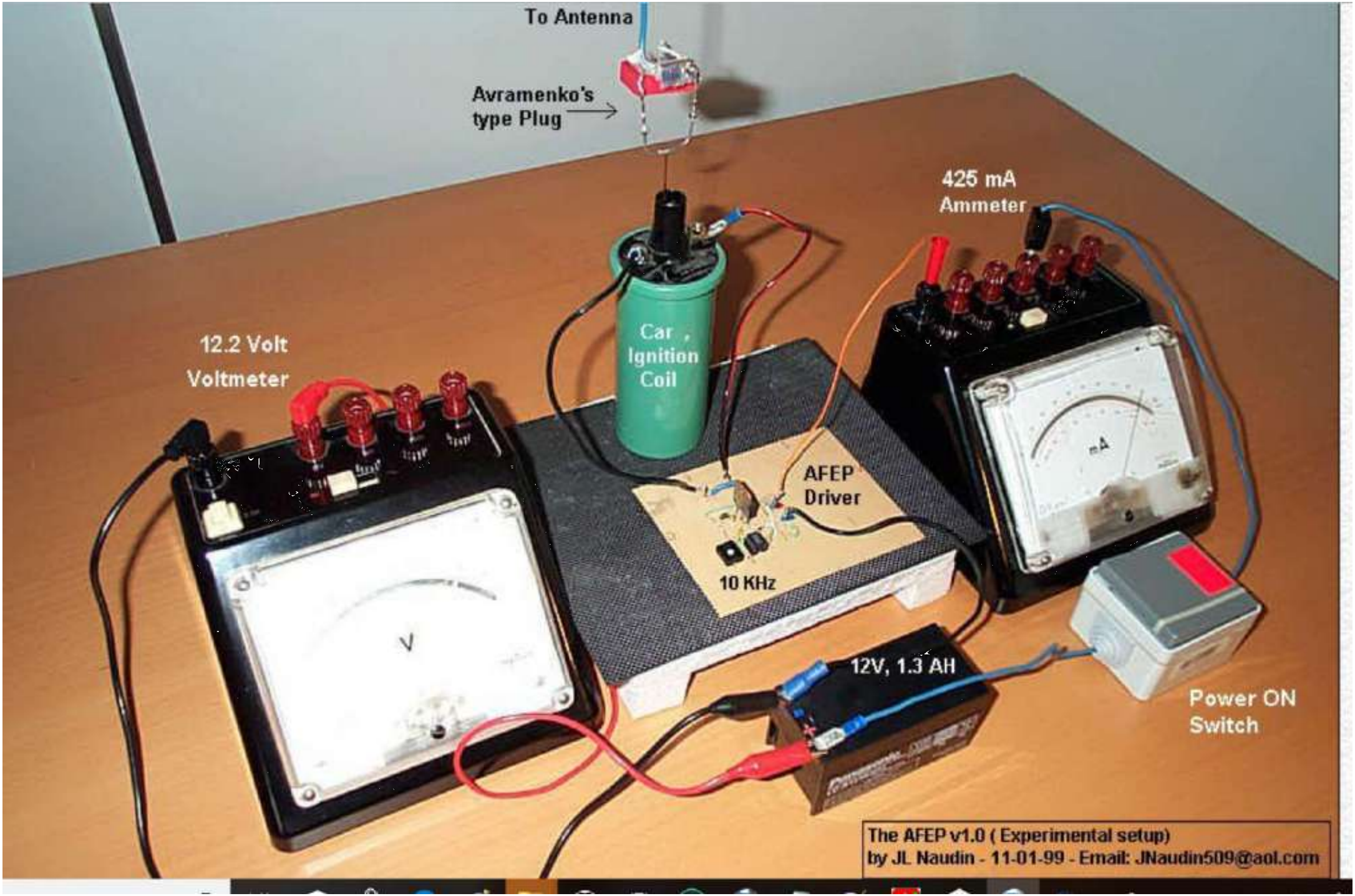
The AFEP device MUST BE powered by a Battery source (I have used a 12V 1.3 AH lead-acid battery) and MUST NOT BE GROUNDED. This is very important, because the system MUST BE OPEN. If you ground the AFEP generator circuit, you build a common closed system and free electrons can't be tapped from the atmosphere.





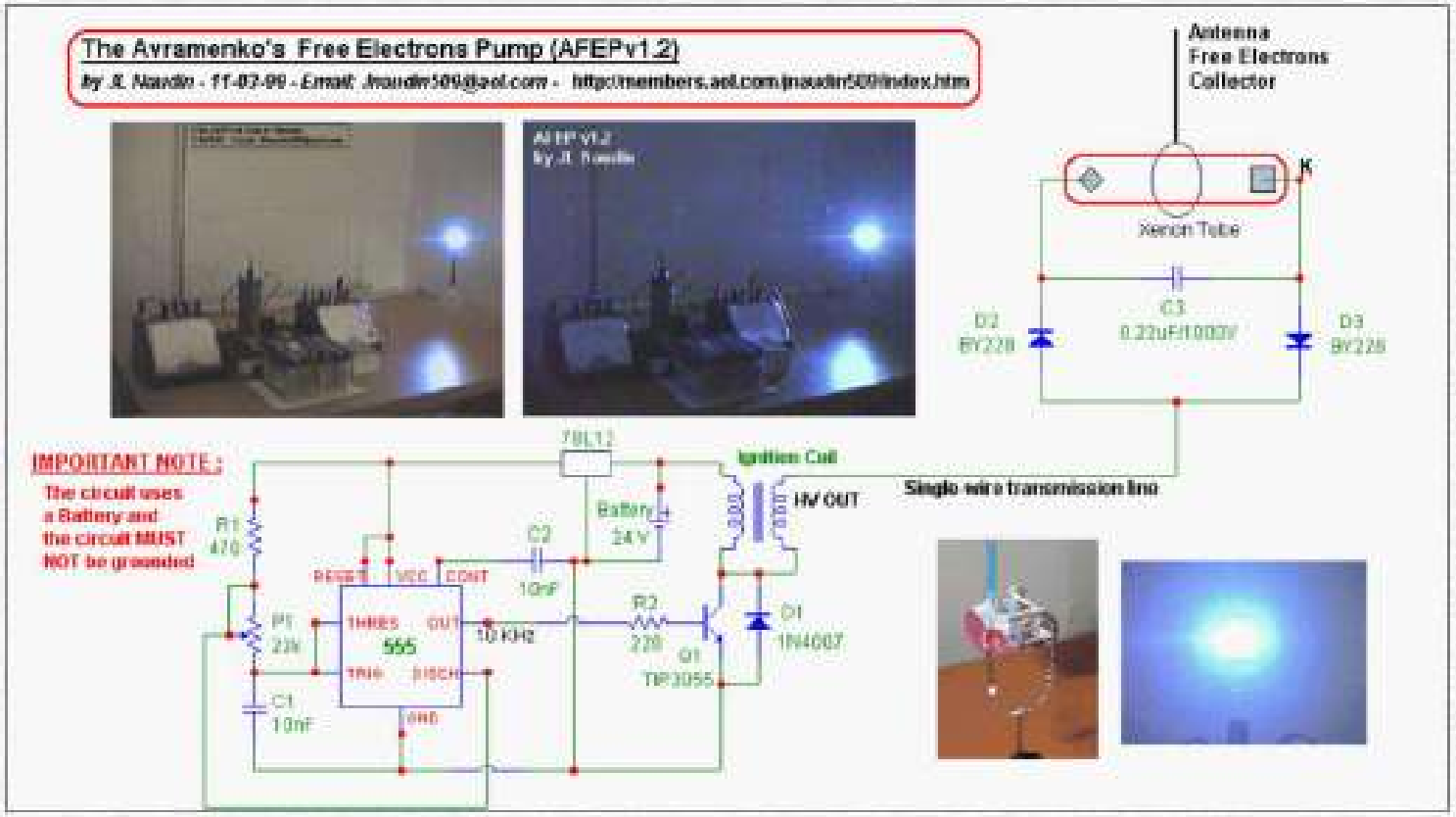
The main driver circuit uses a basic 555 square waves oscillator tuned at 10 KHz for the best output. The TIP 3055(Q1) is used as a common switcher for the car ignition coil. The most important part is the enhanced Avramenko's plug :


AFEP v1.0
by JL Naudin
11-01-99
Antenna
Collector
Flash
Xenon Tube
0.22uF
1000V
BY228
BY228
HV OUT
10 KHz


To Antenna
Avramenko's type Plug
425 mA Ammeter
12.2 Volt Voltmeter
Car , Ignition Coil
AFEP Driver
10 KHz
12V, 1.3 AH
Power ON Switch
The AFEP v1.0 (Experimental setup)
by JL Naudin - 11-01-99 - Email: JNaudin509@aol.com

The AFEP experiment is based on the russian patent application filed on May 10th, 1993 by Stanislav and Konstantin Avramenko (PCT/RU93/00960). This a staight-forward application of the single-wire electrical energy transmission based upon the principle of longitudinal electrostatic waves as described by Nikola Tesla in the 1890s.

The AFEP v1.2 is a improved version of the AFEP v1.0. I have added a small 78L12 DC regulator for the 555 square wave pulses generator circuit. The AFEP circuit is now powered with a 24V DC source (two lead acid 12V/4 AH batteries) and always ungrounded.

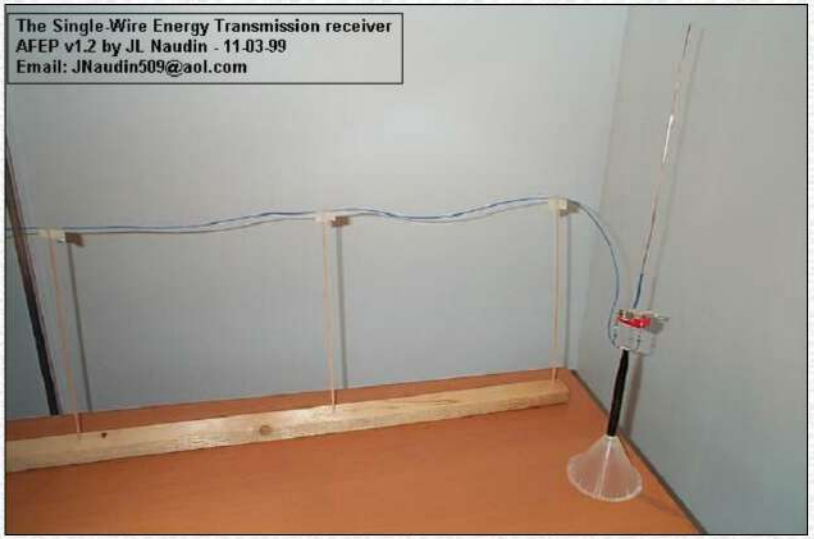


The First Single-Wire Energy Transmission test (11-03-99)

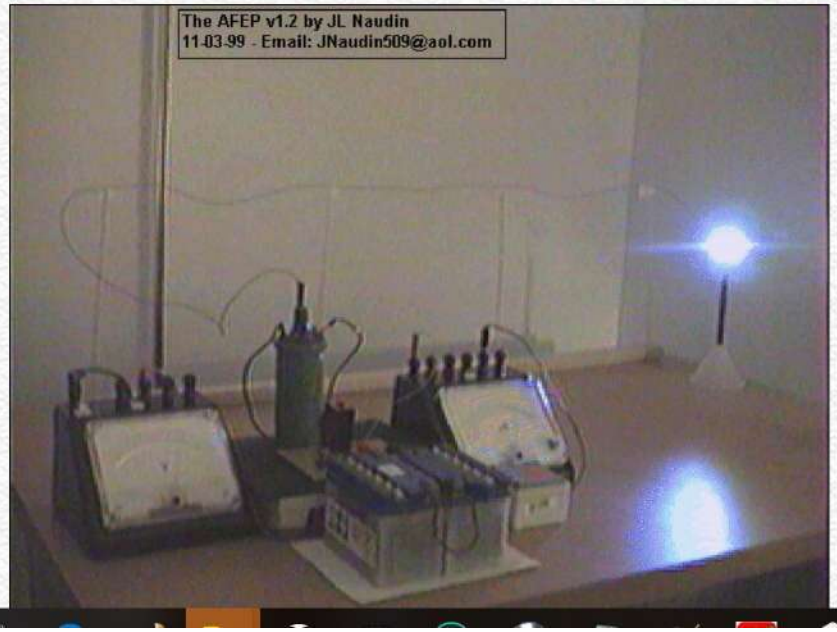
The purpose of this test is to check the inventor's claim about the energy transmission through a single wire with the Avramenko's plug.

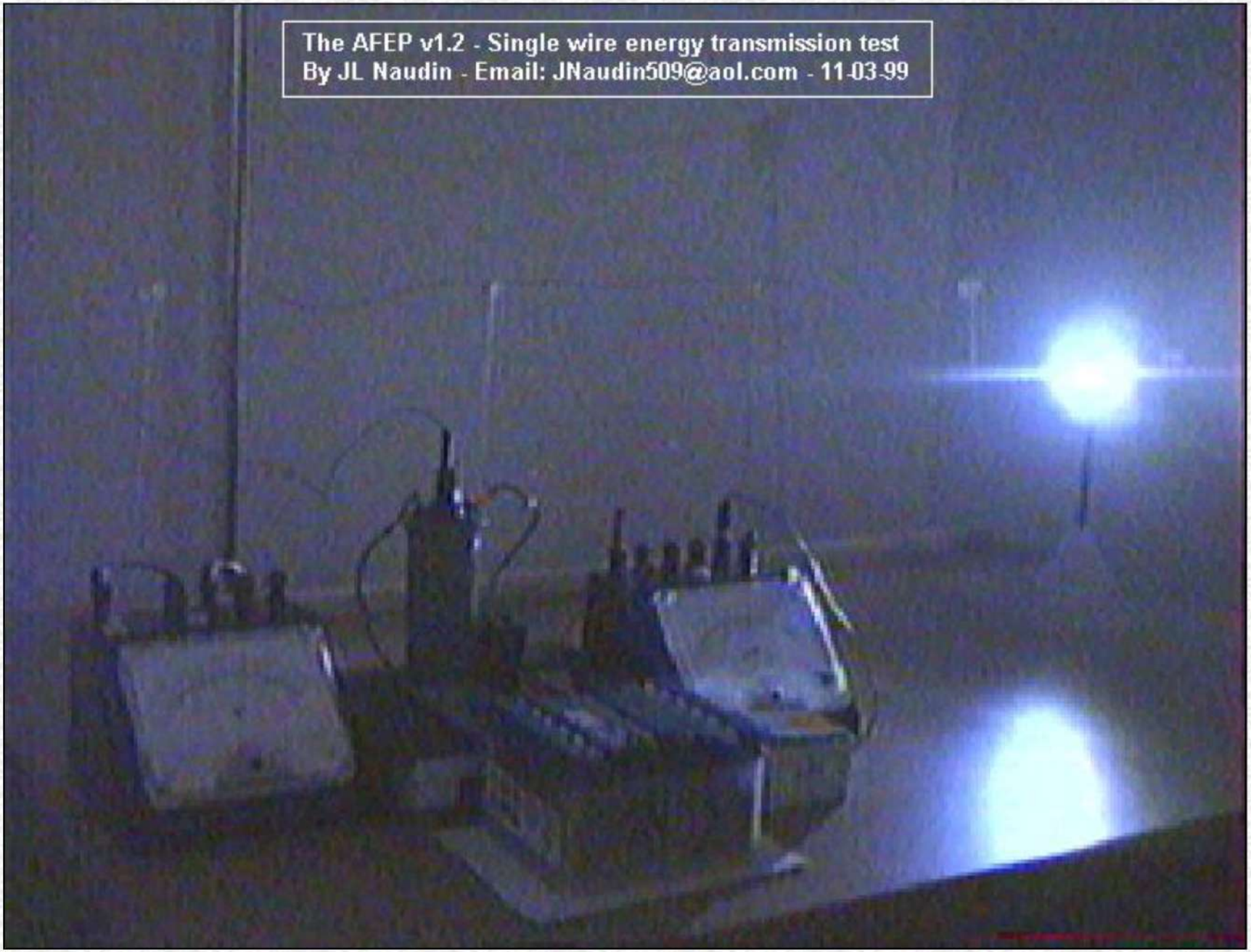


the enhanced Avramenko's plug previously used with the AFEP v1.0 has been connected at the end (see below).



Test Results : When the AFEP generator is switched on, the xenon tube flash immediately with the same strenght and period than without the line. This confirms the Avramenko's claim.



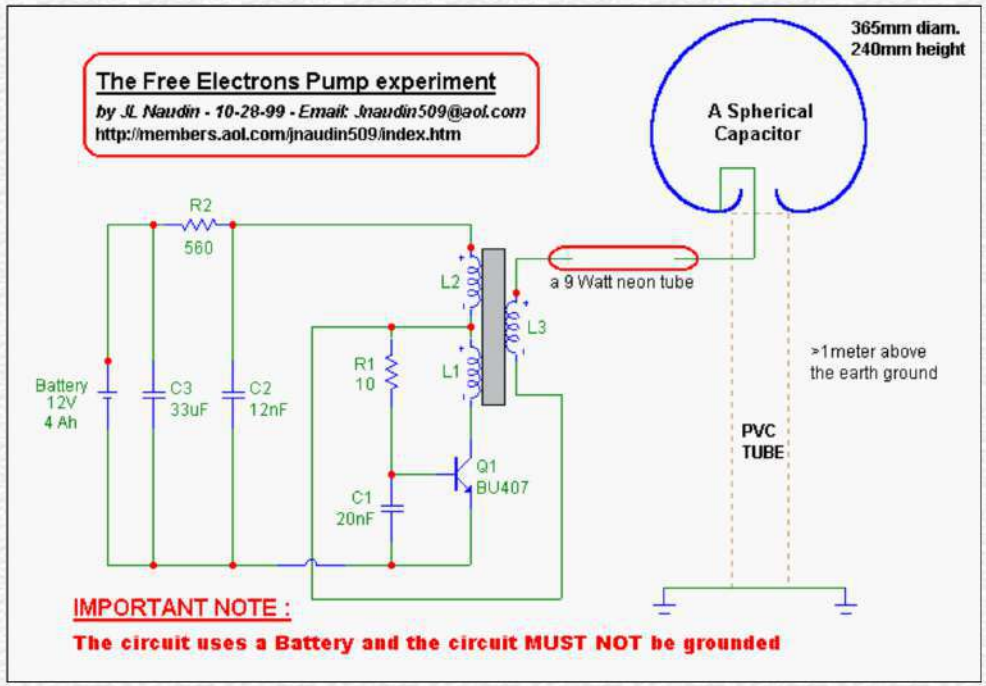


A bright and strong flash light between the enhanced Avramenko's plug in the darkness of the JLN Labs.
Energy is transmitted through the single-wire and free electrons sucked from the air are used for triggering the flash...

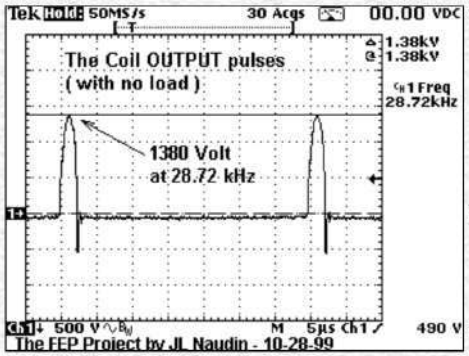
The FEP v1.0 is an enhanced version which uses a spherical capacitor coupled with the earth atmosphere. As Nikola Tesla had used in the Power Wave experiment in Colorado springs in June 26, 1899 and also during his tests of the first models of the Tesla Magnifier Amplifier tower, the FEP v1.0 uses the same principle for sucking free electrons from the atmosphere : *" To produce an electrical movement of the required magnitude it is desirable to charge the terminal as highly as possible, for while a great quantity of electricity may also be displaced by a large capacity charged to low pressure, there are disadvantages met with in many cases when the former is made too large. The chief of theses are due to the fact that an increase of the capacity entails a lowering of the frequency impulses or discharges and diminution of energy of vibration....."* (Tesla US Patent number 1,119,736 : "Apparatus for transmitting electrical energy" (issued Dec. 1, 1914)).

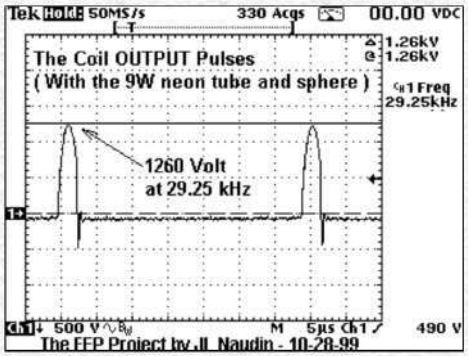


The FEP v1.0 uses a spherical capacitor made with an aluminum hollow sphere (365 mm diam. and 240 mm height). A 9 Watt neon tube (OSRAM 9W/Dulux S 41/82) is connected between the FEP generator and the aluminum sphere.

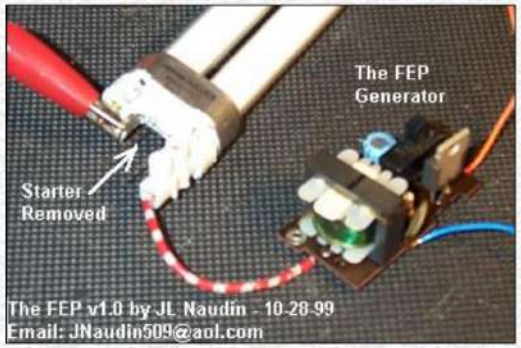


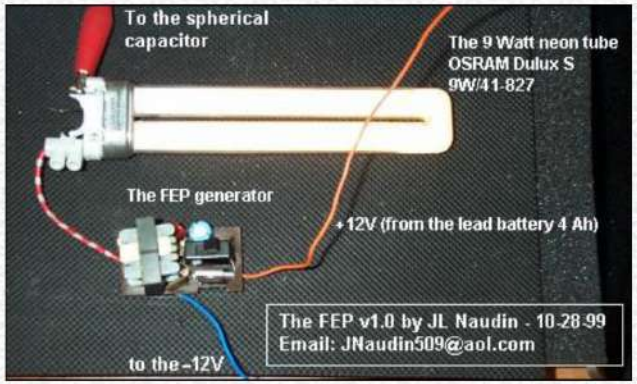
The FEP generator is a High Voltage Pulses generator which produces 1380 V pulses at about 29 kHz (see below). The FEP transformer (L1,L2,L3) is a high frequency transformer (with ferrite core) which can be found in common portable neon lights (used for camping). But you can also use L1 (7 turns of 4/10mm), L2 (6 turns of 5/10), L3 (750 turns of 1/10) wound on a ferrite core 10mm diam. If you find a ready made ferrite HF transformer, this will be better.





The 9W neon tube is a common low consumption light tube, but I have removed its original starter circuit.





The FEP Generator MUST BE powered by a battery source (I have used a 12V 4 Ah lead acid battery) and MUST NOT BE GROUNDED. This is very important, because the system MUST BE OPEN. If you ground the FEP generator circuit, you build a common closed system and free electrons can't be tapped.



I have used an analog voltmeter and an analog ammeter, this is strongly recommended for avoiding some parasitic effects due to the electromagnetic waves induction (EMI) in some digital equipments which can generate some "false/true" measurements....

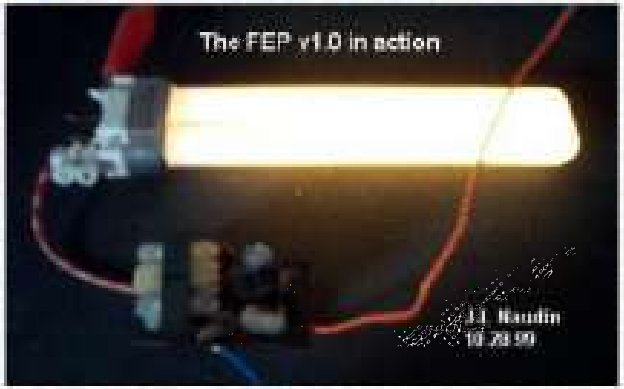
So, when the power is switched on WITHOUT the neon tube (with the FEP output left opened), the power input required for the functionning of the FEP circuit is **5.17 Watt** (11.5 Volt and 450 mA DC input)(see below).



When the 9W neon tube is connected with its spherical capacitor, the power input DROPS to **4.66 Watt** (11.5 Volt and 405 mA DC input) while the neon tube throws out about 30% of its max light...(see below)



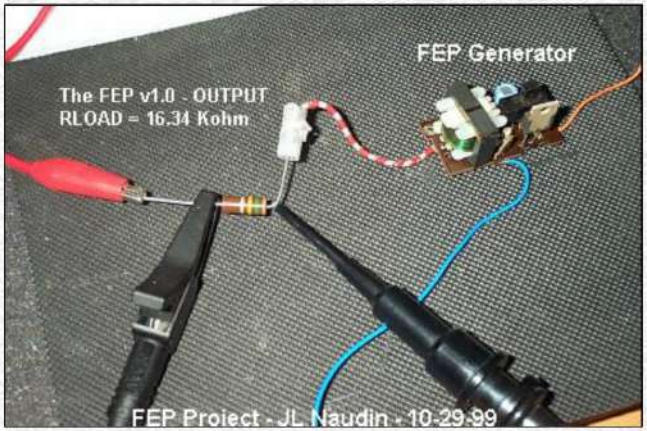




Note : If you don't have an aluminum spherical capacitor, you may also use a big aluminum sheet as a free electrons collector.

Now that you have a very simple electronic circuit that you can build and test by yourself, you will notice that this circuit works very well and shows that some free electrons can be tapped easily, from the atmosphere or from the ground with the FEP v1.0 device...

The 9 Watt neon tube has been replaced by a 15 Kohm-5 Watt (the exact value was 16340 ohm) carbon resistor (see below) :



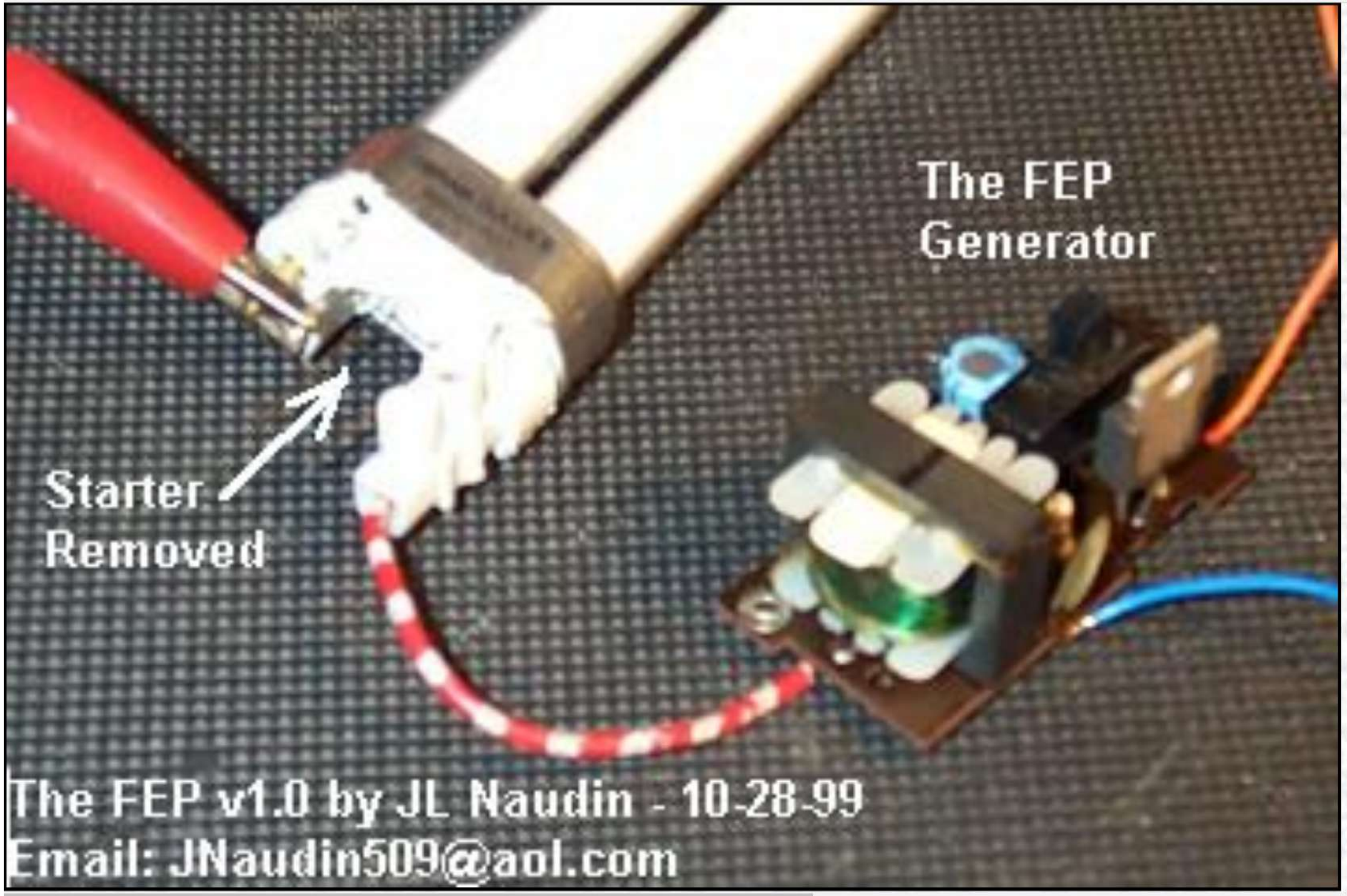
I have used a Textronix THS720P isolated and ungrounded channels oscilloscope for measuring the voltage accross the output resistor. The RMS and PEAK output voltages has been computerized automaticaly by the scope.

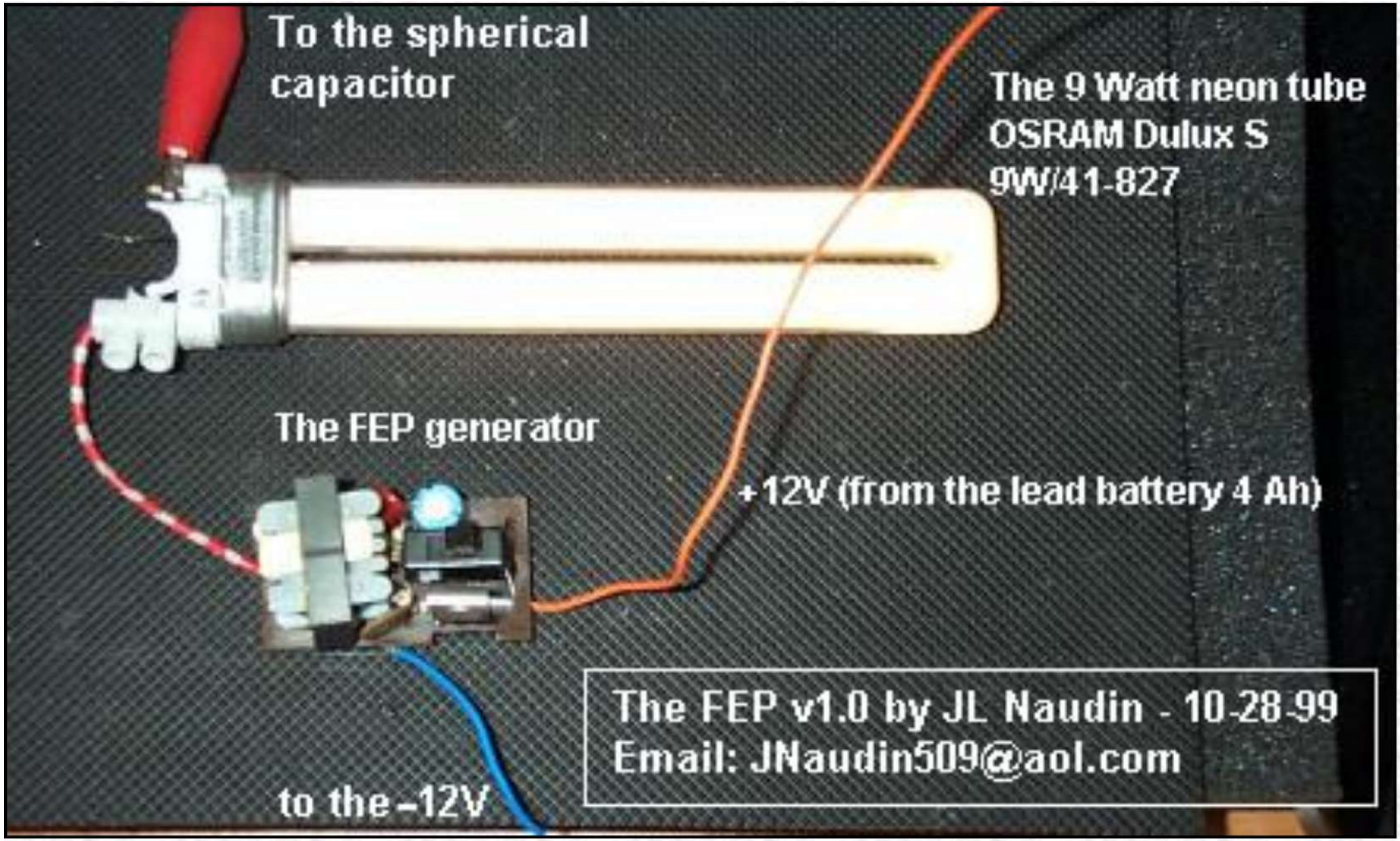
The FEP v1.0 (Input/Ouput)				by JL Naudin	10-29-99	Email: JNaudin509@aol.com			
DC INPUT					OUTPUT				
Vinp (V)	CurOut (A)	Pwr (W)	Del Pwr	Freq (kHz)	Rload (ohm)	Vout RMS (V)	Pwr RMS (W)	Vout Peak (V)	Pwr Peak (W)
11,3	0,34	3,842	-	30,75	Nload	1260,0	-	-	-
11,3	0,32	3,616	-0,226	31,19	16340	114,4	0,801	376	8,652

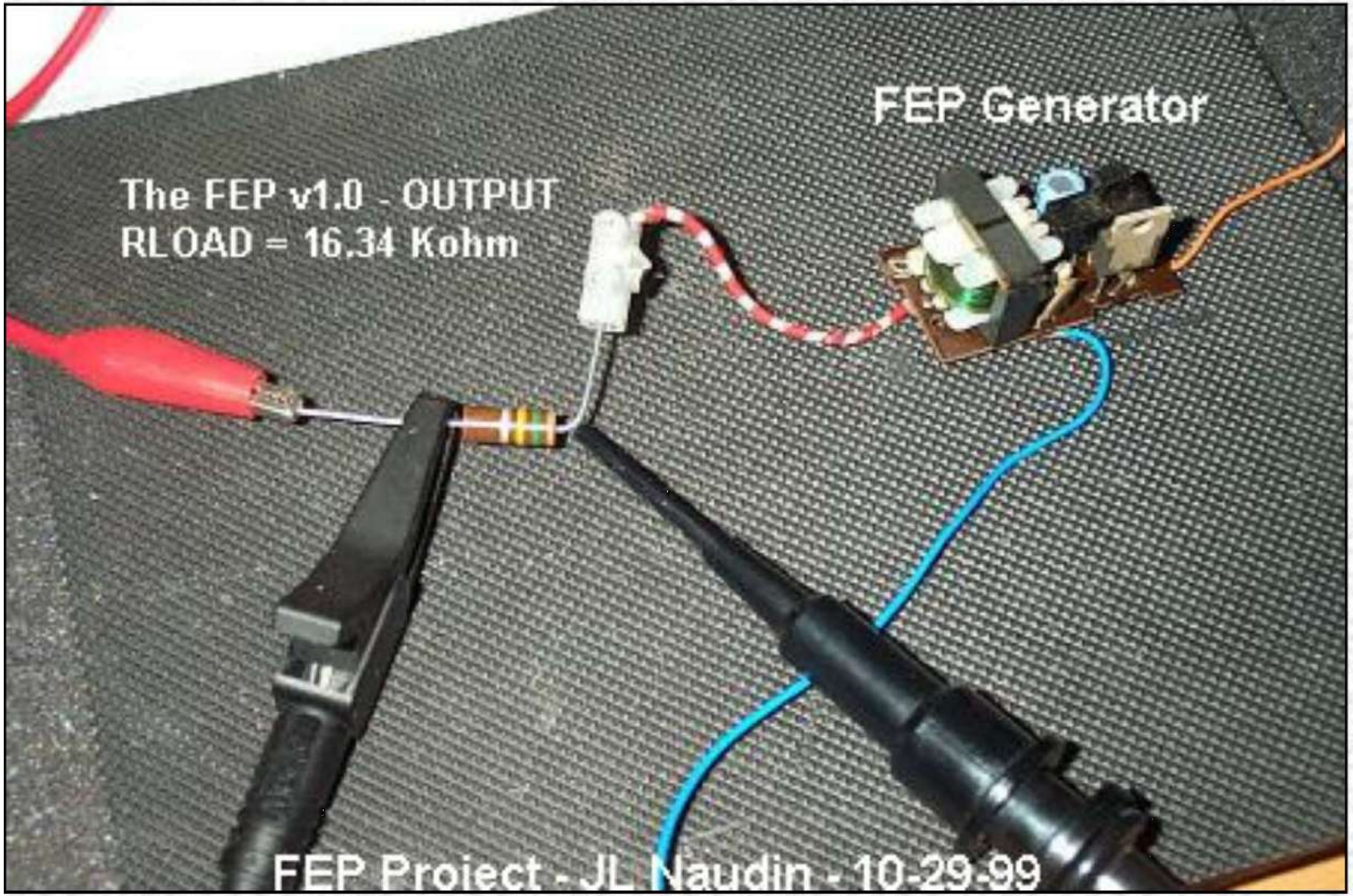
***JLN Comments*:**

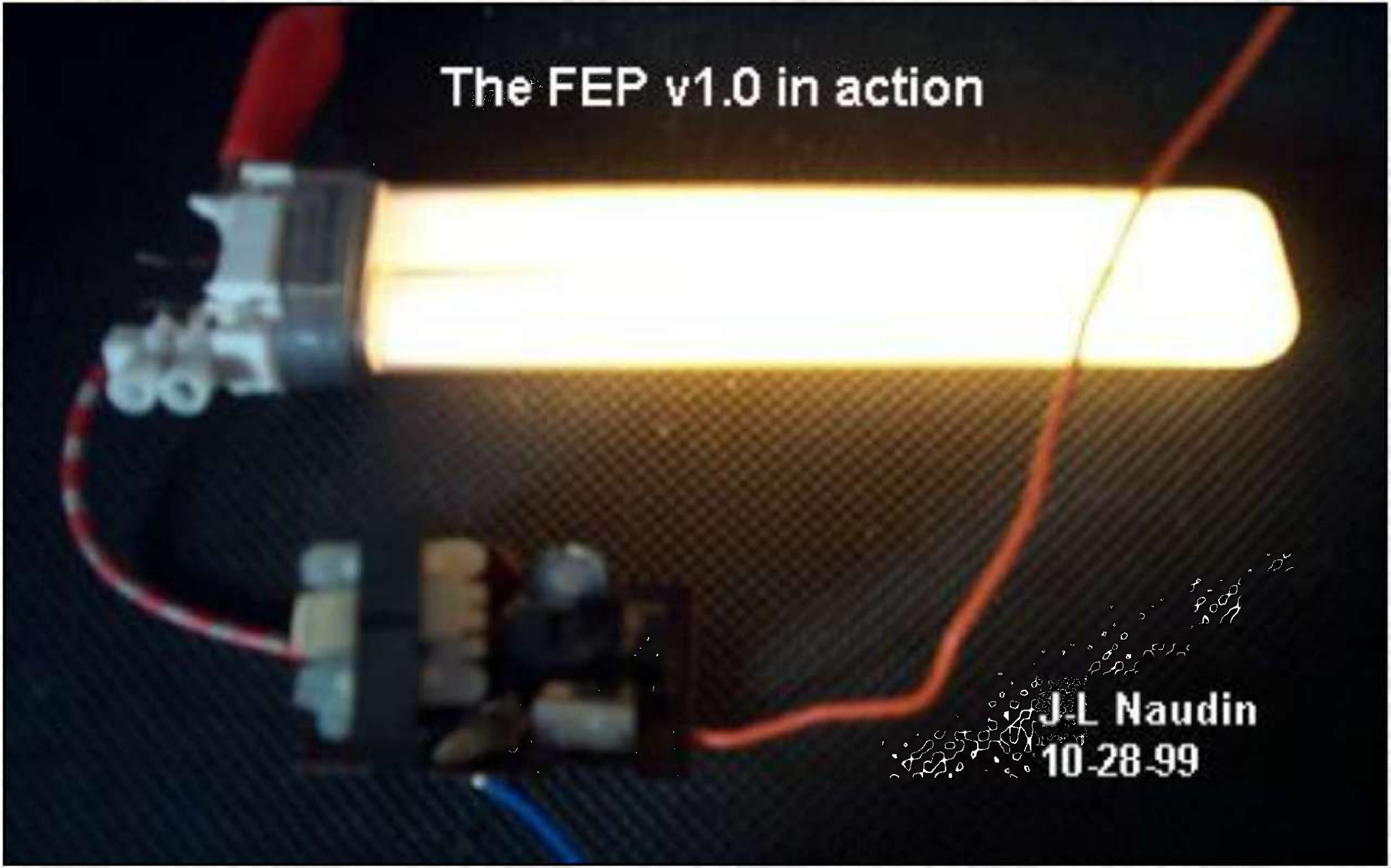
As you may notice in the diagram above, the measured output power accross the resistor was 801 mW RMS for 8.6 Watt Peak, the most interesting thing to observe is that THE INPUT POWER DROPS of 226 mW while 801 mW is generated at the output.

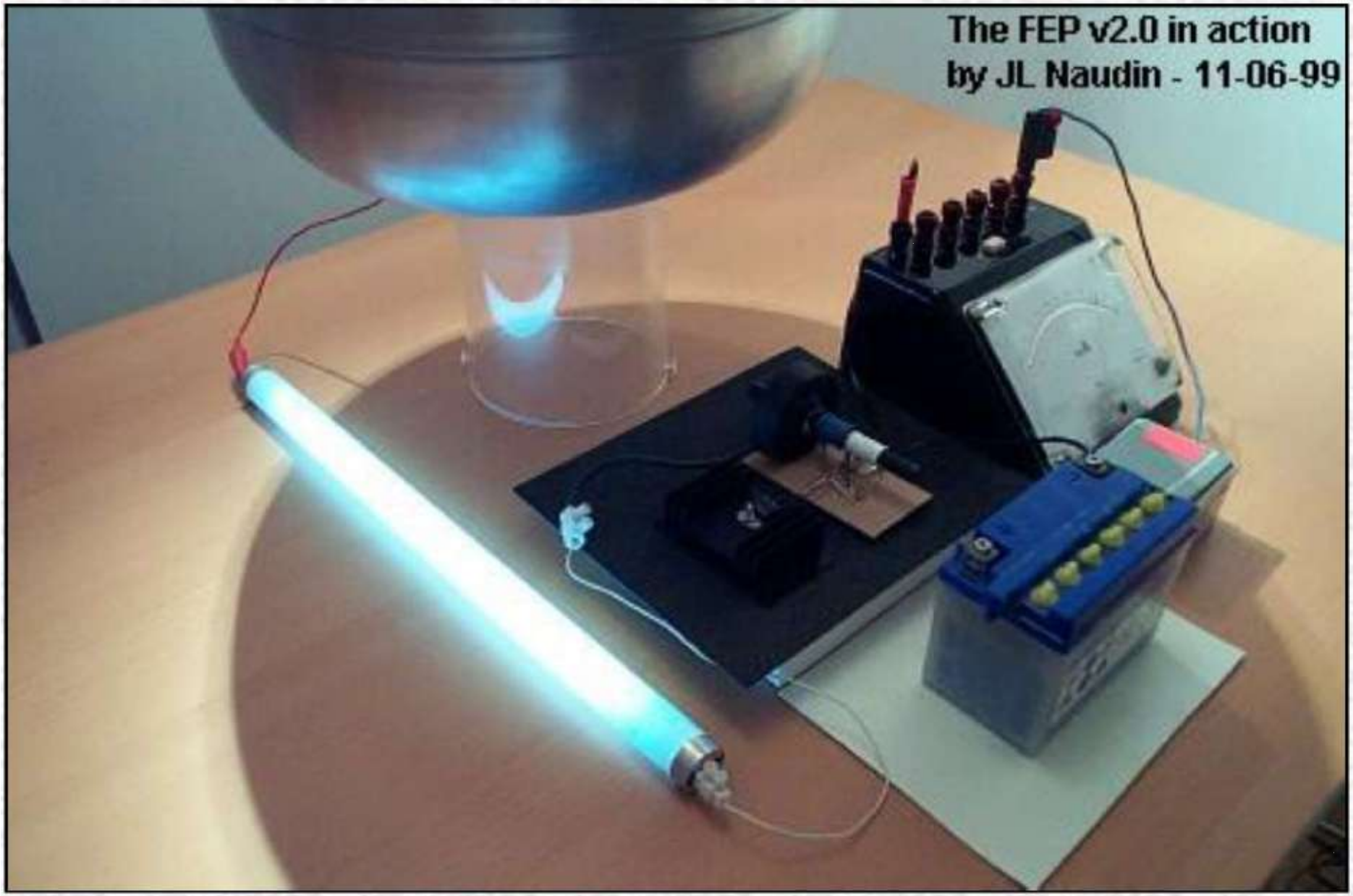
See also :


The FEP
Generator
Starter
Removed
The FEP v1.0 by JL Naudin - 10-28-99
Email: JNaudin509@aol.com


To the spherical capacitor
The 9 Watt neon tube OSRAM Dulux S 9W/41-827
The FEP generator
+12V (from the lead battery 4 Ah)
The FEP v1.0 by JL Naudin - 10-28-99
Email: JNaudin509@aol.com
to the -12V

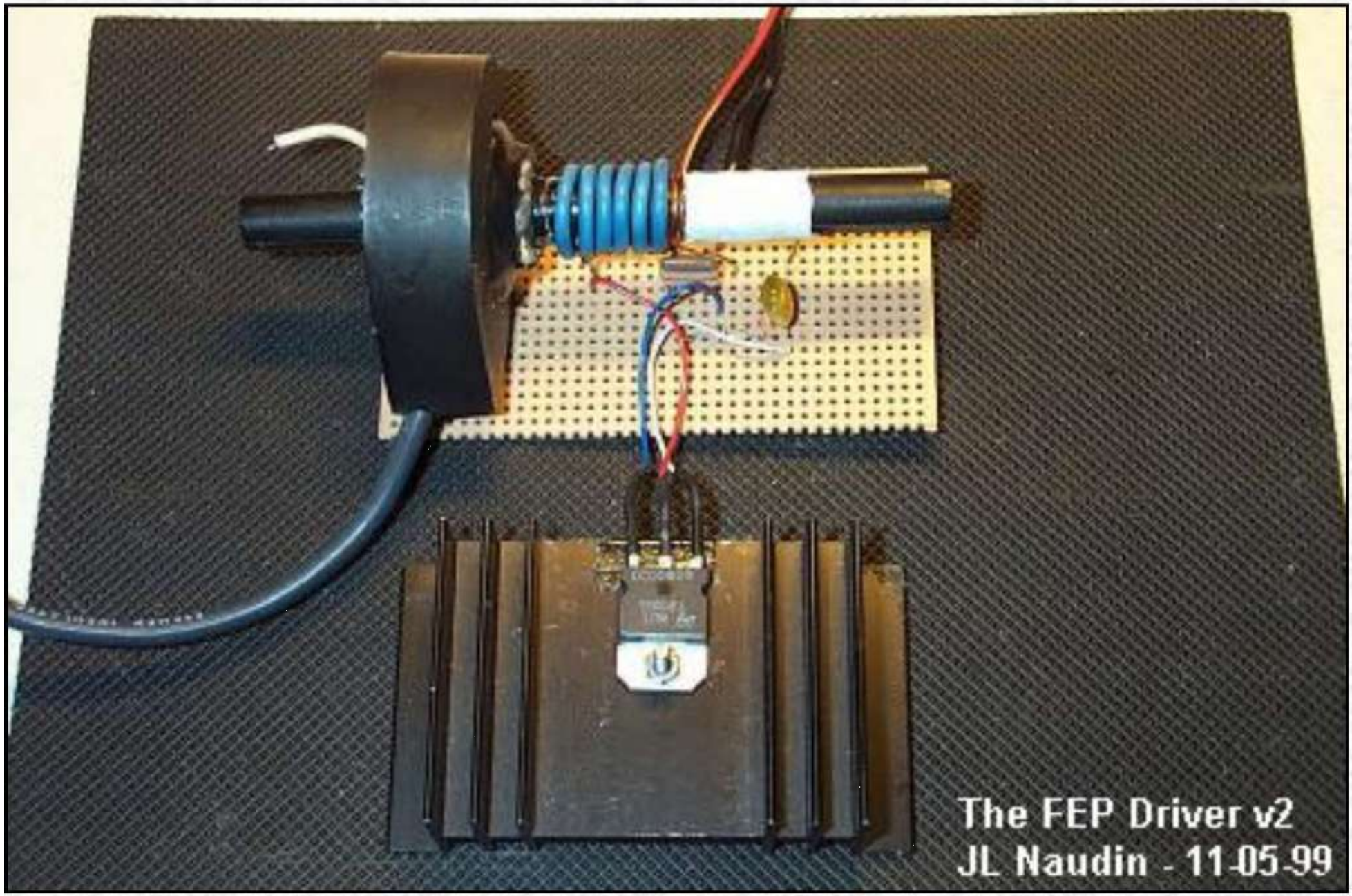

FEP Generator
The FEP v1.0 - OUTPUT
RLOAD = 16.34 Kohm
FEP Project - JL Naudin - 10-29-99


The FEP v1.0 in action
J-L Naudin
10-28-99



The Free Electrons Pump (FEP v2.0)

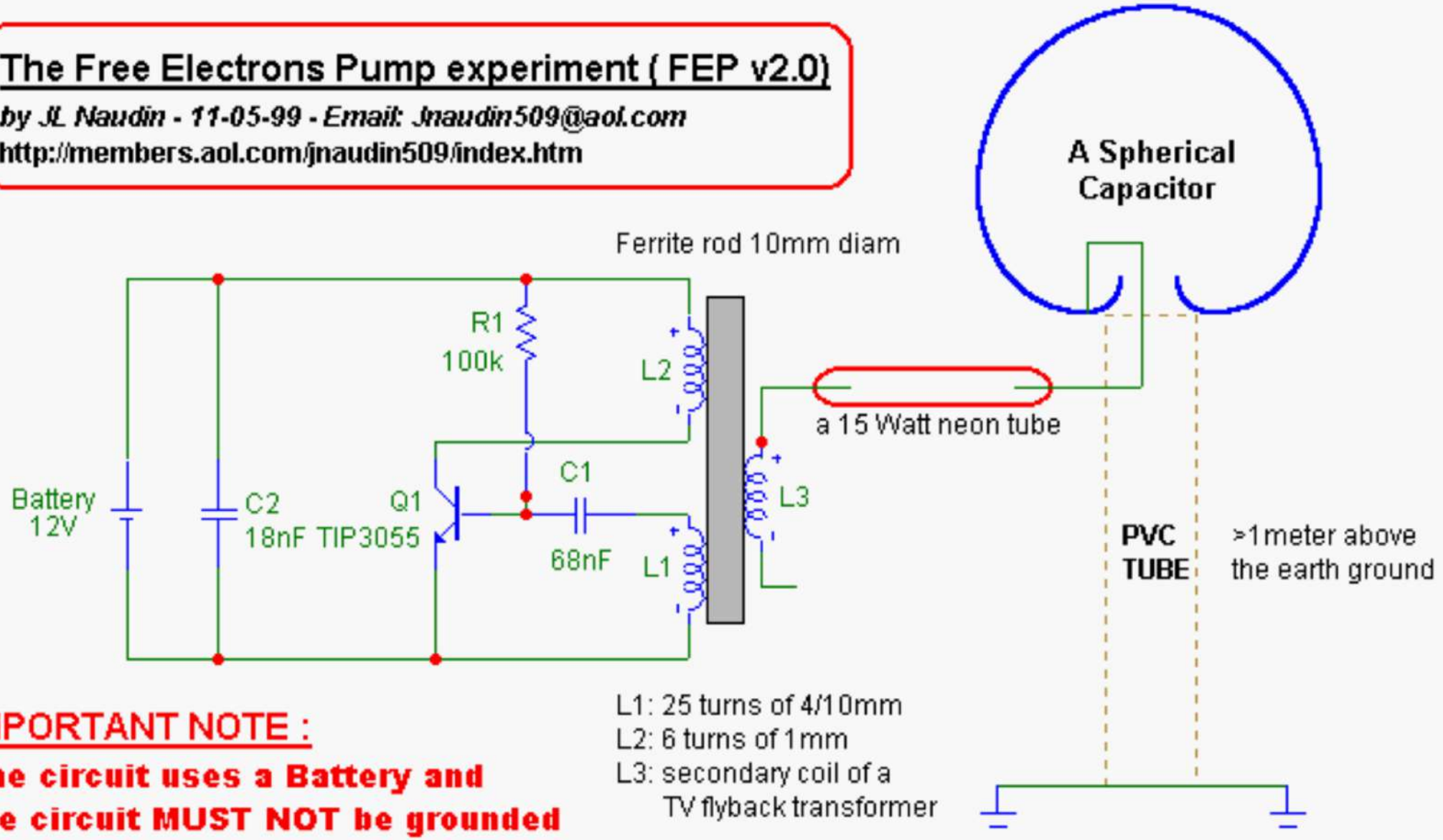
By Jean-Louis Naudin



The New FEP generator v2.0

The Free Electrons Pump experiment (FEP v2.0)

by JL Naudin - 11-05-99 - Email: Jnaudin509@aol.com
http://members.aol.com/jnaudin509/index.htm



L1: 25 turns of 4/10mm
L2: 6 turns of 1mm
L3: secondary coil of a TV flyback transformer

IMPORTANT NOTE :

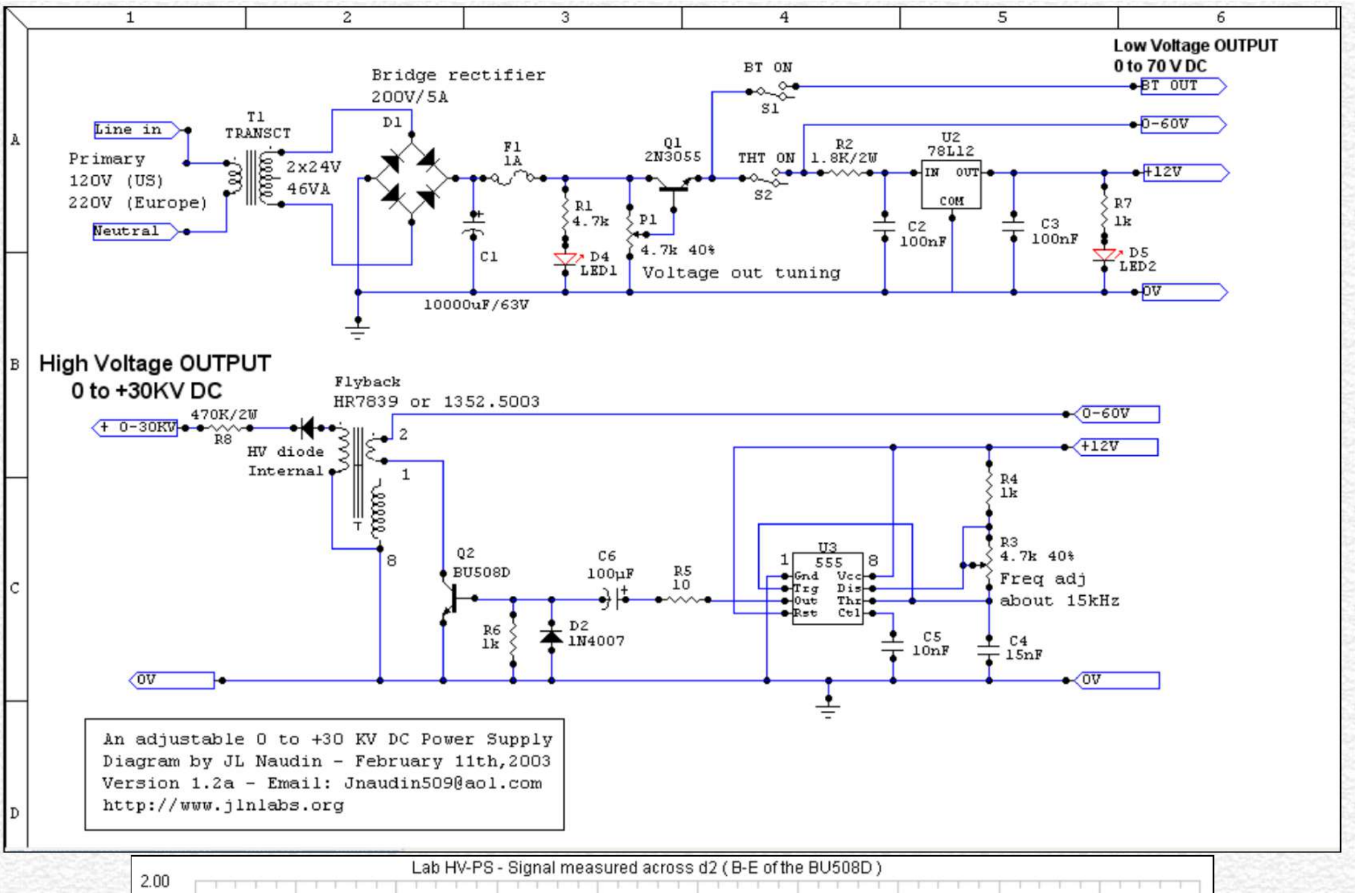
The circuit uses a Battery and the circuit MUST NOT be grounded

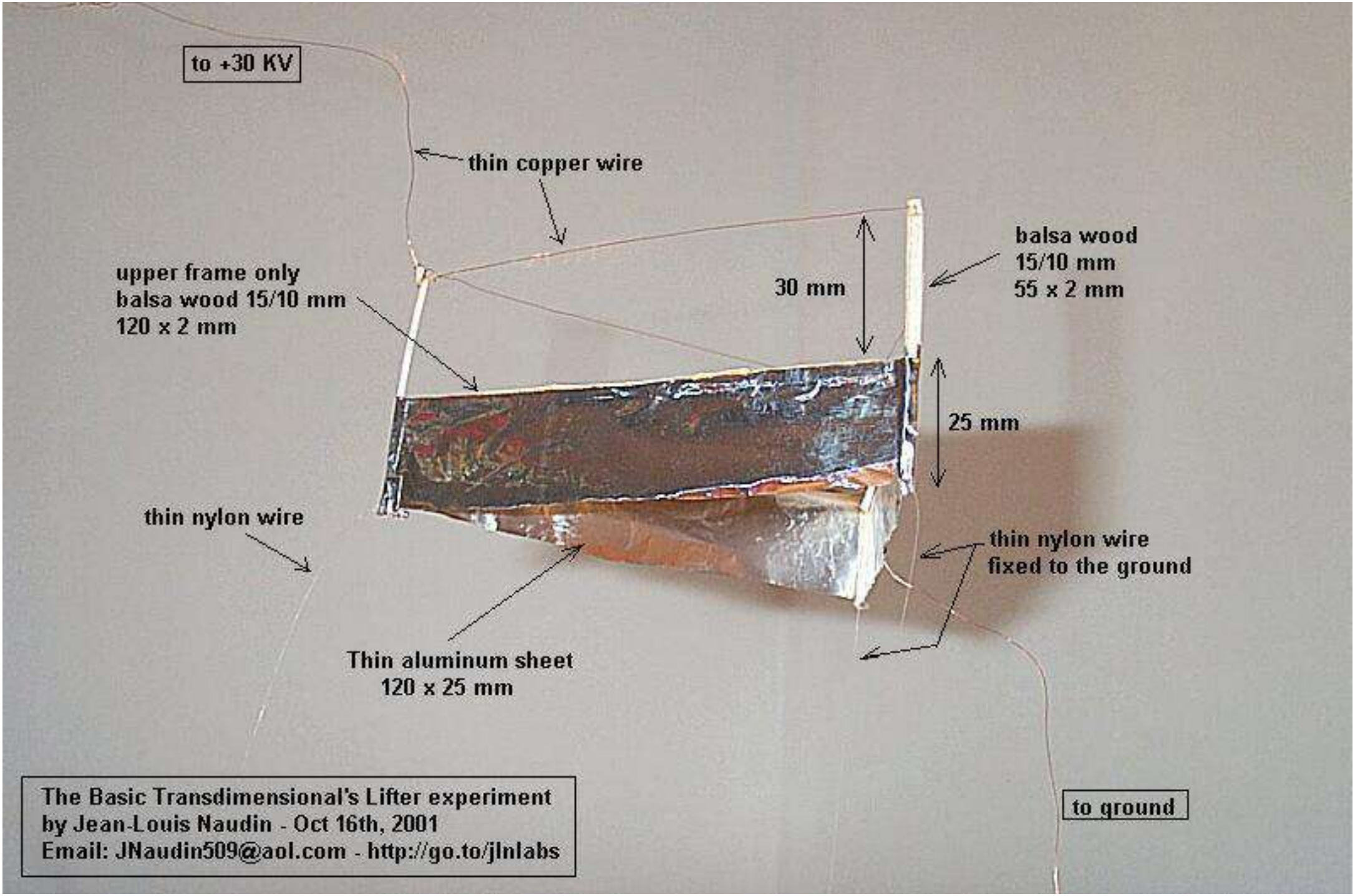
You will find in this document a very useful High Voltage Power supply (Lab HV-PS) diagram for your personal laboratory experiments. This is a dual outpout power supply :
- the first output is a Low Voltage output fully tunable between 0 to 70 V DC,
- the second output is a High Voltage output fully tunable between 0 to 30 KV DC

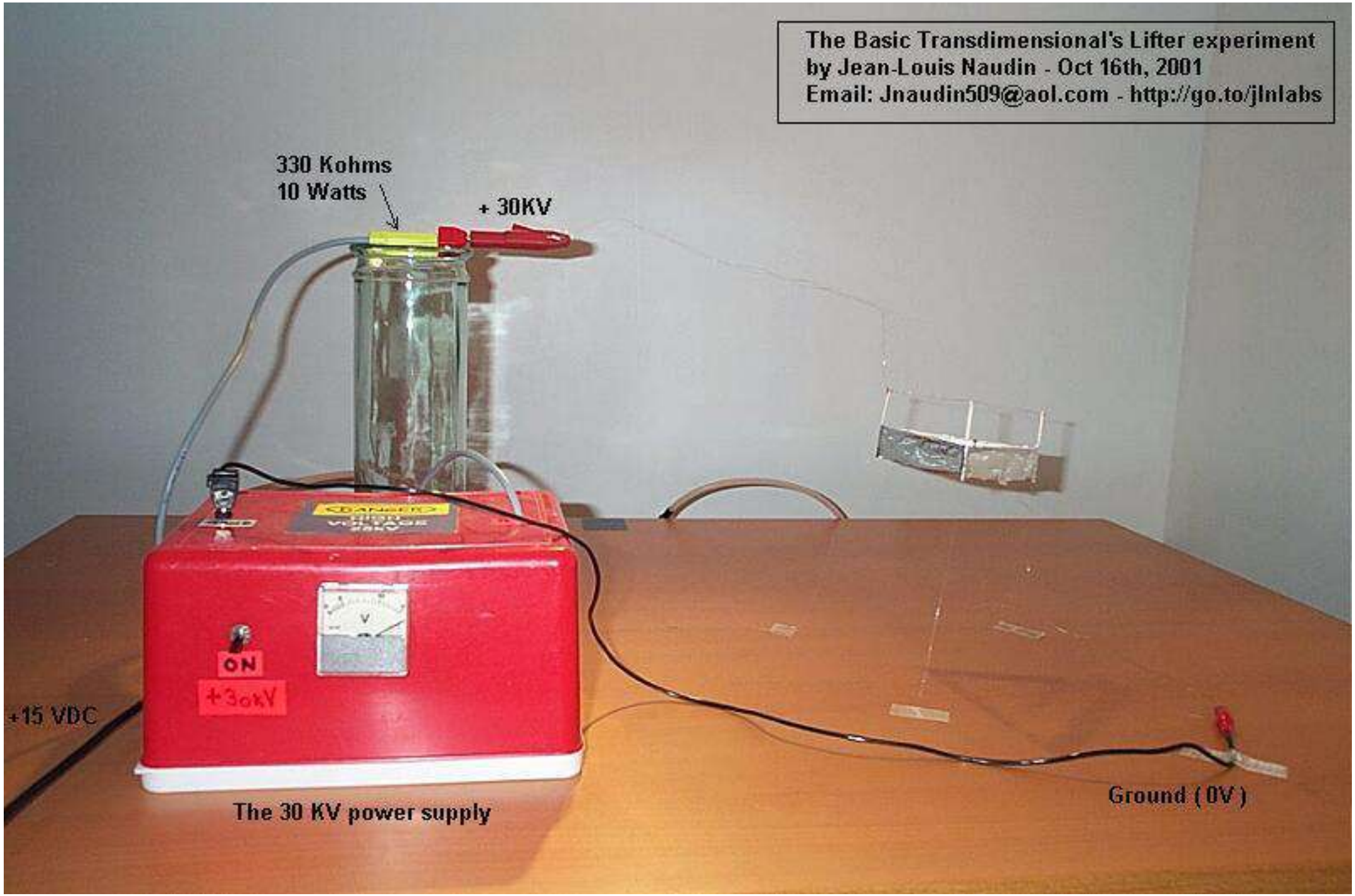


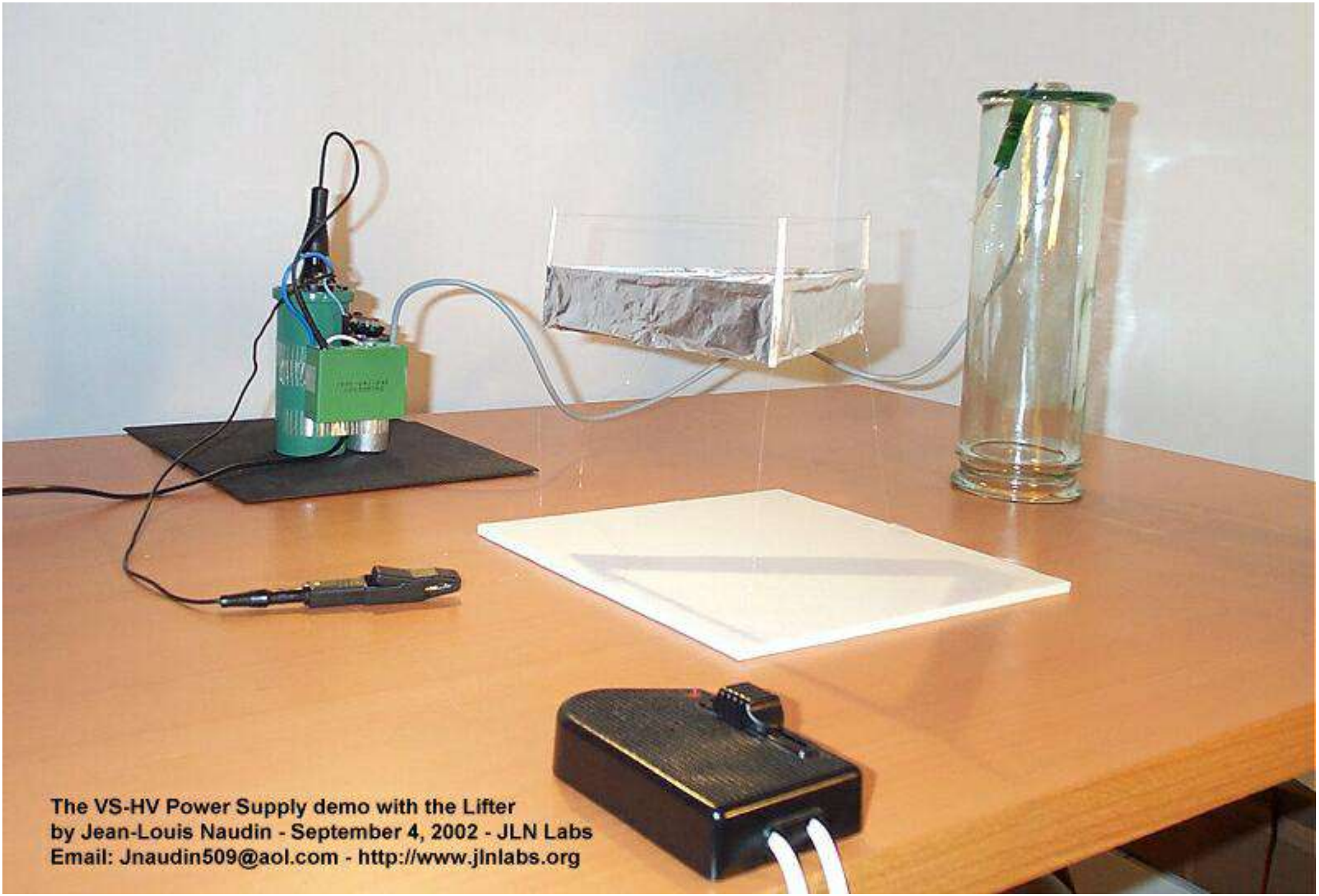
This Lab HV-PS is able to lift off a Lifter v2.0 without problem at a voltage about 21 KV. This allows you to conduct some interesting experiments about the Lifter hovering by tuning the HV output level.

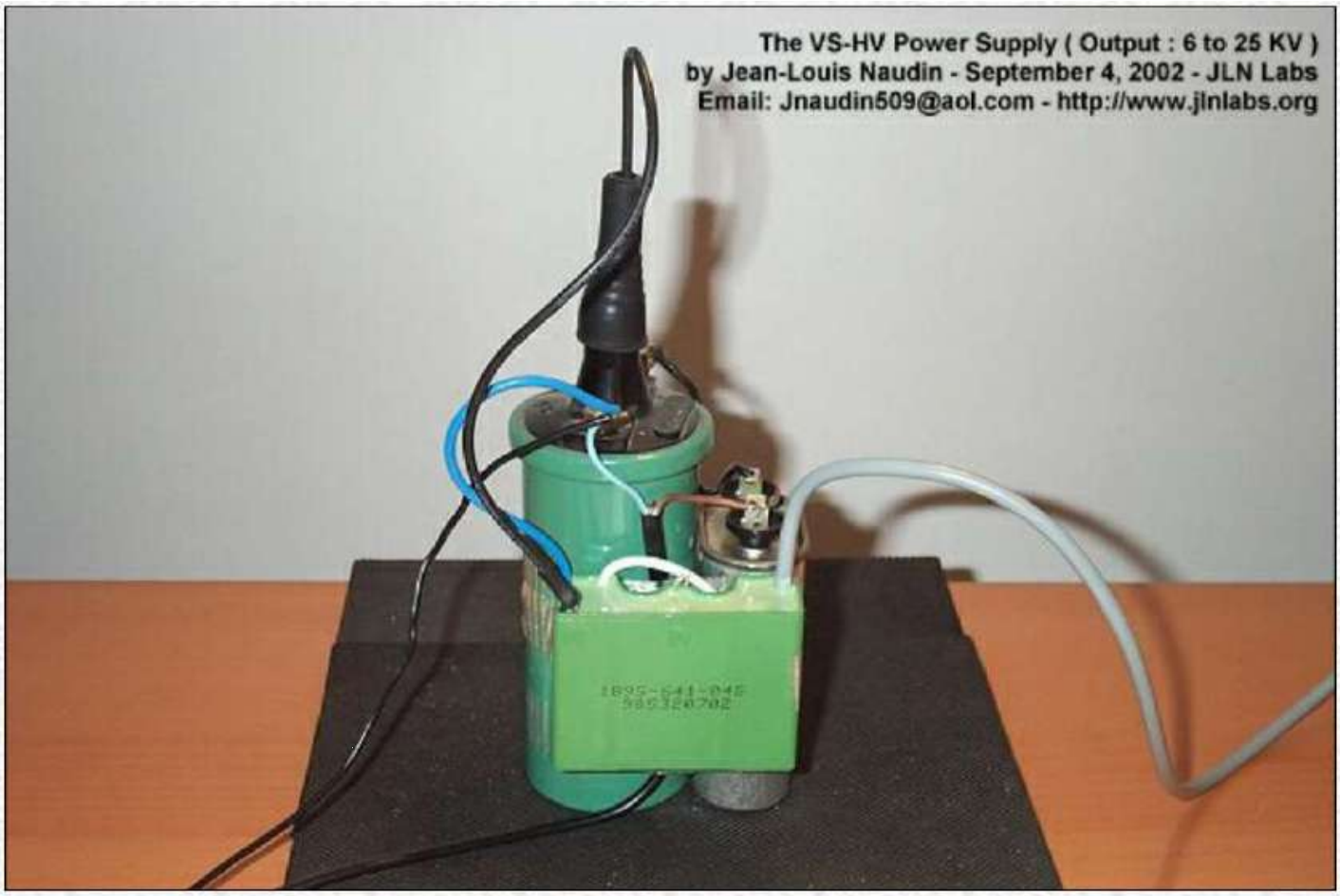


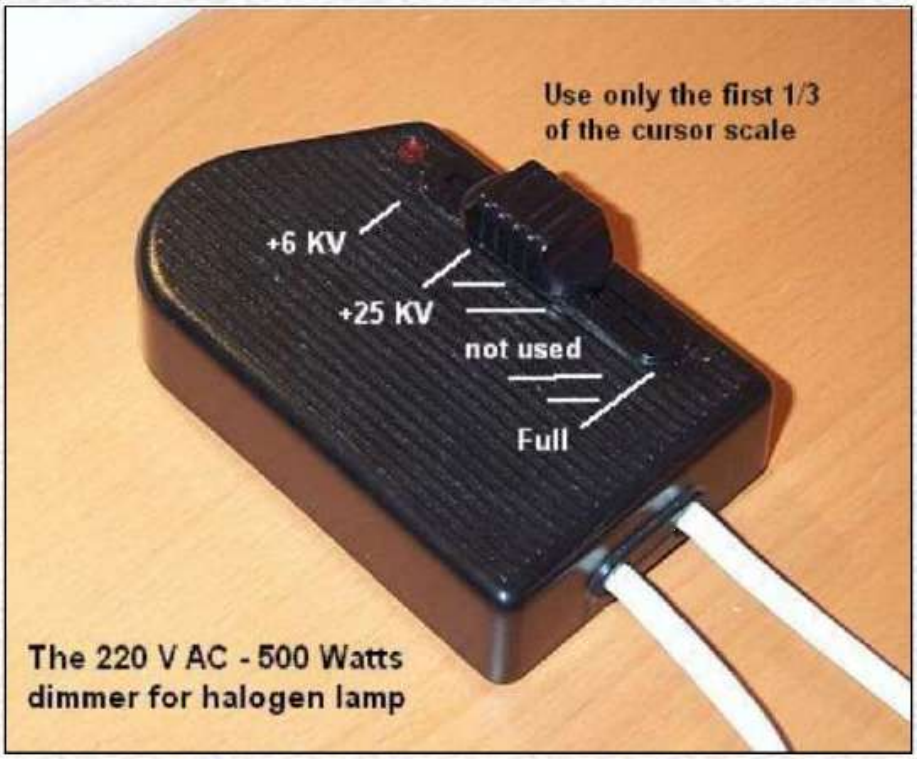

Low Voltage OUTPUT
0 to 70 V DC
Bridge rectifier
200V/5A
BT ON
S1
BT OUT
Line in
T1
TRANSCT
D1
F1
1A
Q1
2N3055
THT ON
R2
1.8K/2W
U2
78L12
IN OUT
COM
0-60V
+12V
Primary
120V (US)
220V (Europe)
Neutral
2x24V
46VA
R1
4.7k
P1
4.7k 40%
Voltage out tuning
S2
C2
100nF
C3
100nF
R7
1k
D5
LED2
C1
10000uF/63V
D4
LED1
0V
High Voltage OUTPUT
0 to +30KV DC
Flyback
HR7839 or 1352.5003
+ 0-30KV
470K/2W
R8
HV diode
Internal
2
1
8
T
Q2
BU508D
C6
100µF
R5
10
U3
555
Gnd
Trg
Out
Rst
Vcc
Dis
Thr
Ctl
R4
1k
R3
4.7k 40%
Freq adj
about 15kHz
C5
10nF
C4
15nF
R6
1k
D2
1N4007
An adjustable 0 to +30 KV DC Power Supply
Diagram by JL Naudin - February 11th,2003
Version 1.2a - Email: Jnaudin509@aol.com
http://www.jlnlabs.org
Lab HV-PS - Signal measured across d2 (B-E of the BU508D)
2.00


to +30 KV
thin copper wire
upper frame only
balsa wood 15/10 mm
120 x 2 mm
30 mm
balsa wood
15/10 mm
55 x 2 mm
25 mm
thin nylon wire
thin nylon wire
fixed to the ground
Thin aluminum sheet
120 x 25 mm
to ground
The Basic Transdimensional's Lifter experiment
by Jean-Louis Naudin - Oct 16th, 2001
Email: JNaudin509@aol.com - http://go.to/jlnlabs


The Basic Transdimensional's Lifter experiment
by Jean-Louis Naudin - Oct 16th, 2001
Email: Jnaudin509@aol.com - http://go.to/jlnlabs
330 Kohms
10 Watts
+ 30KV
ON
+30kV
+15 VDC
Ground (0V)
The 30 KV power supply

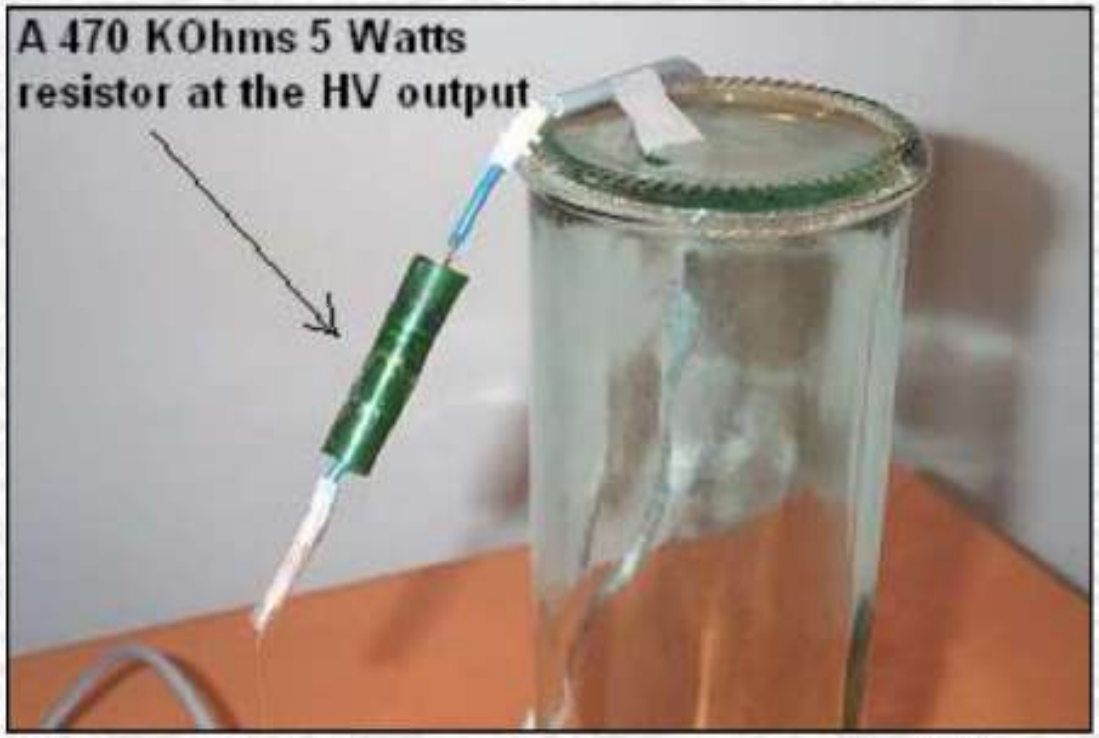

The VS-HV Power Supply demo with the Lifter
by Jean-Louis Naudin - September 4, 2002 - JLN Labs
Email: Jnaudin509@aol.com - http://www.jlnlabs.org





The HV output can be easily adjusted bewteen 6 to 25 KV with the halogen lamp dimmer.

The HV output can be easily adjusted bewteen 6 to 25 KV with the halogen lamp dimmer.
Use only the first 1/3 of the cursor scale.

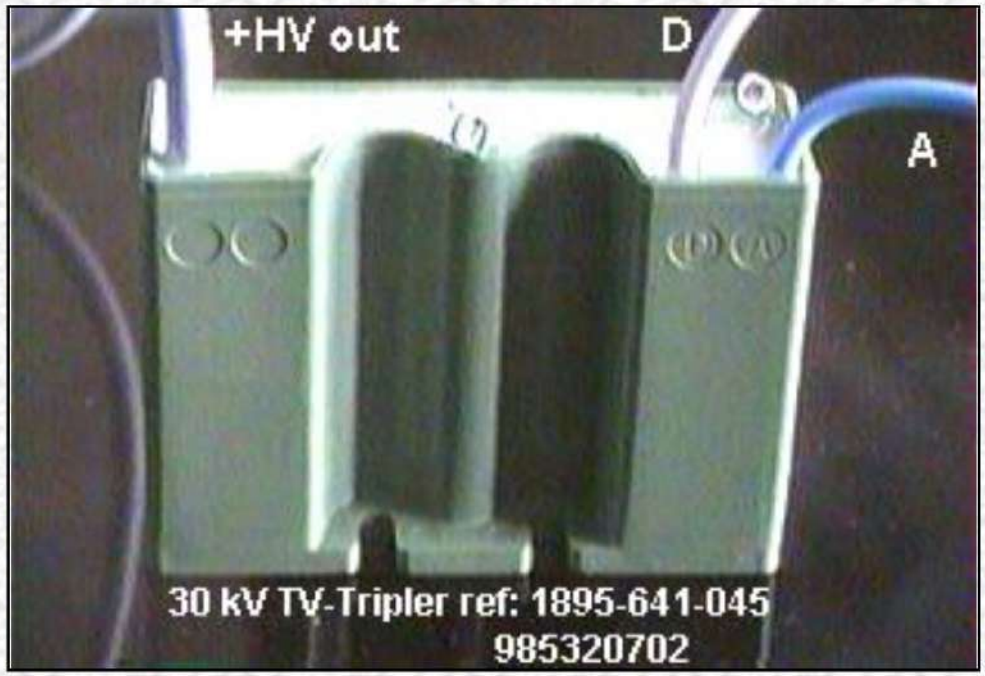


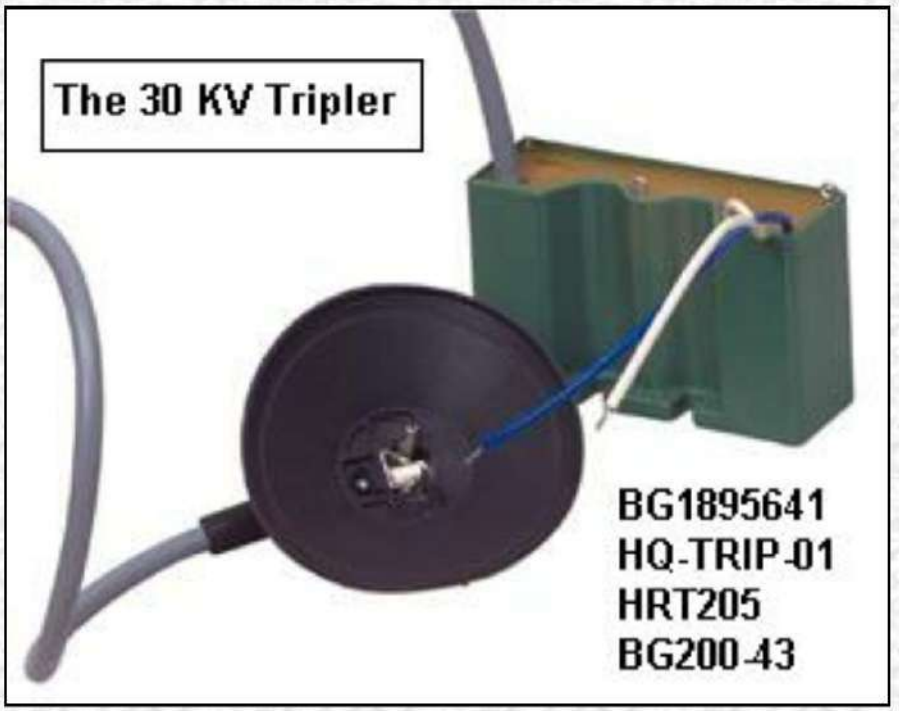
A 470 KOhms 5 Watts resistor is required to protect the HV output of the triplex

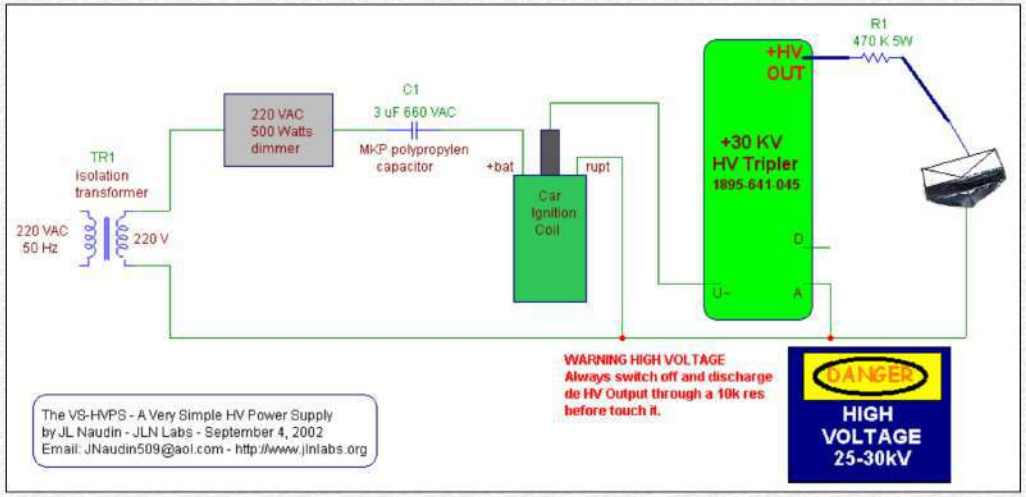
A 470 KOhms 5 Watts resistor is required to proect the HV output of the tripler

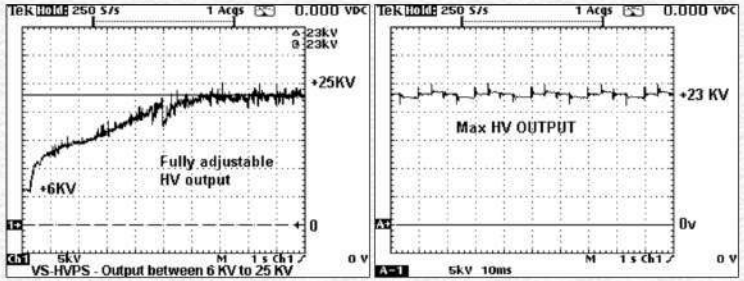


The car ignition coil used is a Ducellier (ref : 2790A) for a 12 V battery.



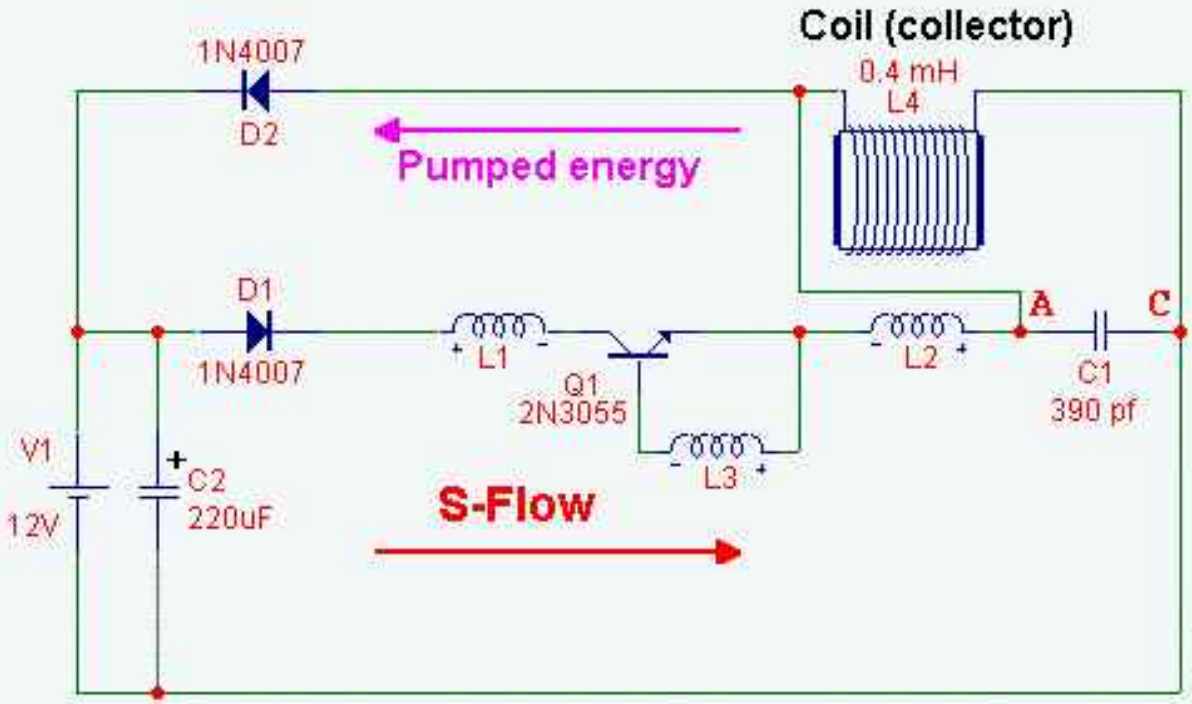




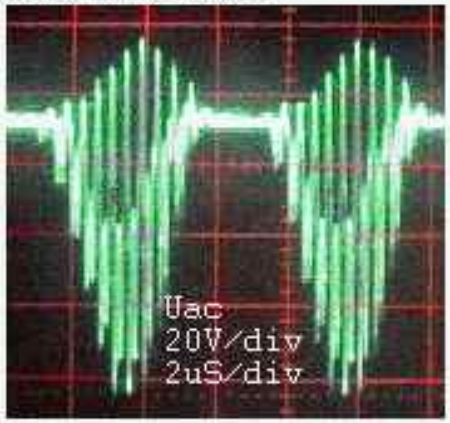


BE CAREFUL, USE EXTREME CAUTION !!!, this device use **High Voltage**, **ALWAYS switch off the input** and **discharge** the output to the ground through 10k/2W resistor **before** touch it. **These plans are not intended for the inexperienced**. User of this document should be very carefull and experienced in High-Voltage electronics to try anything out ! If you do it the risk of any results is just yours. I take no responsibility of anything that might happen.

ATTENTION !!!, Faites preuve d'une extrême prudence. Vous manipulez ici de la **Haute-Tension**, **TOUJOURS arrêter** puis **déconnecter** votre alimentation ou le moniteur et **décharger la sortie Haute Tension à travers une résistance de 10Kohms/2W avant toute manipulation.**. **Les plans et les conseils présentés ici, ne sont pas destinés à des débutants**. Vous devrez procéder avec soin et prudence et avoir l'habitude de manipuler de la Haute-Tension avant d'envisager une telle expérience ! Si vous décider de réaliser cette expérience, ceci est à votre propre risque et je décline toute responsabilité en ce qui concerne les éventuels dommages matériels ou physiques causés.



L4: diam 49 mm,
length 60 mm,
100 turns
#22 magnet wire
Air core
R(L4)=3.2 ohms



The set of the bifilar coil L1,L2 is put into the 'collector' coil L4.

2N5301 : Vcb/Vce 40V, Veb 5V,ICmax 30A, Tj 200C,Ptot 200WC, ftmin 2M, hfe 15/60 (Ic 15A)
2N3055 : Vcb/Vce 100V/60V, Veb 7V,ICmax 15A, Tj 200C,Ptot 115WC, ftmin 200K, hfe 20/70 (Ic 4A)
Q1 : mounted with radiator

The T.E.P. (Time Energy Pump) - V3.0

By Jean-louis Naudin - Email : JNaudin509@aol.com
08/19/97

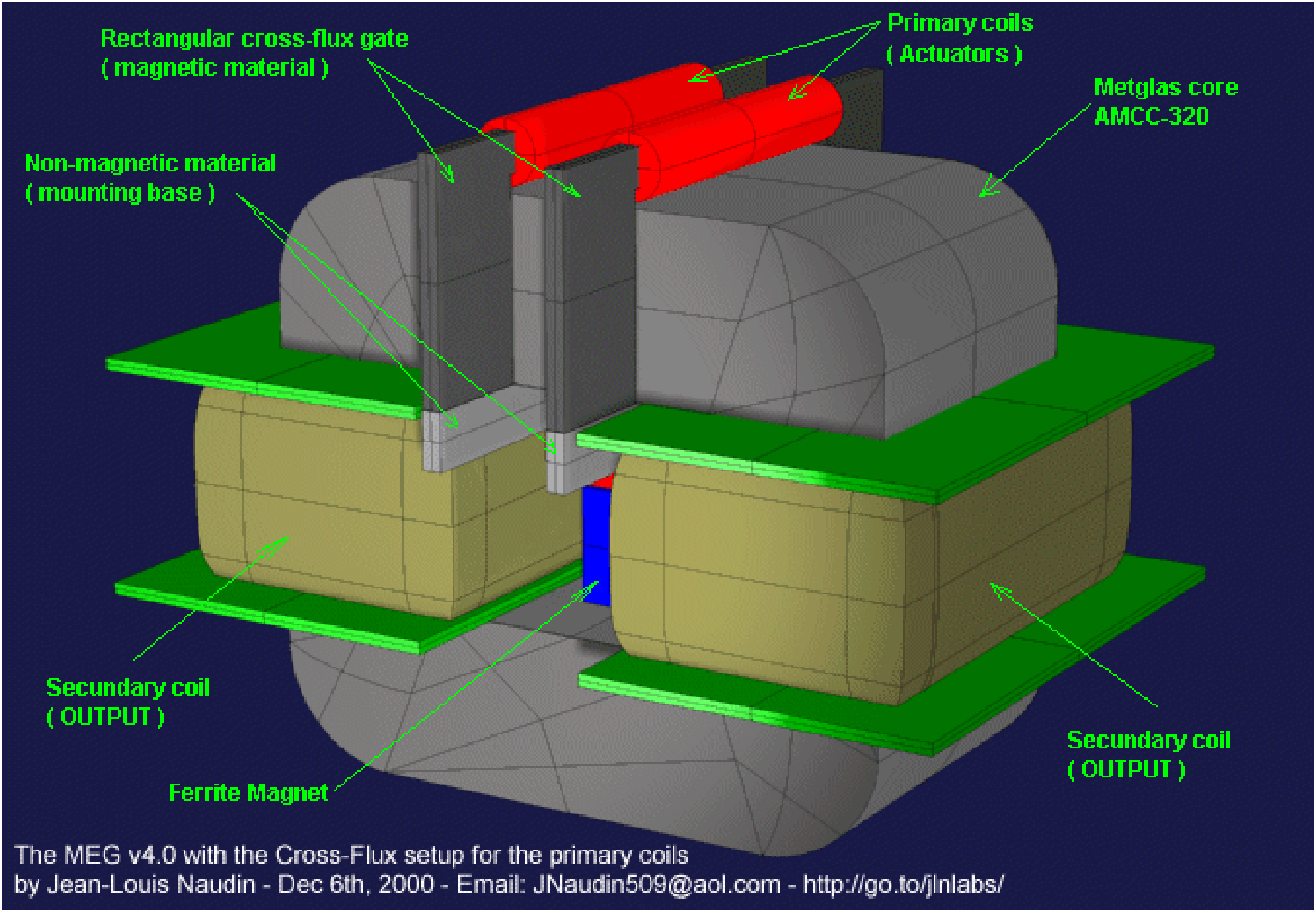


Notes : The polarity of the L1,L2 L3
is VERY IMPORTANT
Flux of L1 cancels the flux of L2

L1,L2 BIFILAR COILS (interweaved)
made with 11.5 m of 5/10 magnetwire #24
on a 20 mm cardboard tube (length 190 mm)

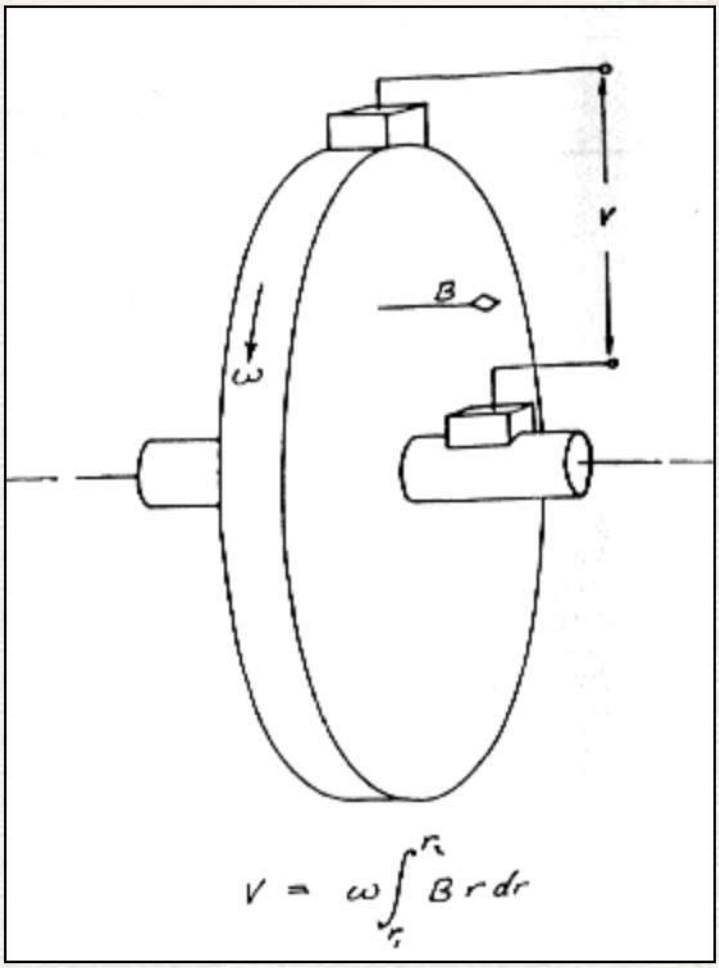
L3 : feedback coil
250 turns of 5/10 mm magnetwire #24





The MEG v4.0 with the Cross-Flux setup for the primary coils

by Jean-Louis Naudin - Dec 6th, 2000 - Email: JNaudin509@aol.com - http://go.to/jlnlabs/


V
B
ω
$V = \omega \int_{r_i}^{r_o} B\, r\, dr$


Soft Iron shell
N
Ferrite Magnet
outer diam : 70 mm
inner diam : 33 mm
8 mm thick
mA
meter
8 mm bolt
A simple Homopolar Generator - V1.0 - 13 April 97
By Jean-Louis Naudin - Email : JNaudin509@aol.com
At 2600 RPM - I = 1.5 mA, E = 0.5 V

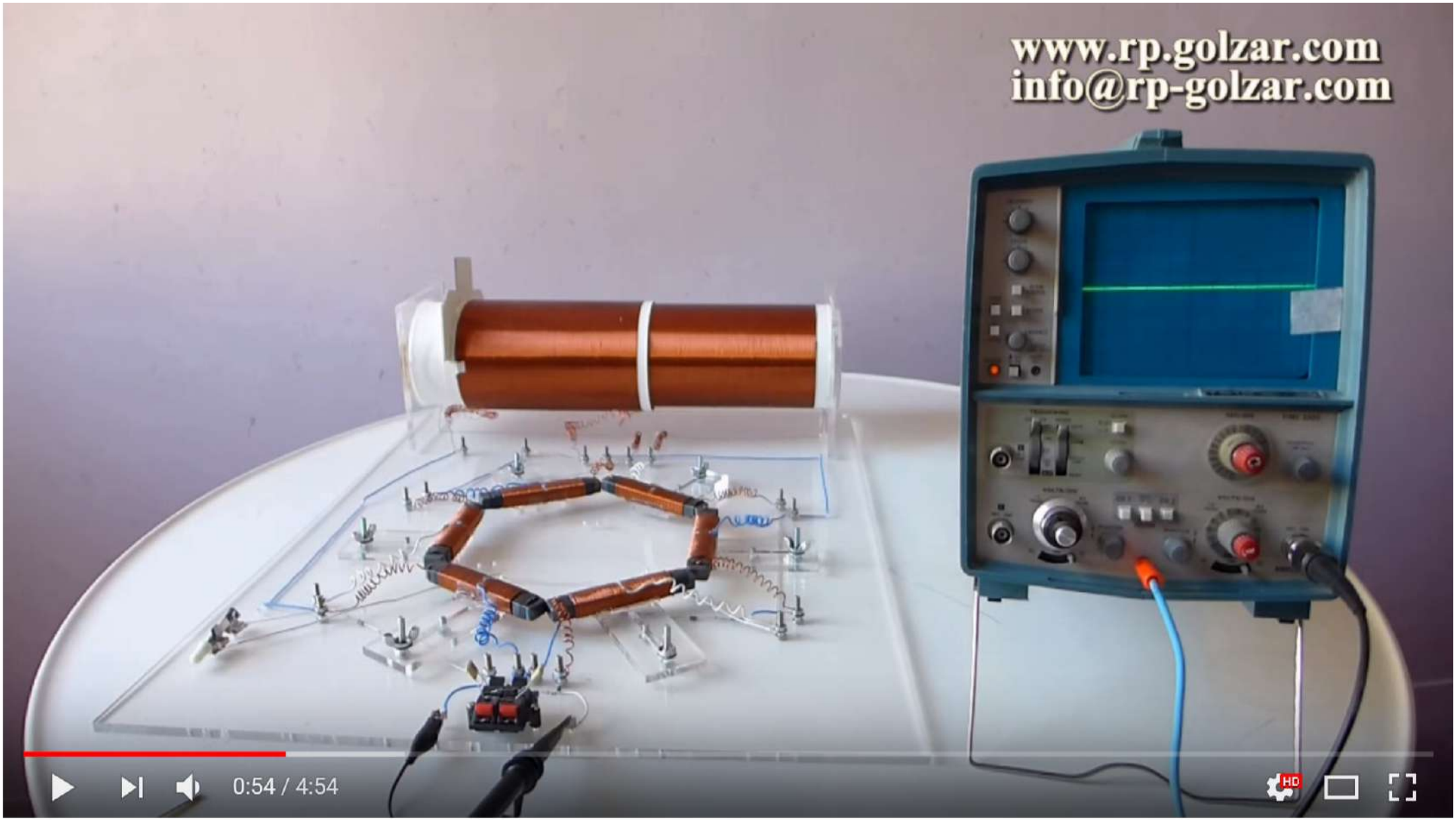




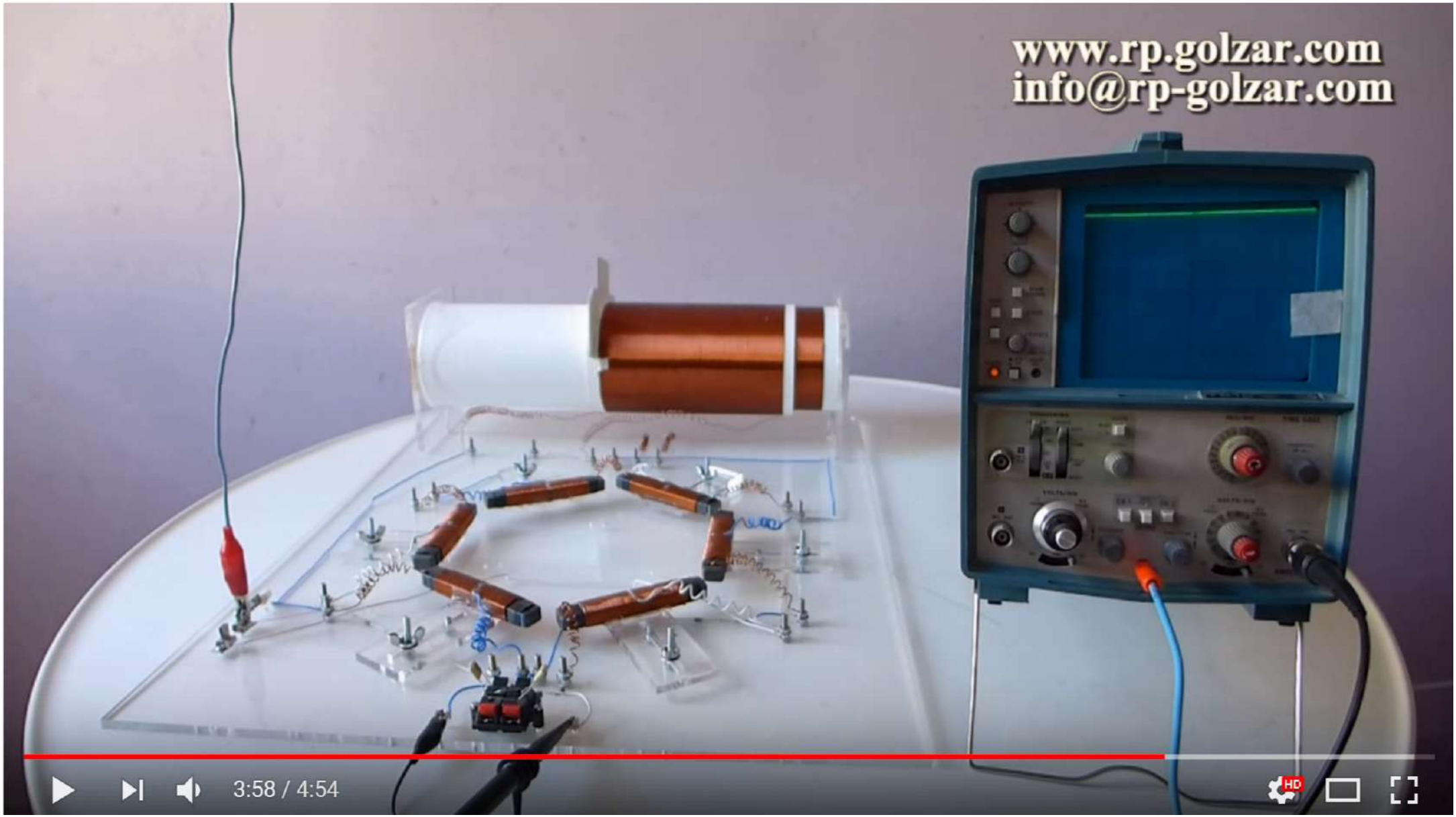



HARDWARE





Free Energy Device 2015


www.rp.golzar.com
info@rp-golzar.com
3:58 / 4:54

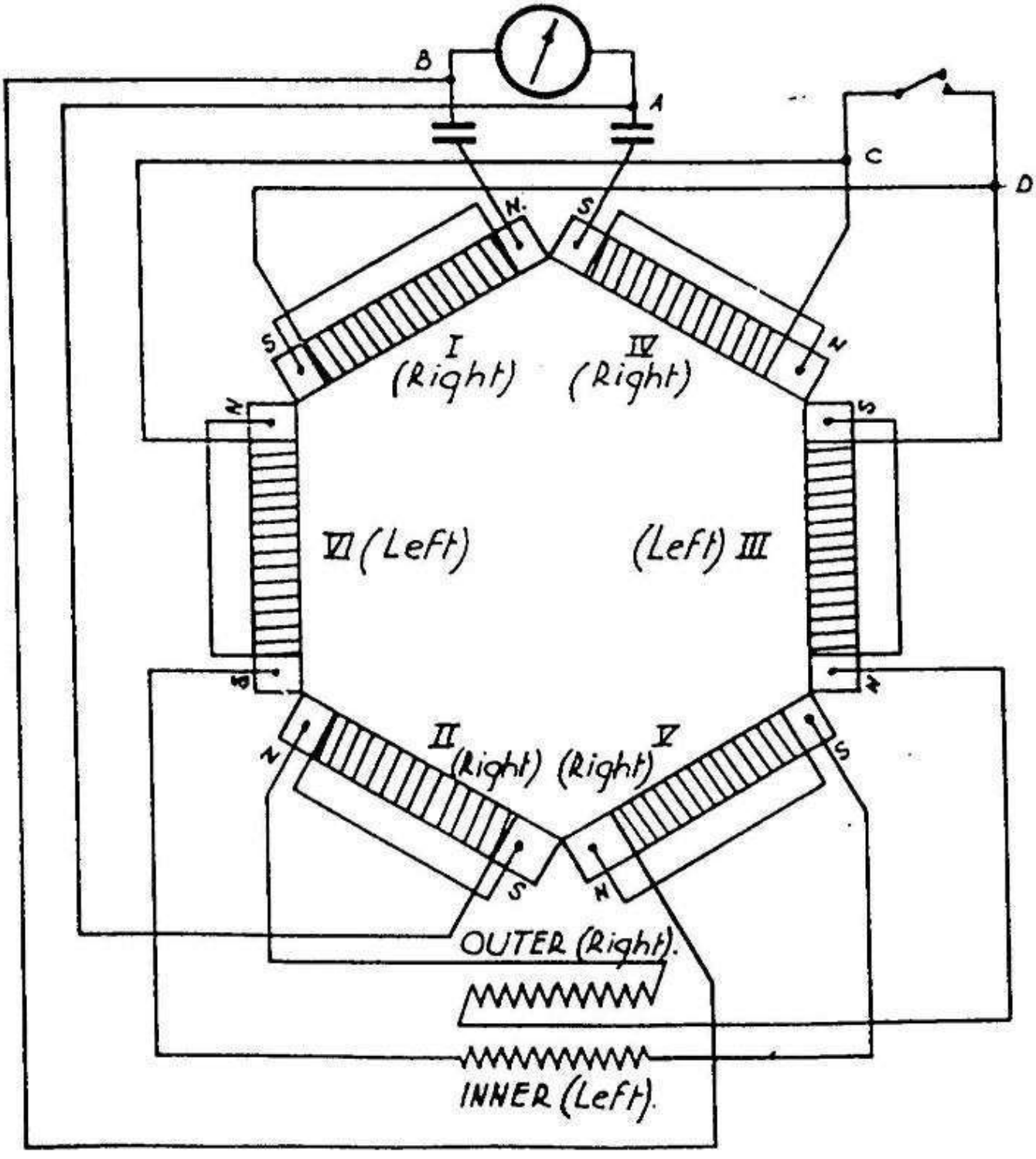

B
A
C
D
N
S
I
(Right)
IV
(Right)
VI (Left)
(Left) III
II
(Right)
(Right) V
OUTER (Right).
INNER (Left).

Fig: 2.

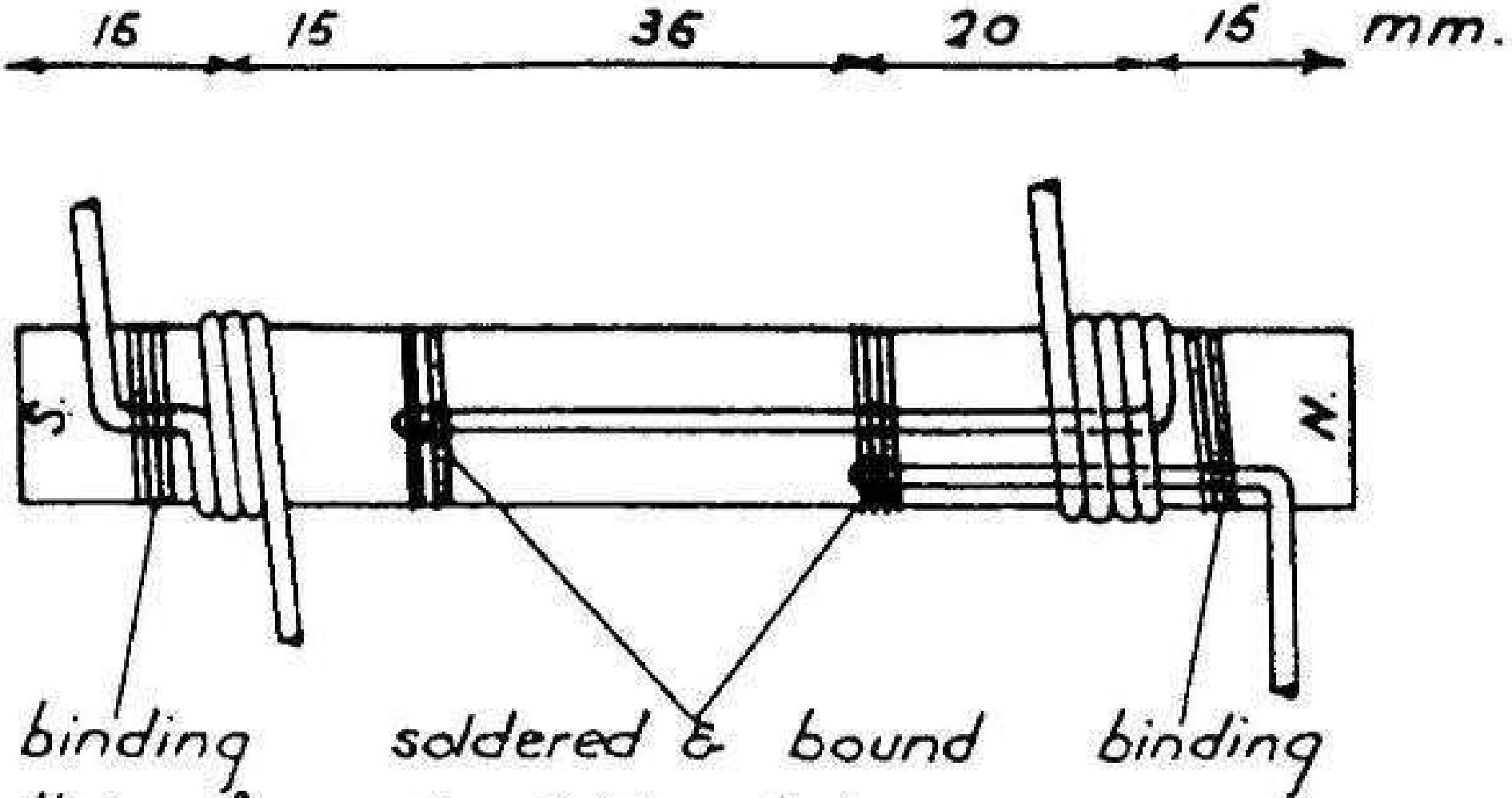
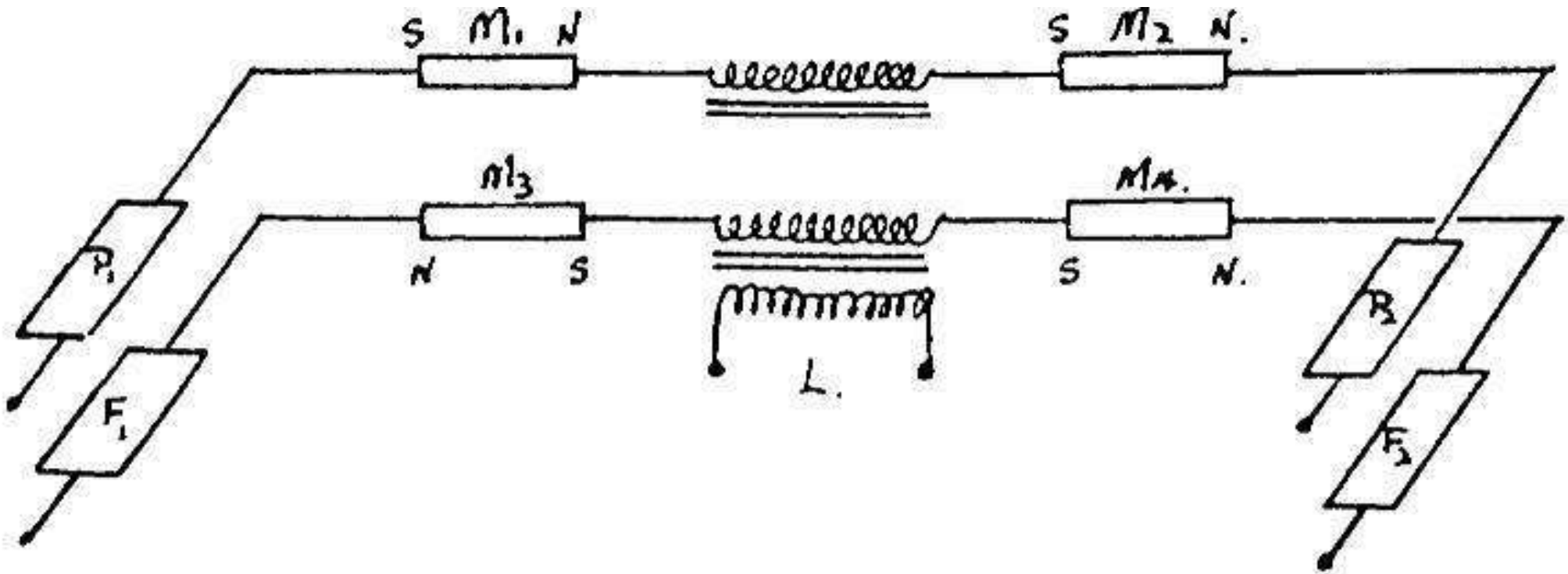

16
15
36
20
15
mm.
S
N
binding
soldered & bound
binding
Note: Paper insulation between magnet and coil.

Fig: 1.


S M1 N
S M2 N.
M3
M4.
N S
S N.
P1
F1
P2
F2
L.

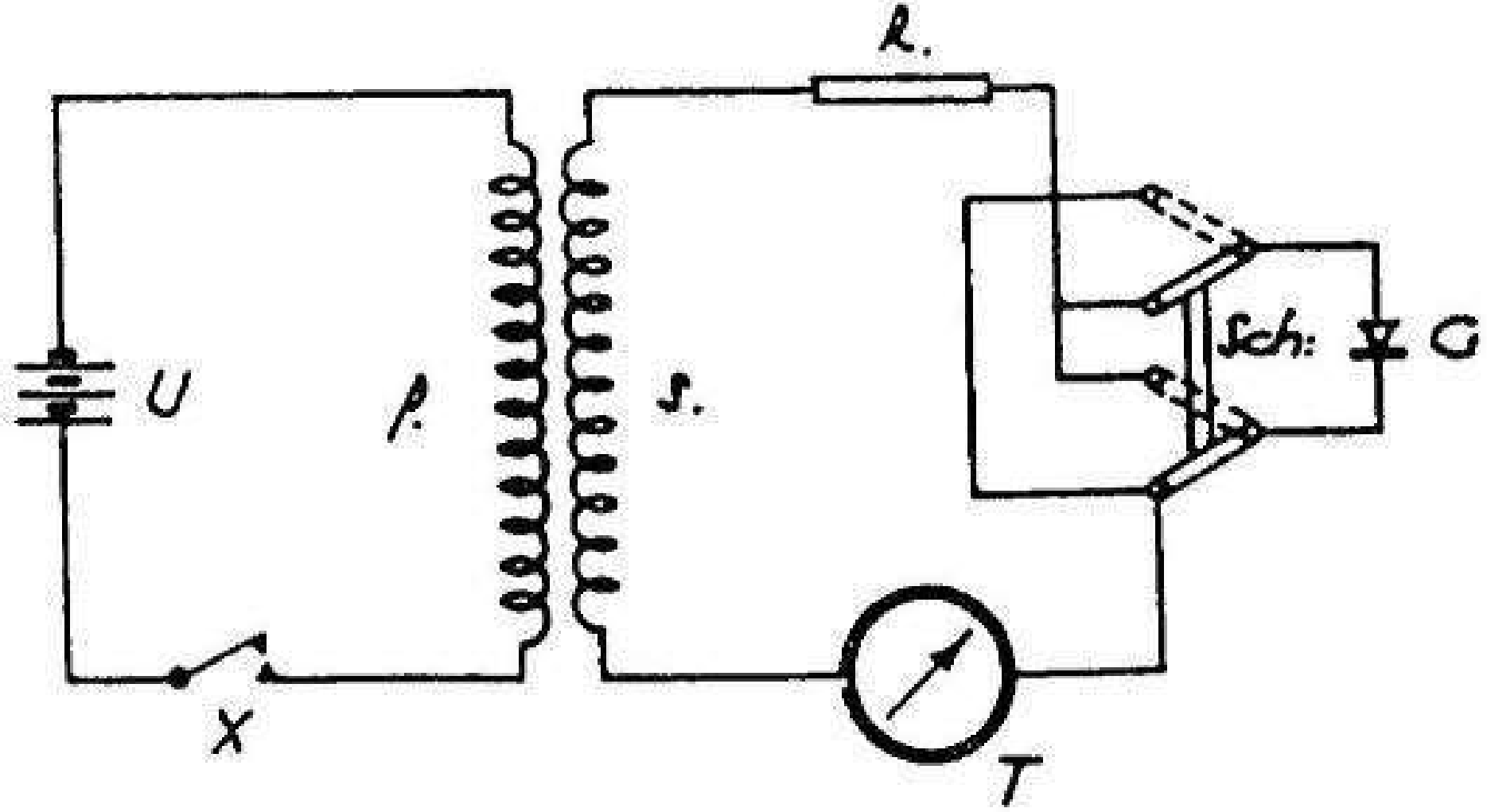


Fig. 4.

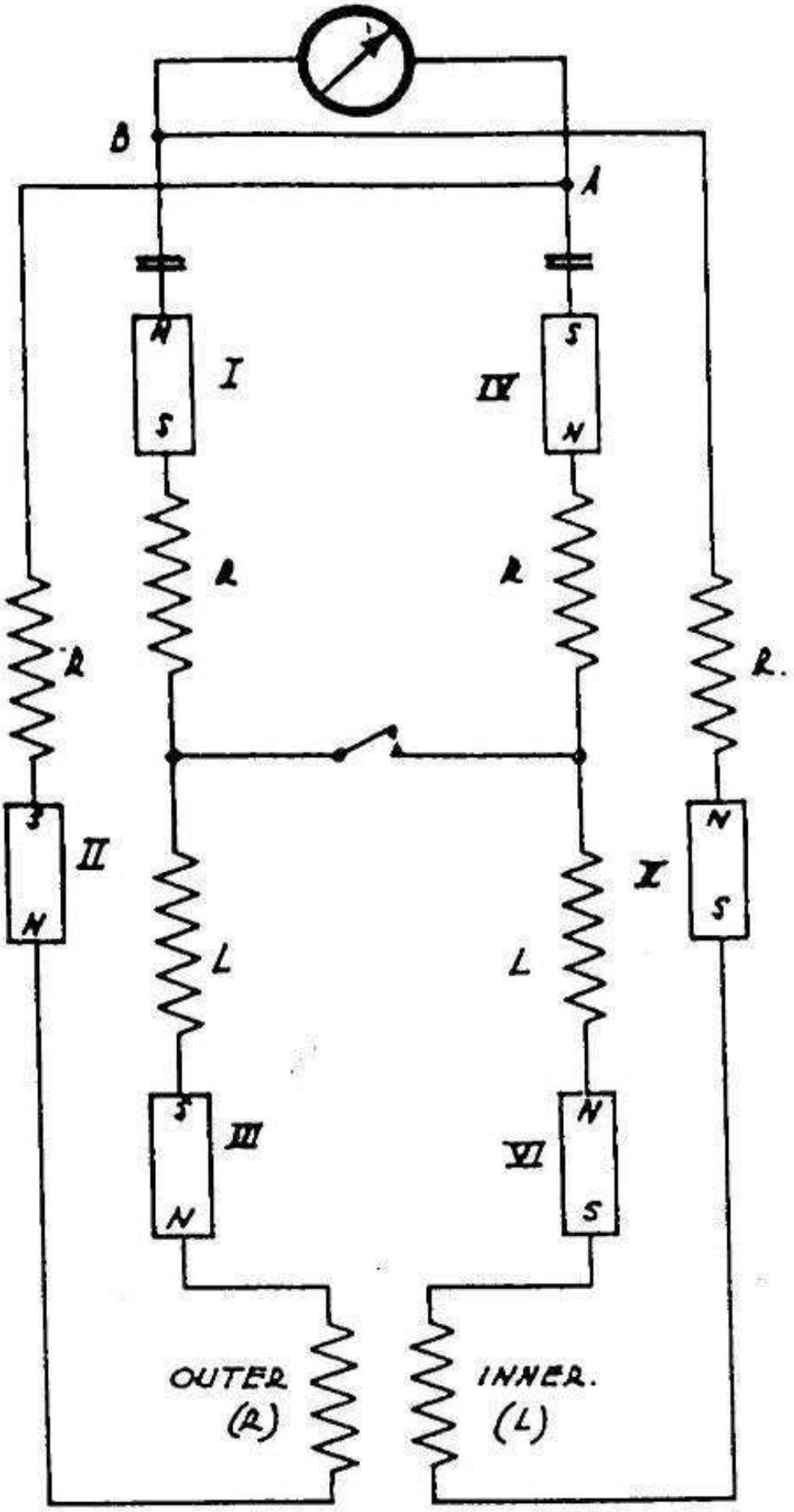
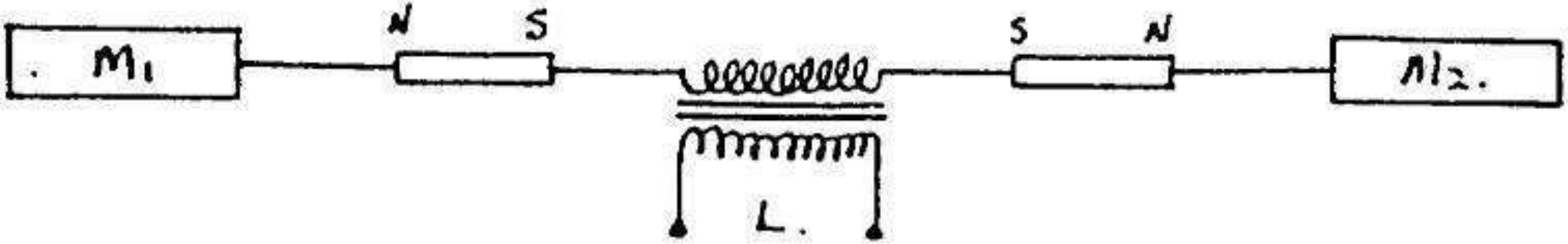
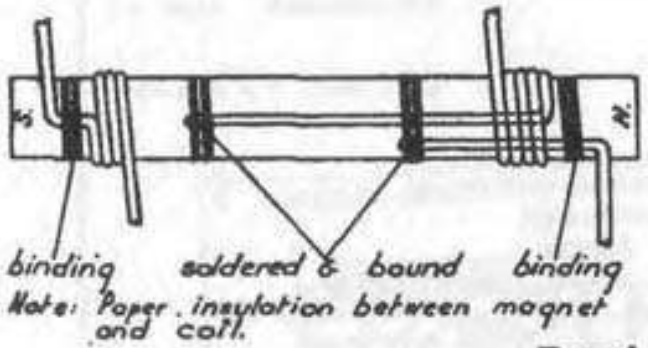
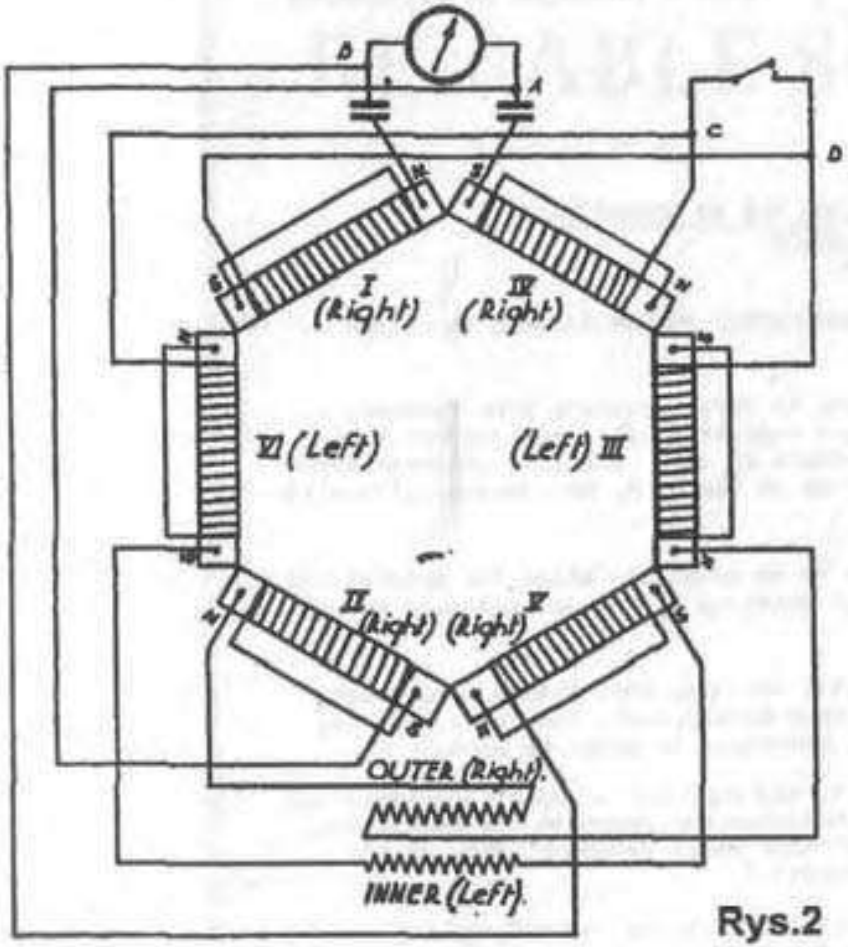


Fig. 3.

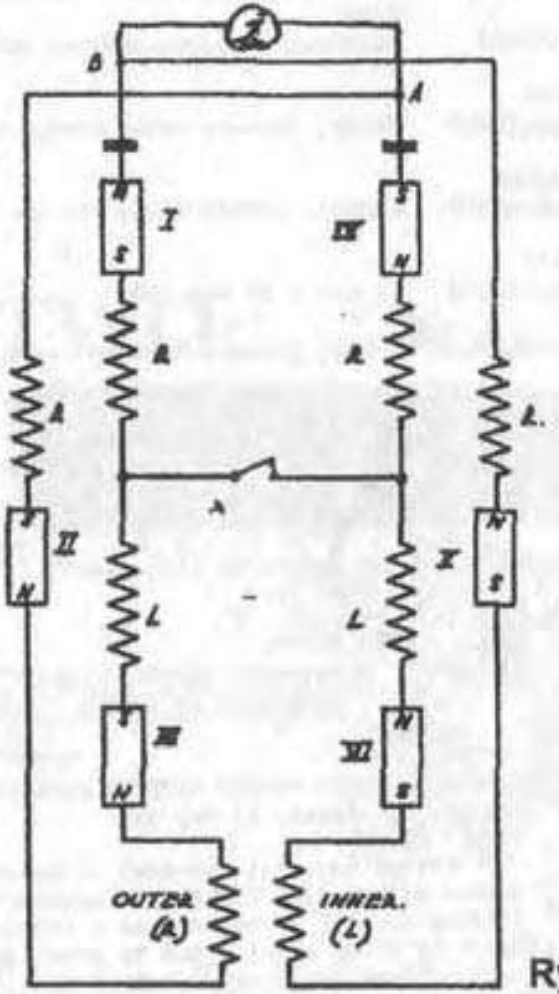

M1
N
S
S
N
M2.
L.



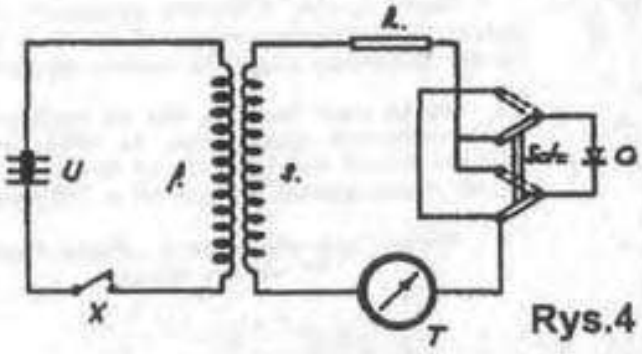
Rys.1



Rys.2



Rys.3



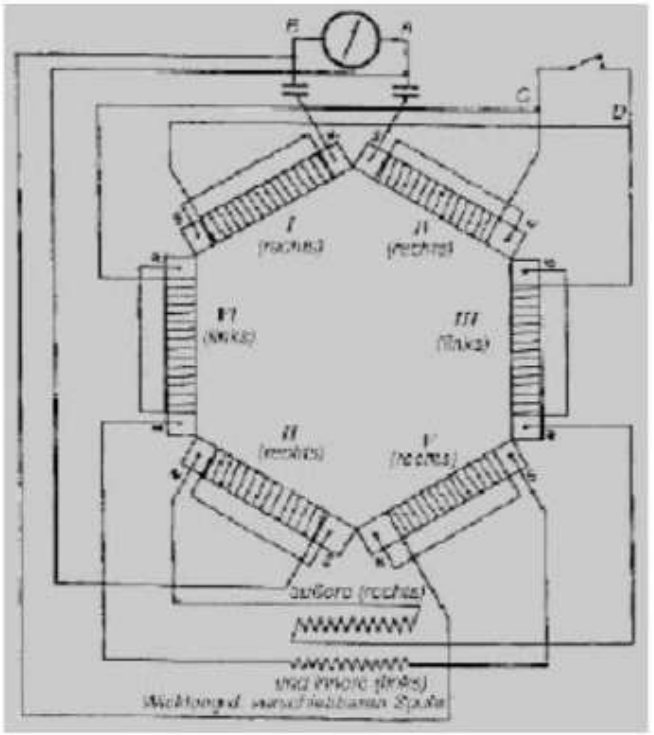
Rys.4

Magnetromapparata



A solid-state magnetic generator was invented by Captain Hans Coler of Germany and a 10 watt example first shown in 1925. It involved magnets to generate electricity and employed a small battery but no other source of input power other than what he called space energy of Nature's quantum invisible world.

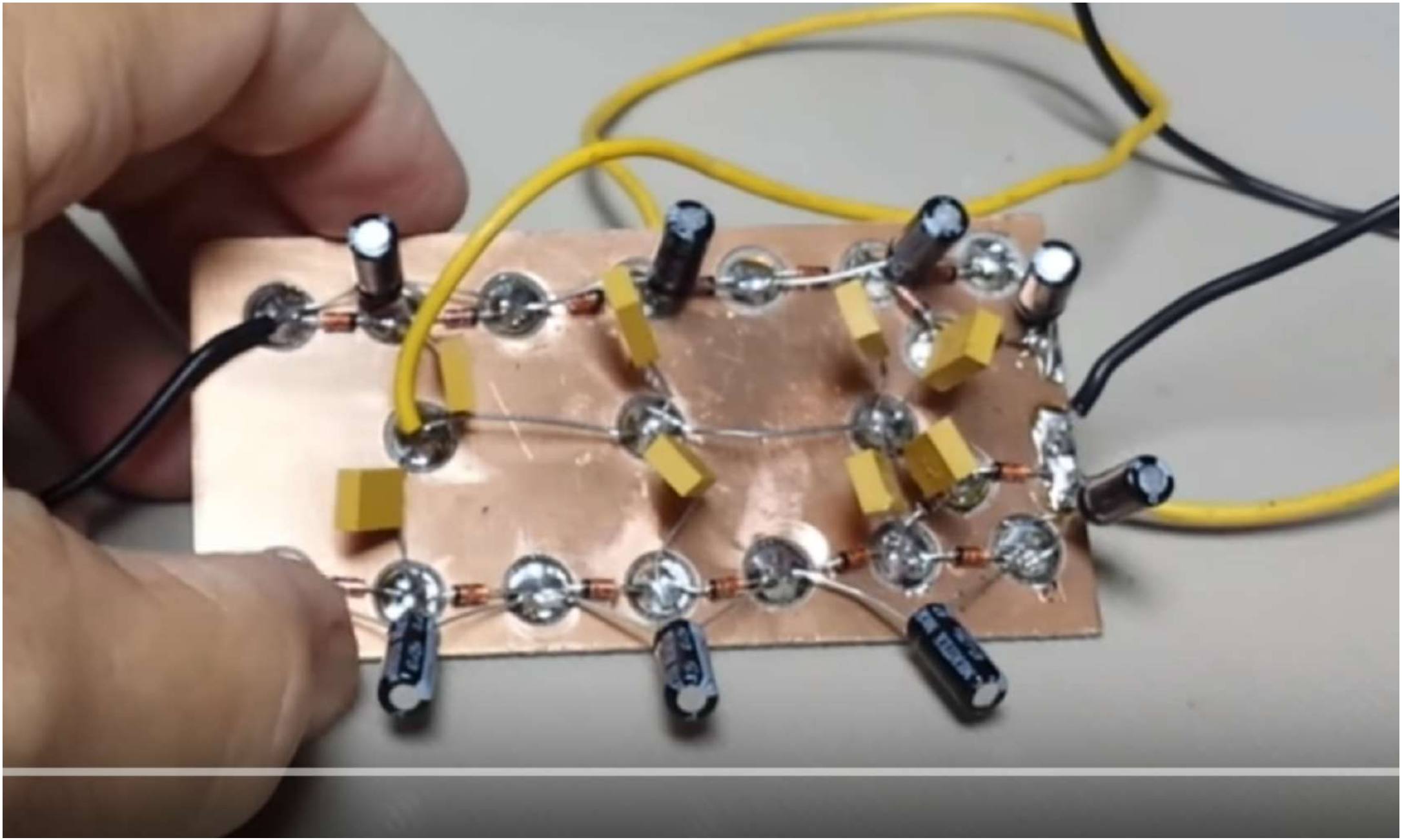
It was denied patent protection by the German Patent Office as being a perpetual motion device. For a time it was ignored, and the records relating to it were buried in hidden archives, possibly because the scientists who had to pass judgement could not understand the physical reason why the invention actually worked.

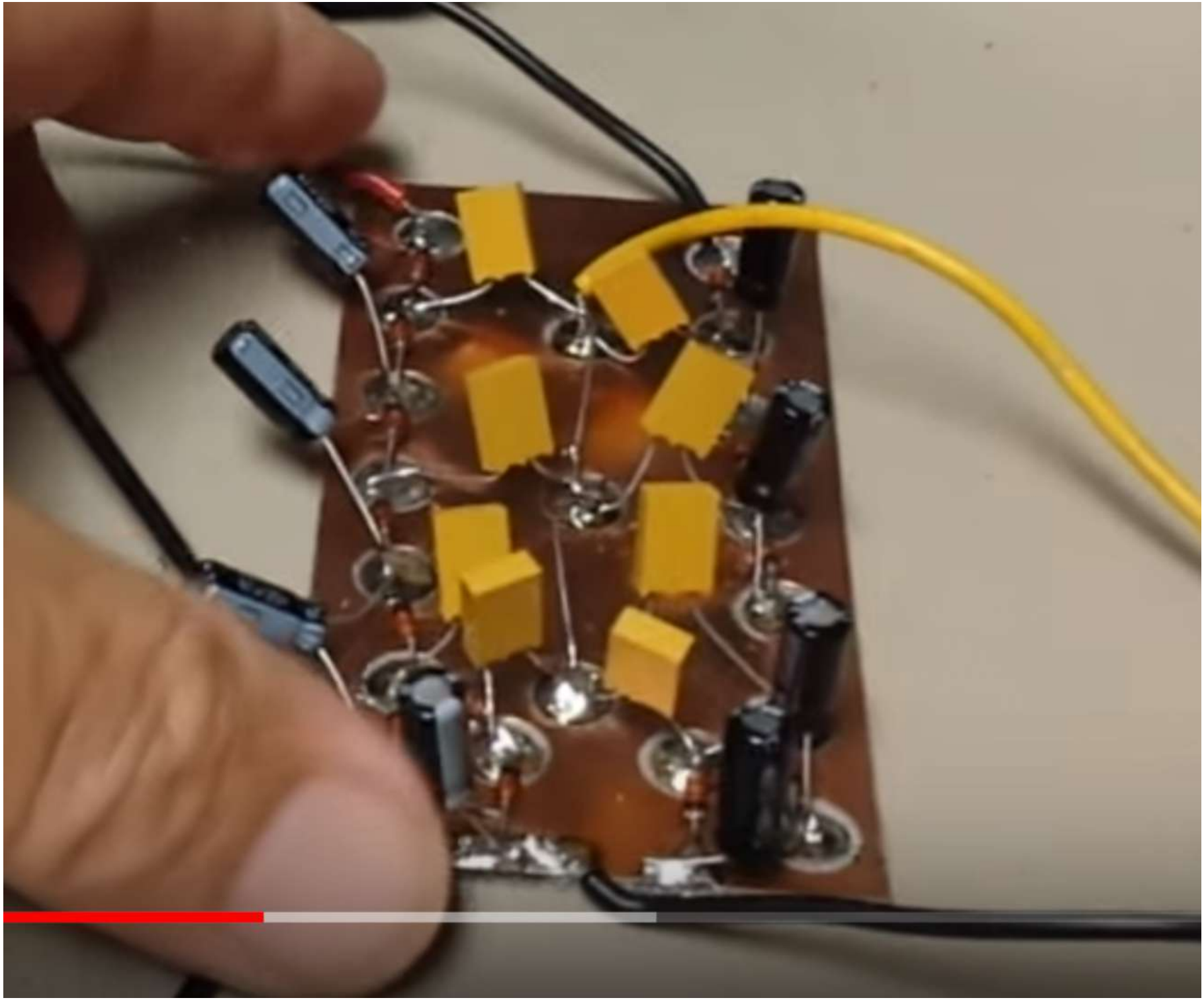


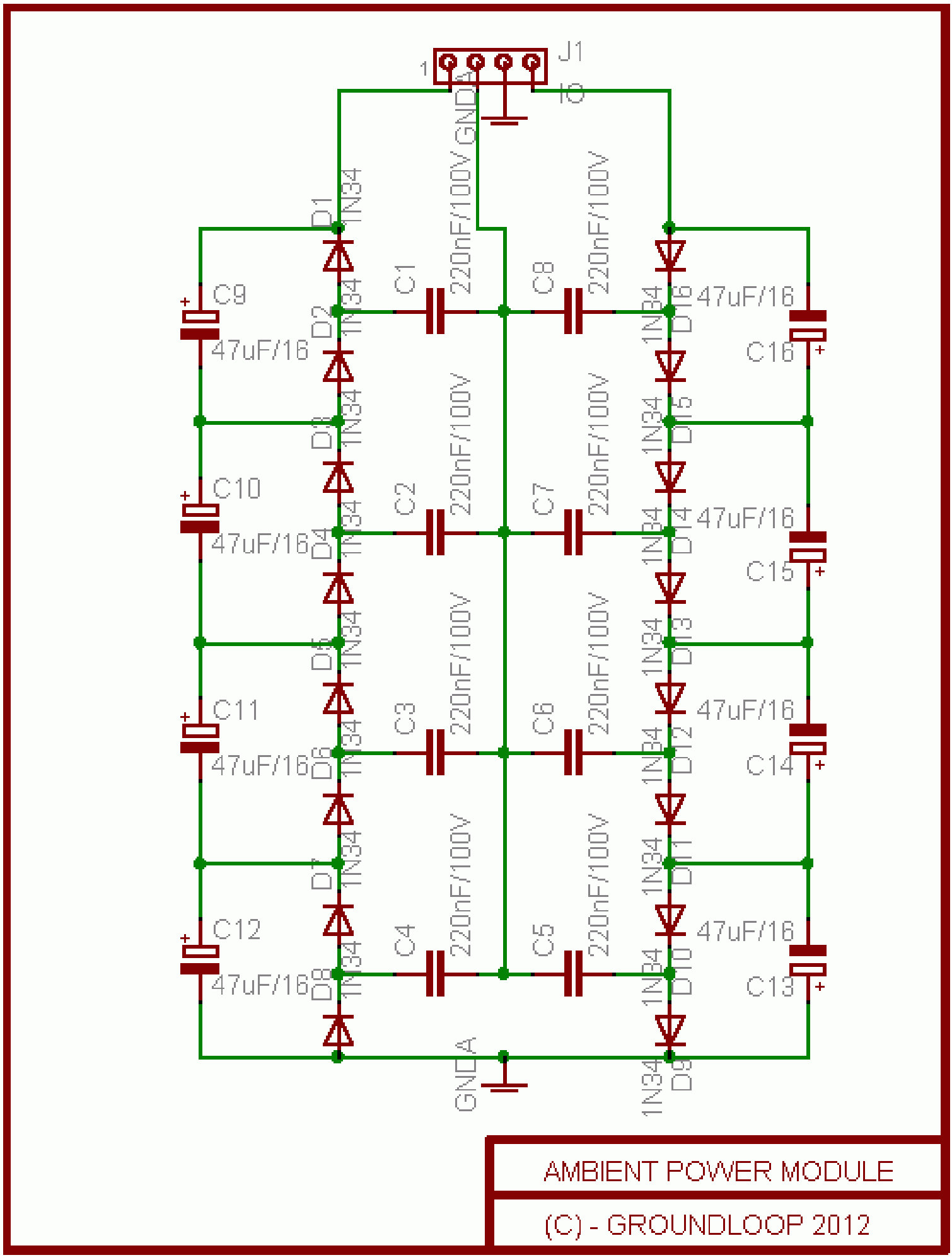
Later, a 70 Watt prototype was built, and a company formed: Coler Gmbh. Later a 5 kilowatt devices was built which allegedly powered Coler's house and laboratory for three years.

Official interest was shown by heads of the German navy who felt an investigation was necessary, and an official report was produced. A highly secret Nazi effort apparently had the goal of using his invention to recharge submarine batteries, without the need for the sub to surface. Experts examined the device and could find no fraud. It was judged Coler was an honest experimenter, but no expert opinion was forth coming as to how the unit operated. It was put under Official Secrecy after its operation had been verified by Government scientists. (Reference: articles entitled Perpetual Commotion and Hans Coler on http://magneticpowerinc.com)

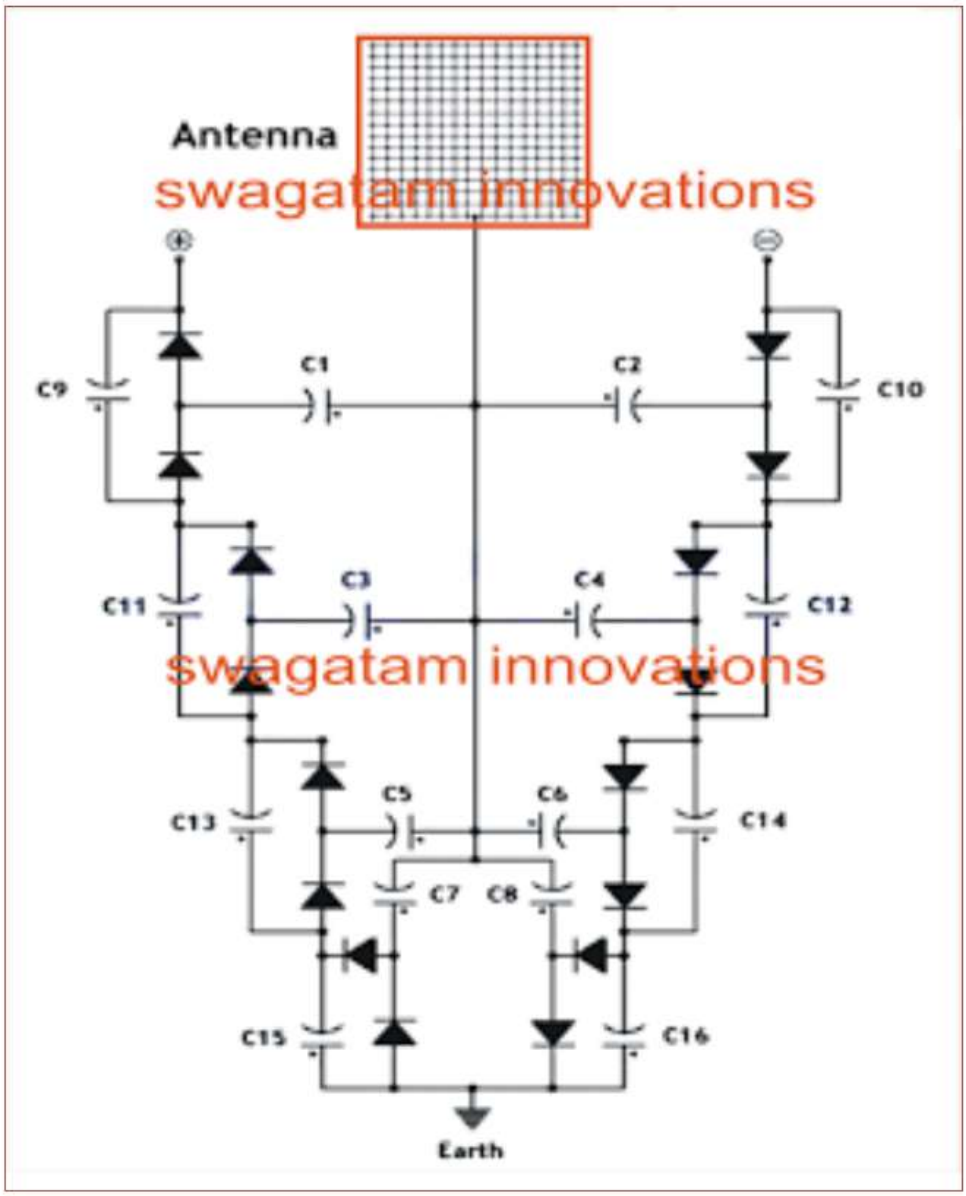
We don't know of anyone who has been able to successfully replicate this technology into a practical device.






J1
1
4
IO
GND
D1
1N34
C1
220nF/100V
C8
220nF/100V
C9
47uF/16
D2
1N34
D16
1N34
47uF/16
C16
D3
1N34
D15
1N34
C2
220nF/100V
C7
220nF/100V
C10
47uF/16
D4
1N34
D14
1N34
47uF/16
C15
D5
1N34
D13
1N34
C3
220nF/100V
C6
220nF/100V
C11
47uF/16
D6
1N34
D12
1N34
47uF/16
C14
D7
1N34
D11
1N34
C4
220nF/100V
C5
220nF/100V
C12
47uF/16
D8
1N34
D10
1N34
47uF/16
C13
GND
A
D9
1N34
AMBIENT POWER MODULE
(C) - GROUNDLOOP 2012

Circuit Diagram

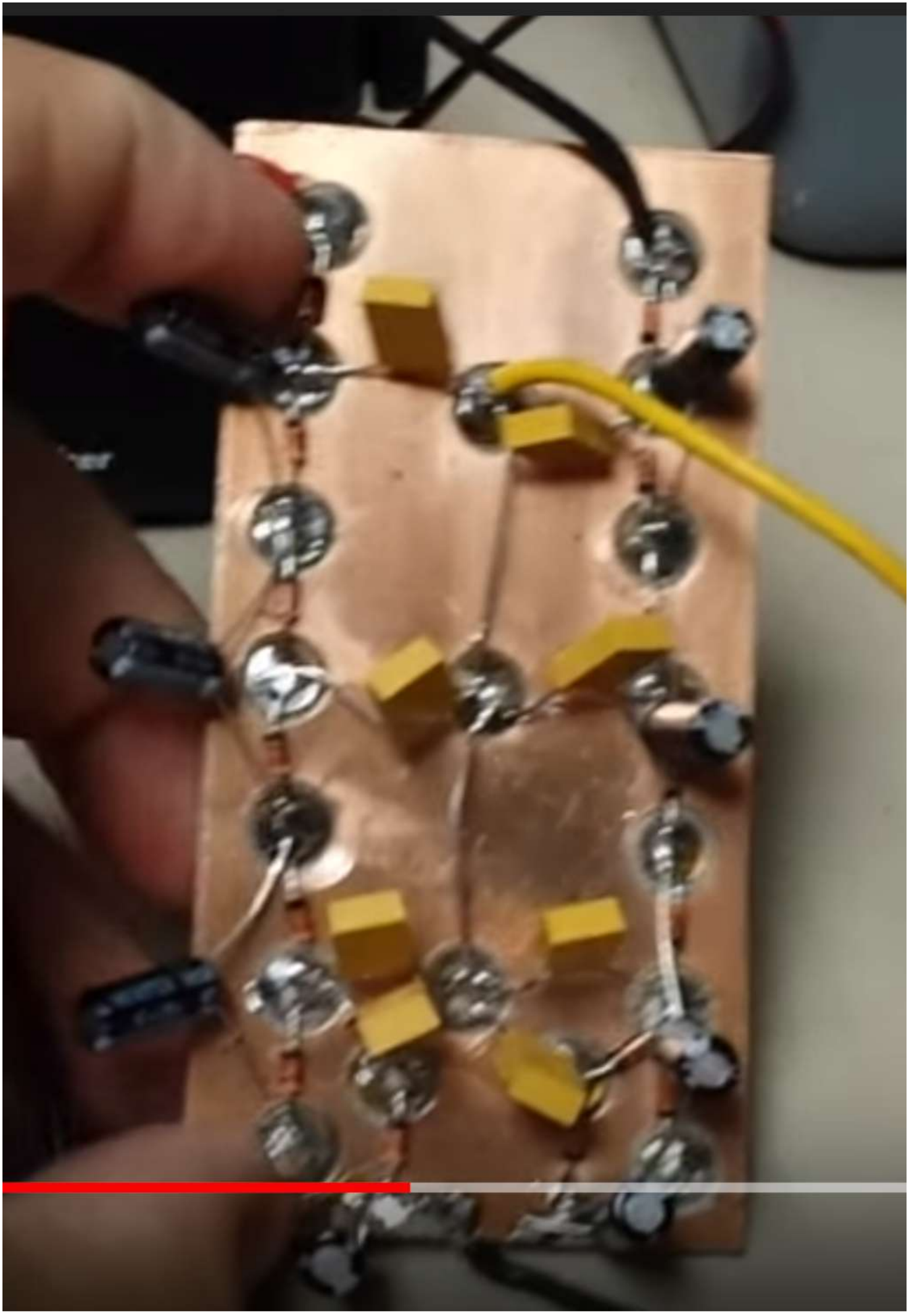


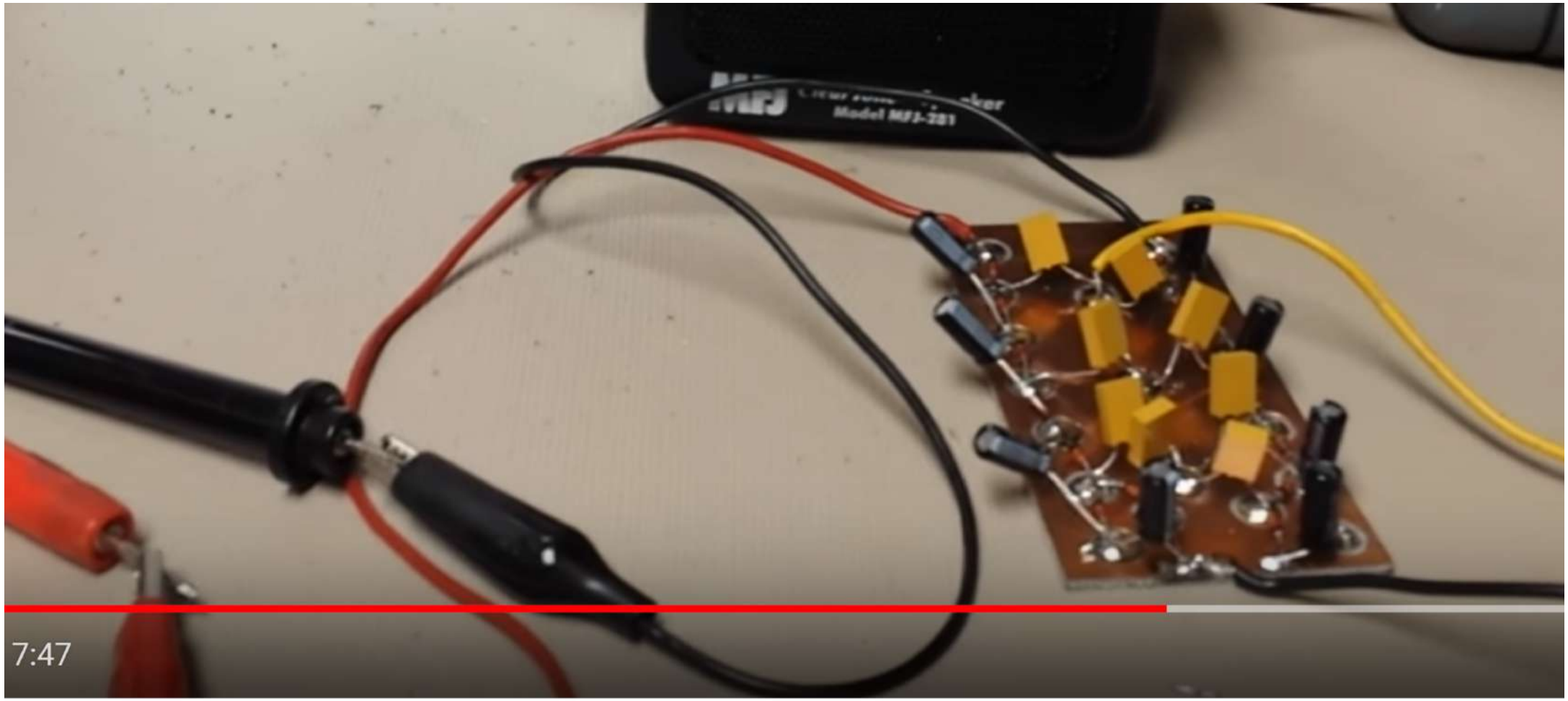
Parts List

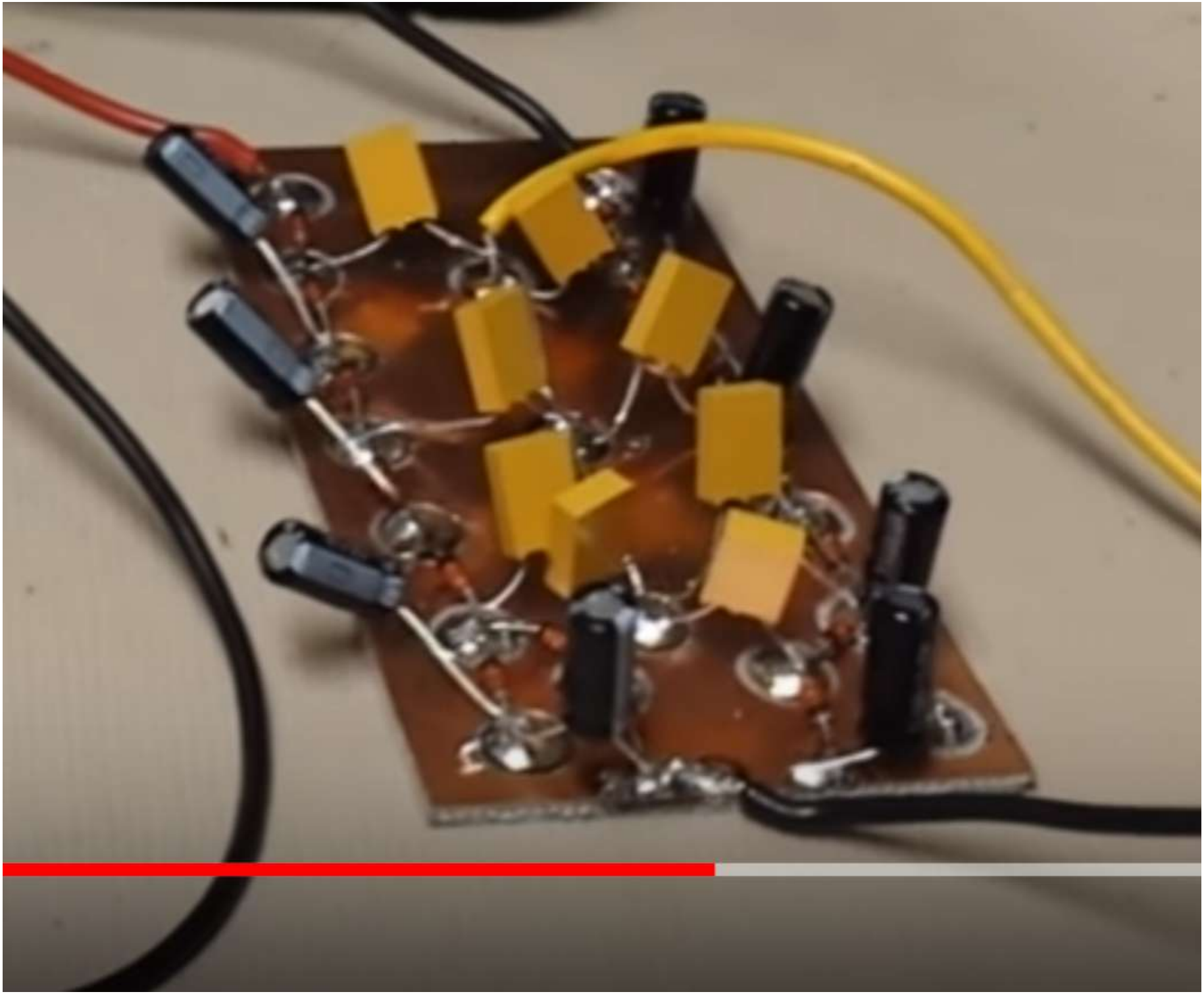
All Diodes are 1N4148

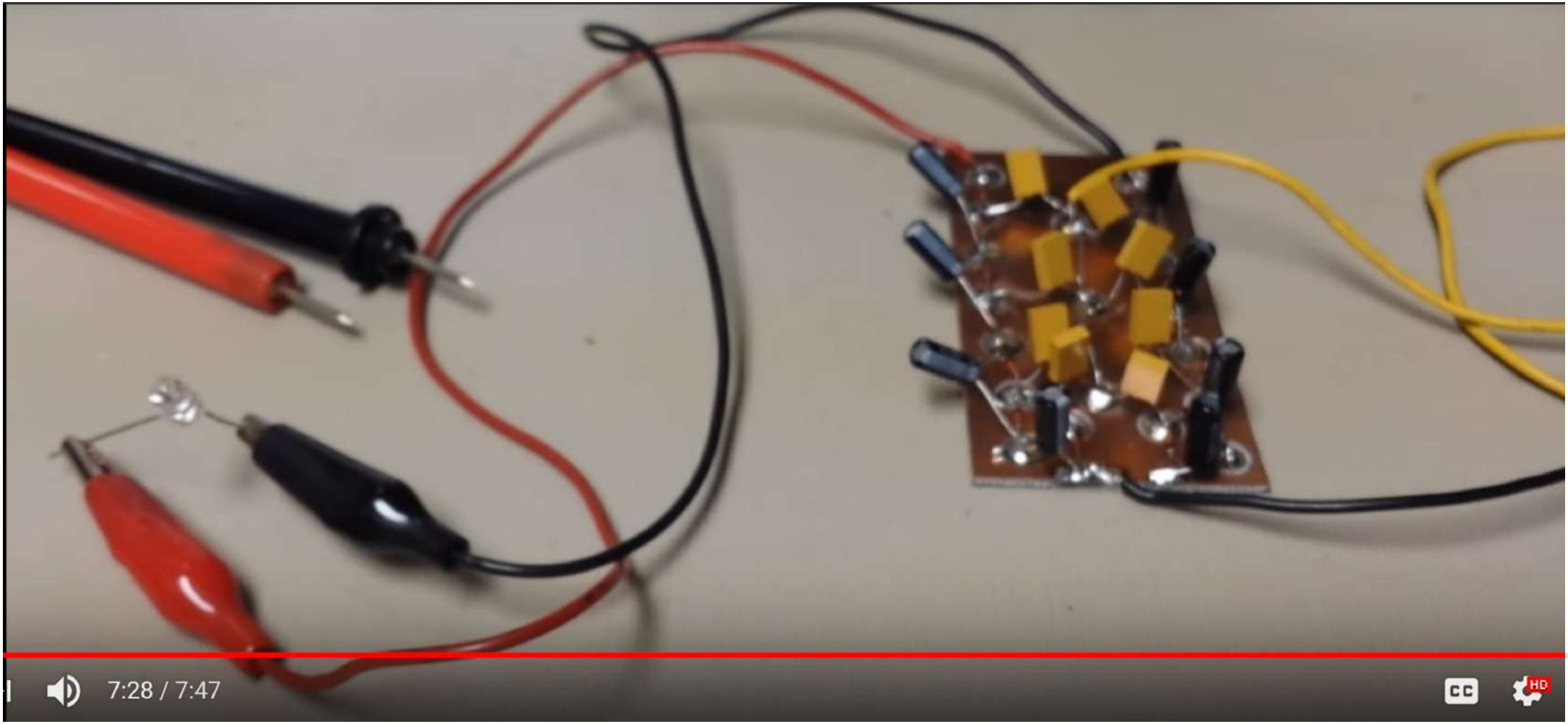
C1---C8 = 0.22uF/100V mylar

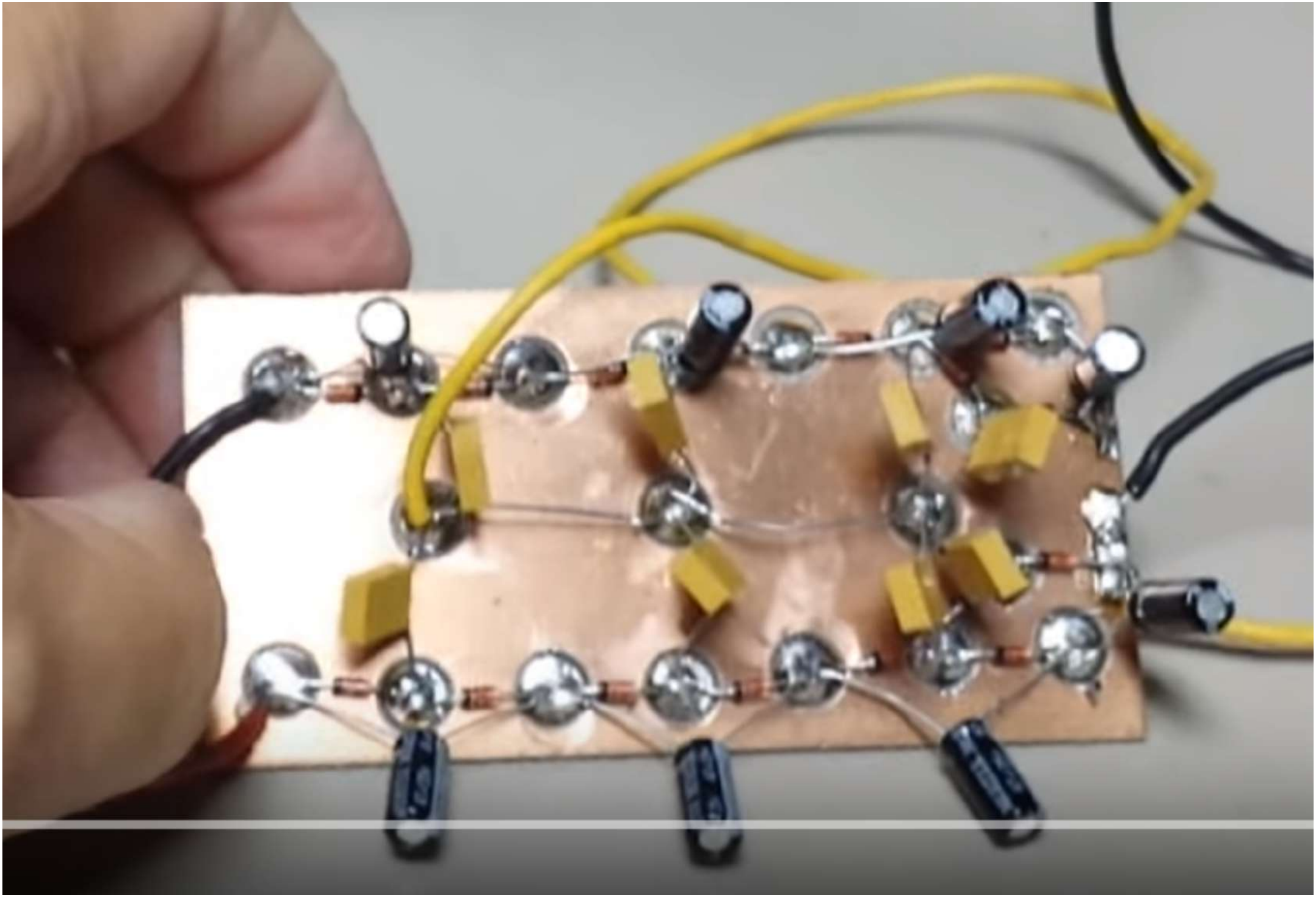
C9----C16 = 33uF/25V electrolytic

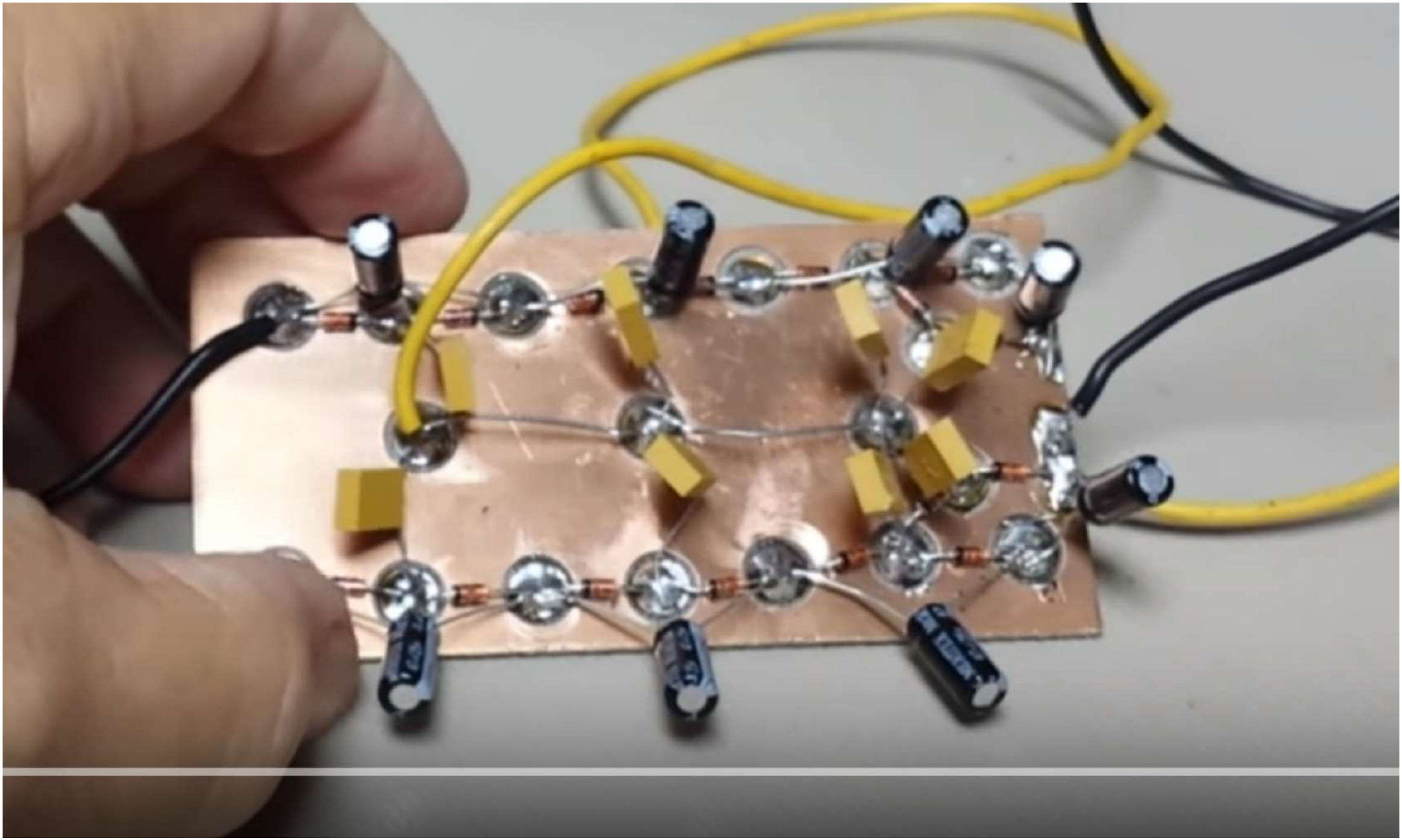


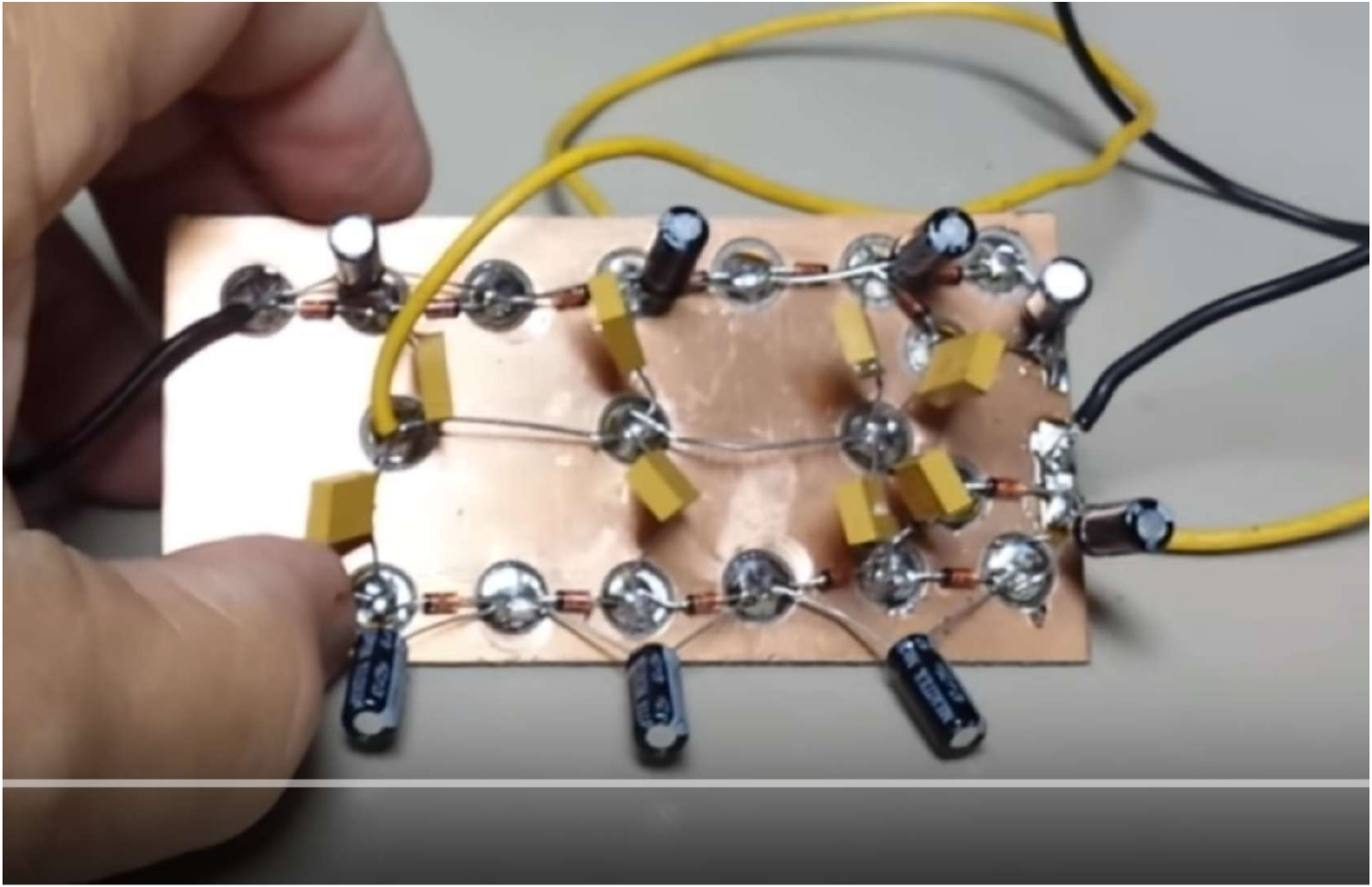

Model MFJ-281
7:47

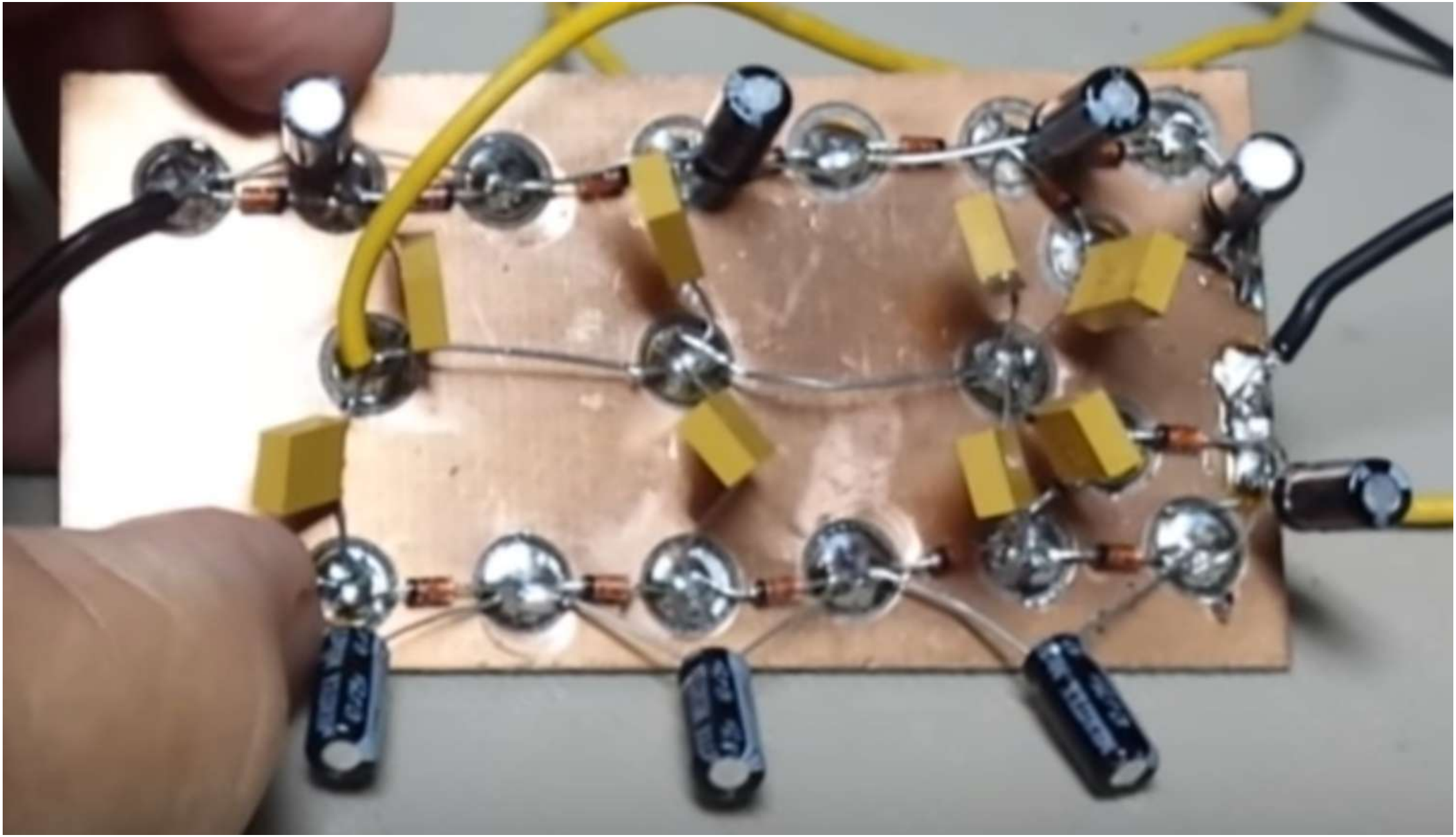


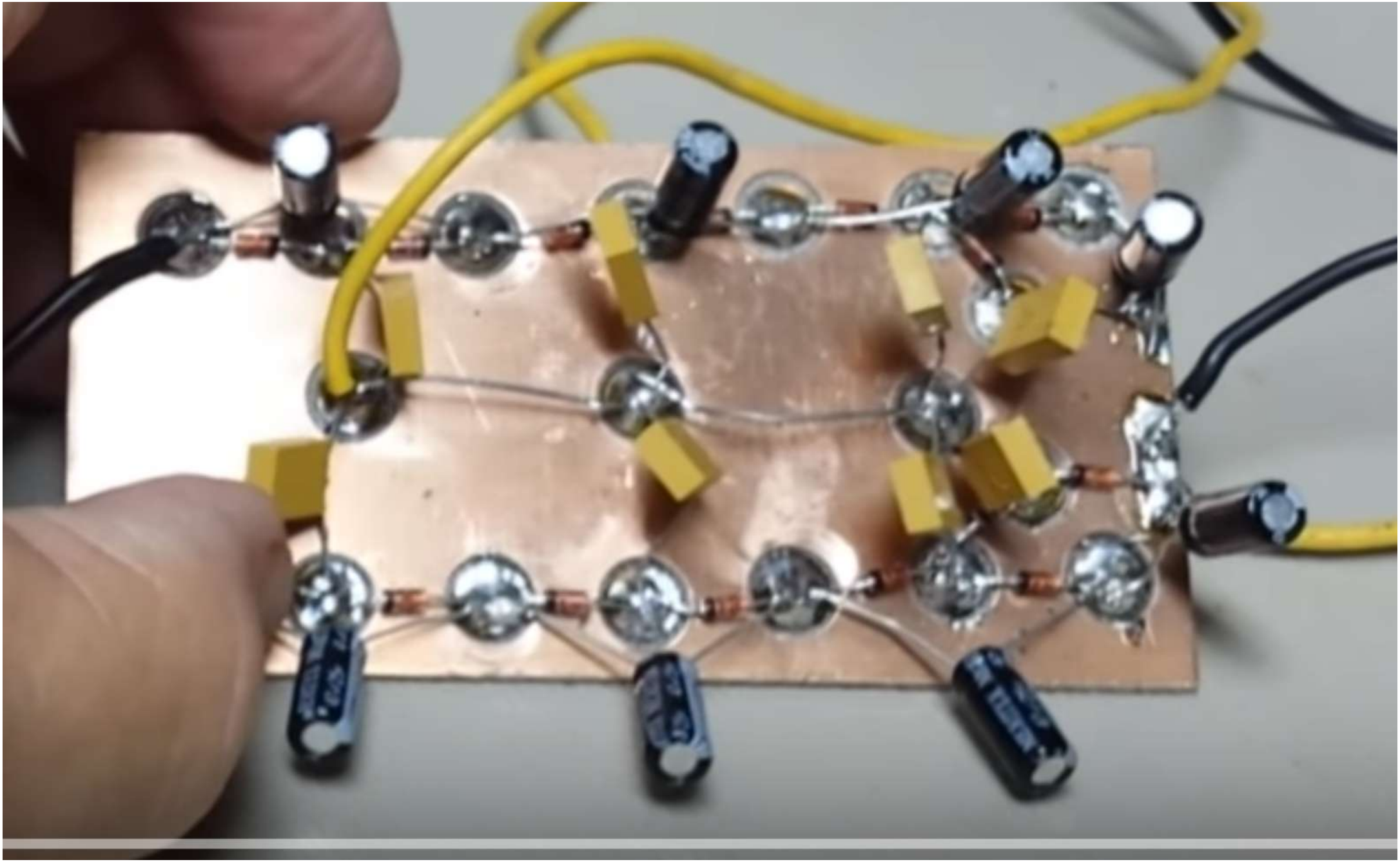

7:28 / 7:47

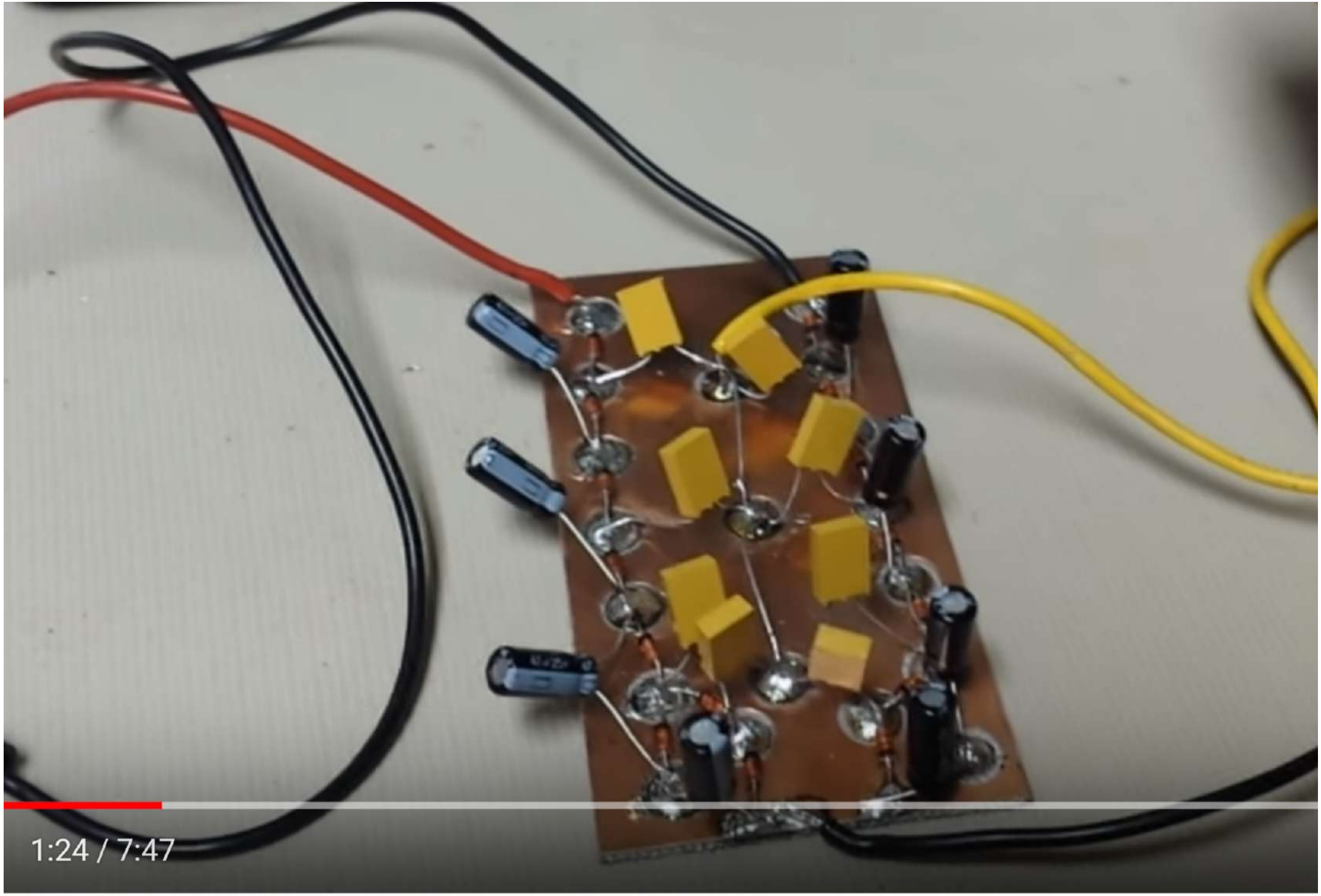


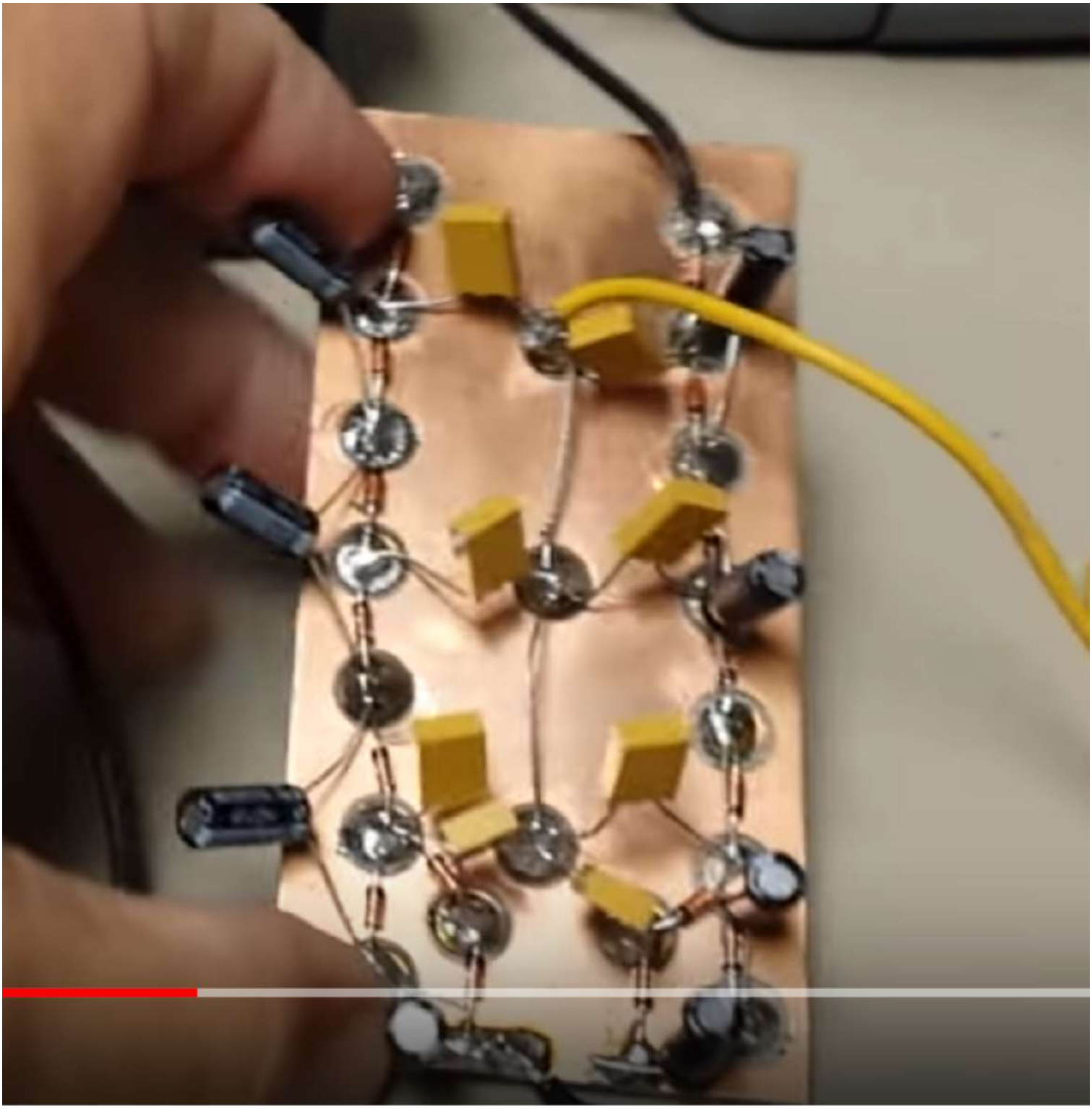


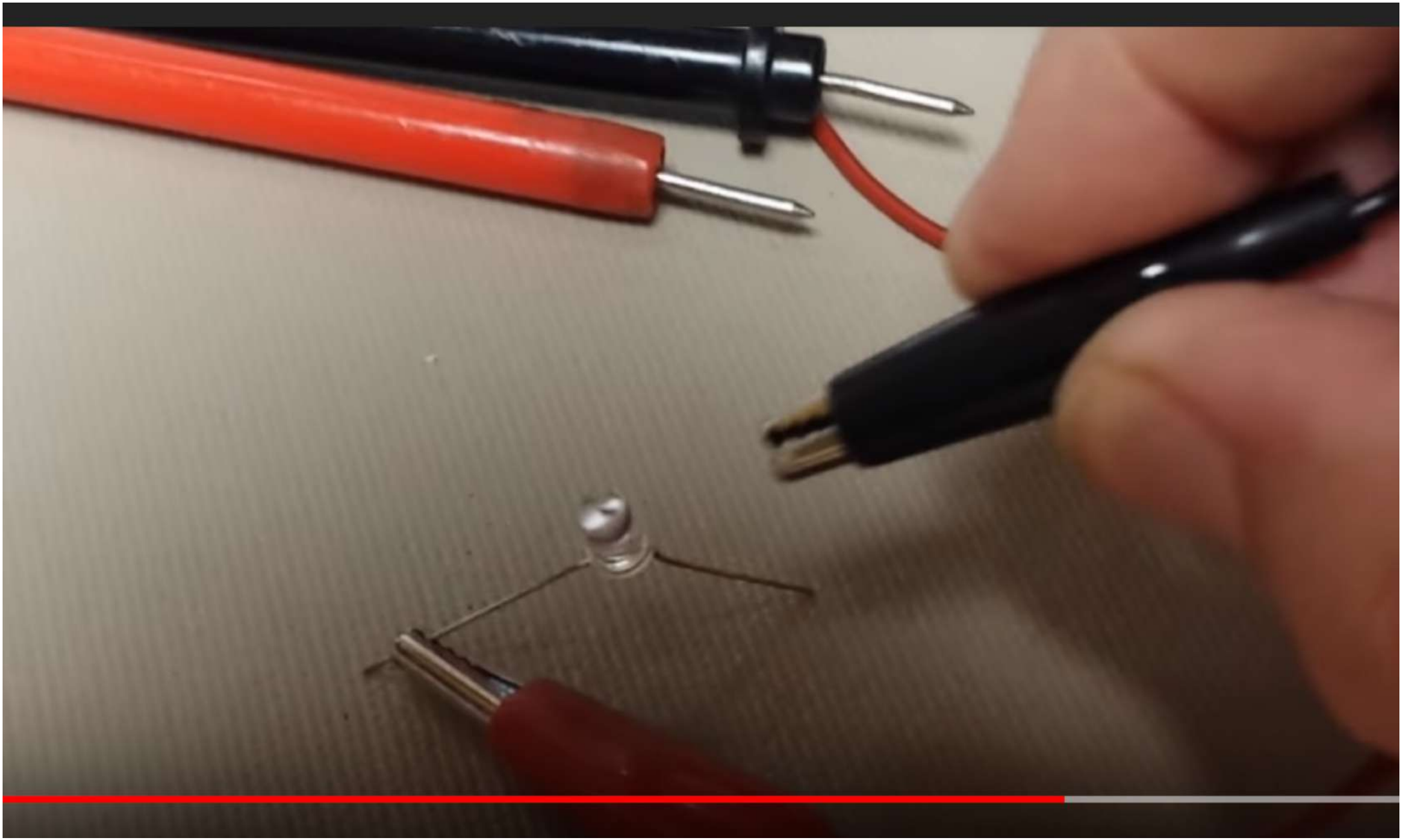


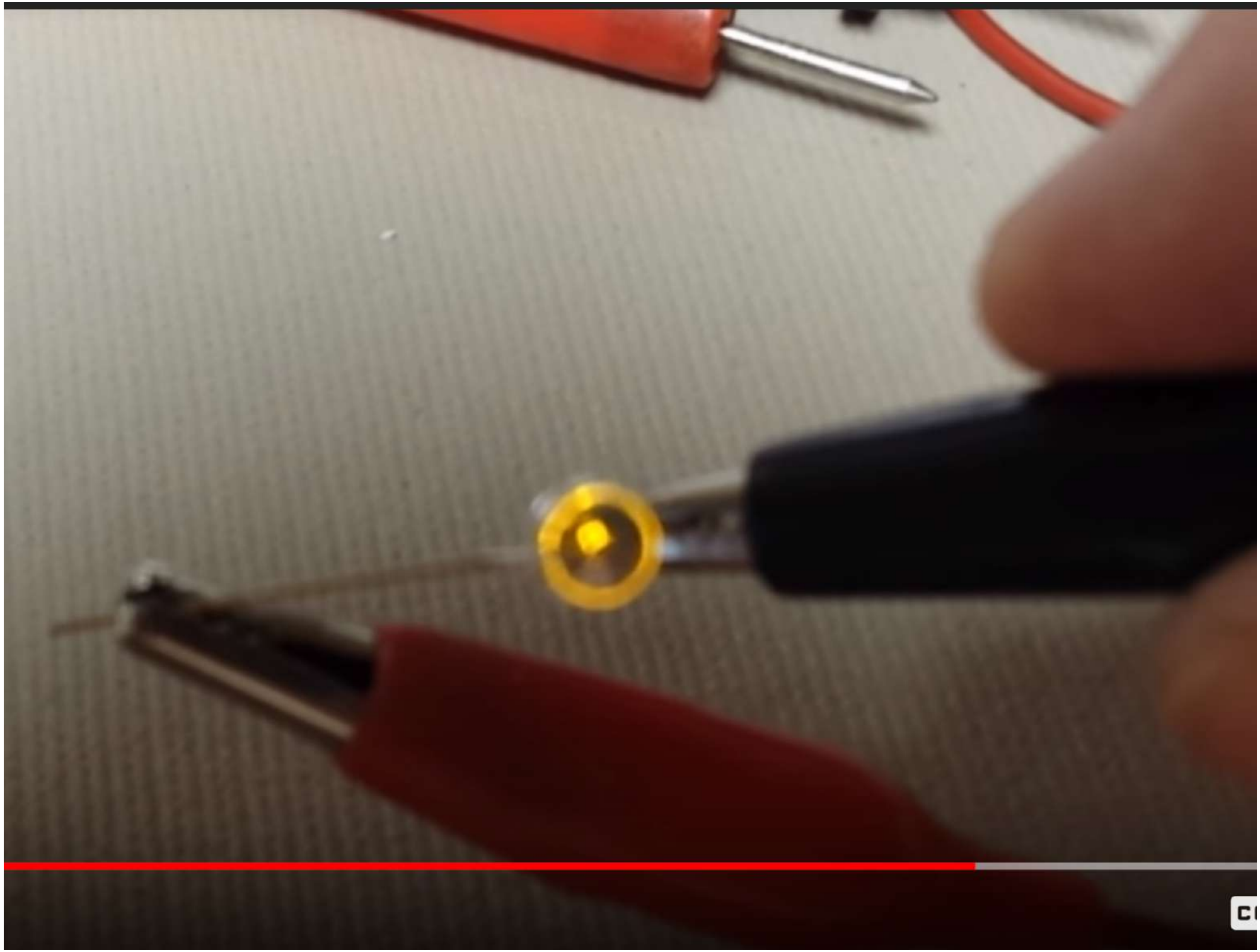


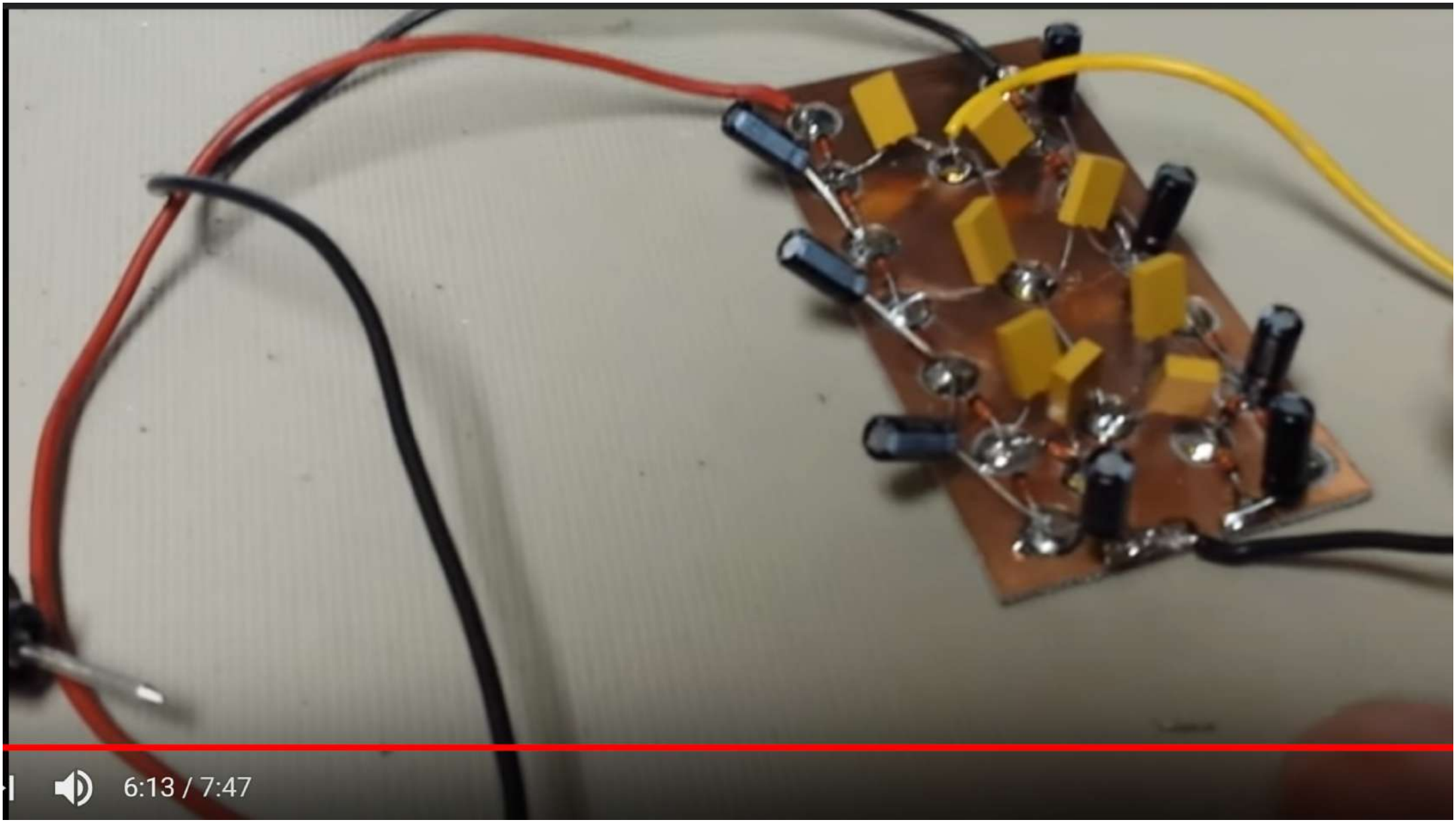


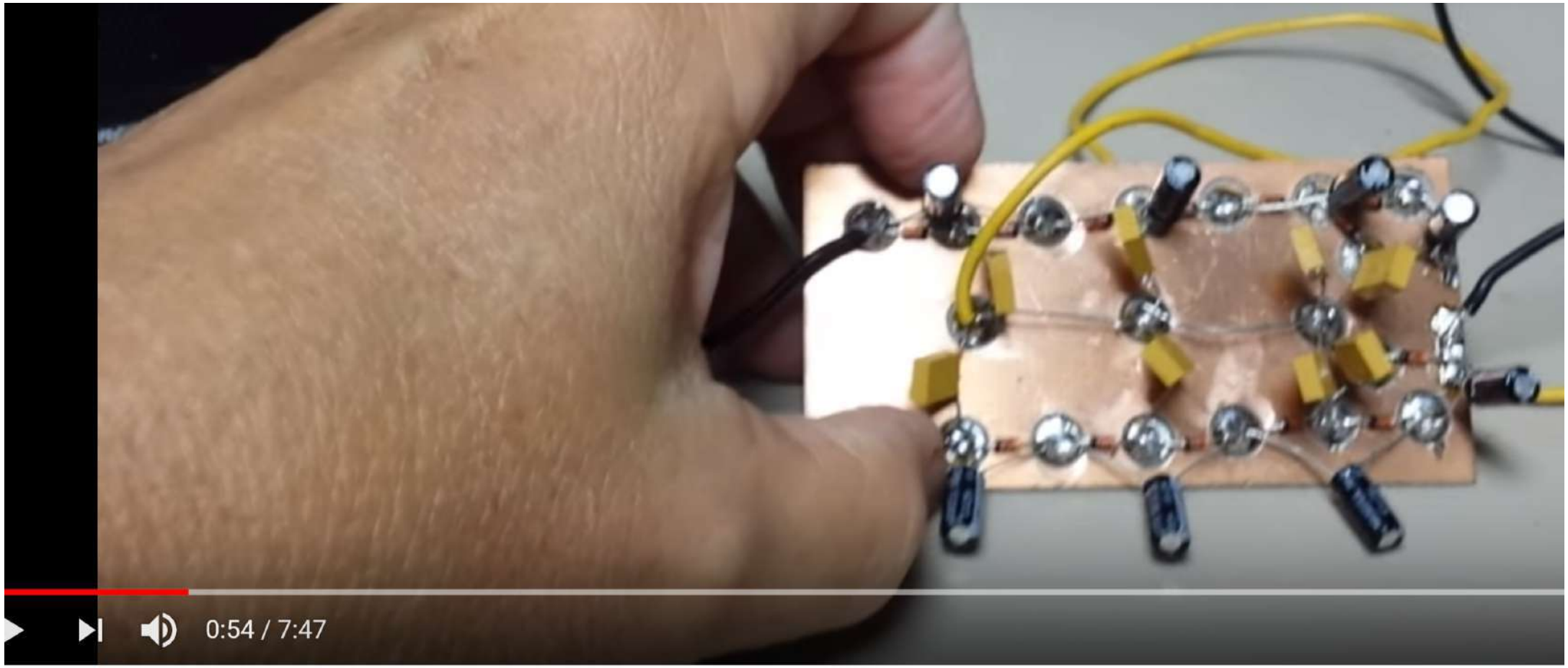

1:24 / 7:47







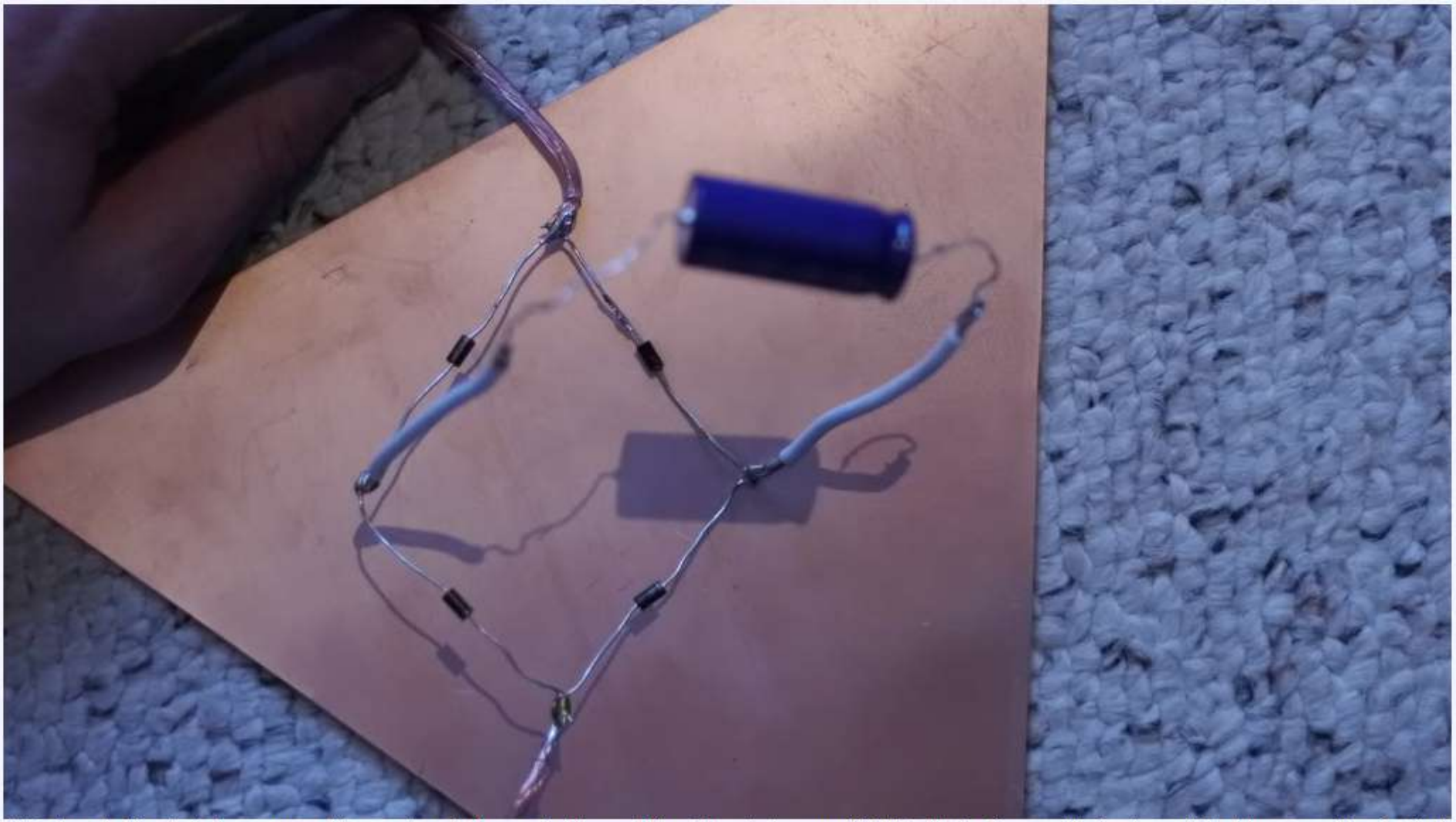

6:13 / 7:47



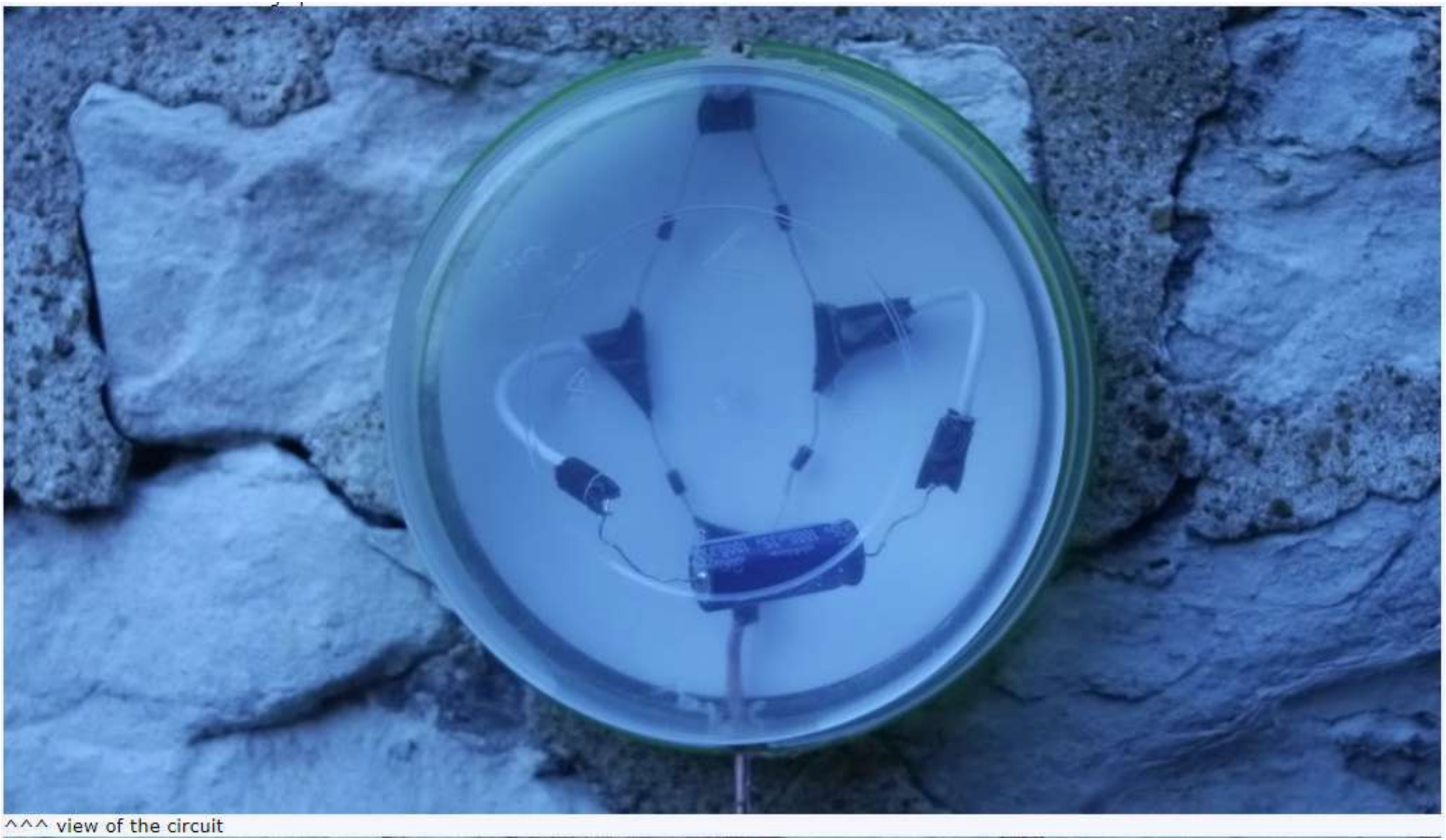
Free Electricial Energy From Invisible Radiation

Up next



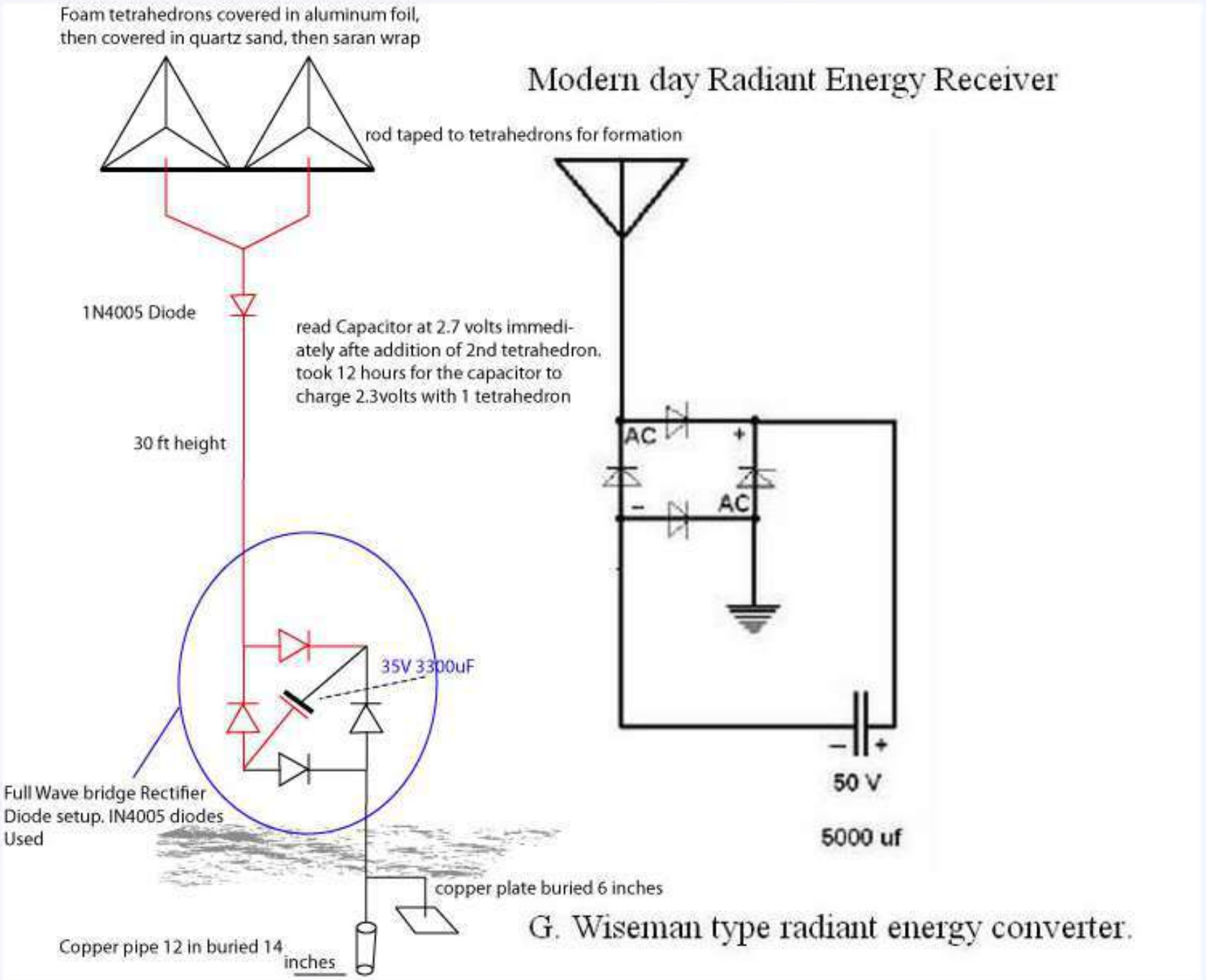


^^^ here is the 4 diodes arranged to create a full wave bridge rectifier. The diodes are 1N4005 diodes from radioshack, and the blue capacitor (radioshack) is 35Volt 3300uF,



^^^ view of the circuit

I made a radiant energy antenna for my 1st Free Energy project, and with LOTS of help and knowledge sharing fro
have 3 antennas and 2 grounds and have 2.81 volts in my cap. Somethings better than nothing heres some pics



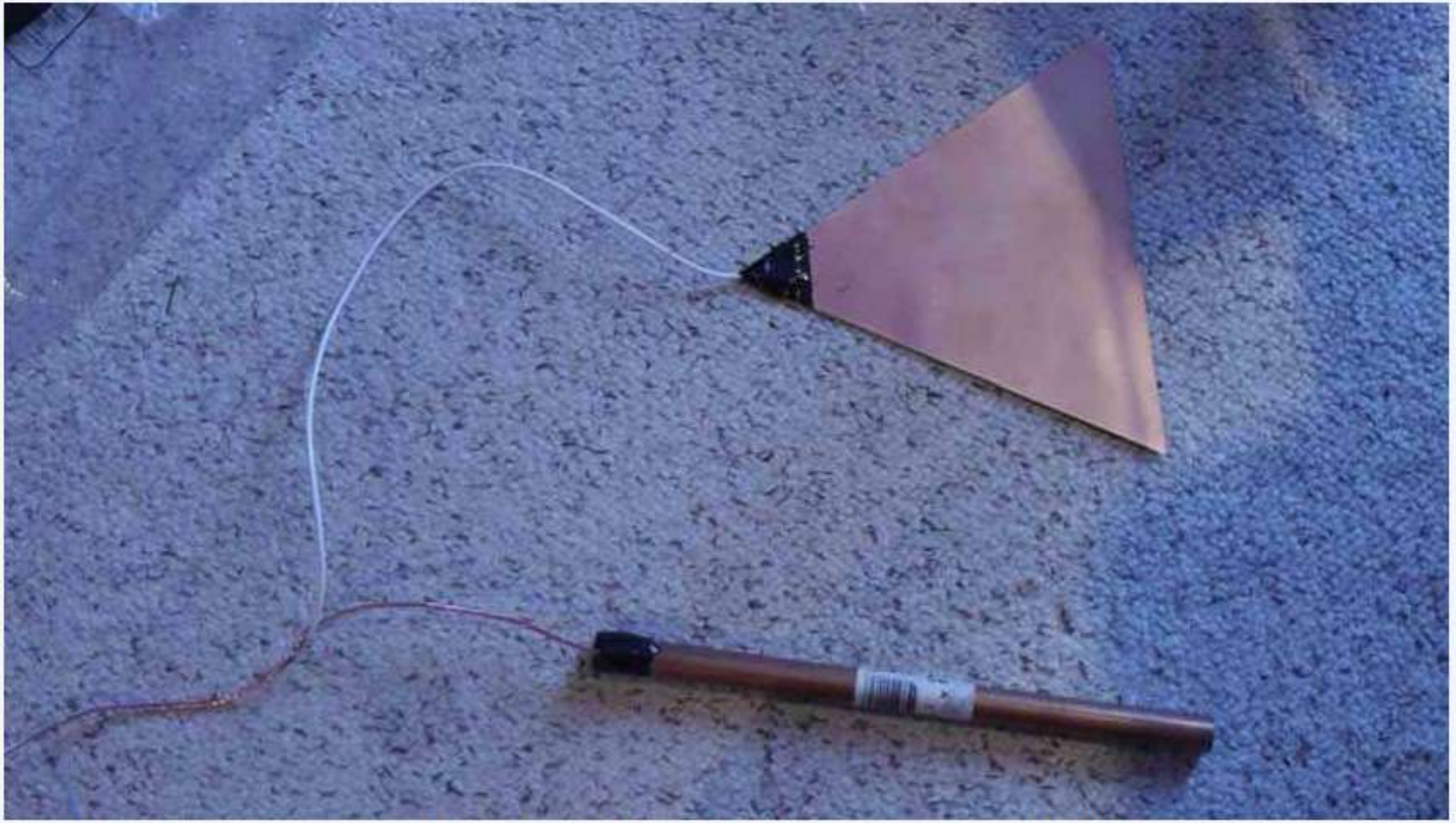
^^^liquid nails to plug the hole, to keep rain out



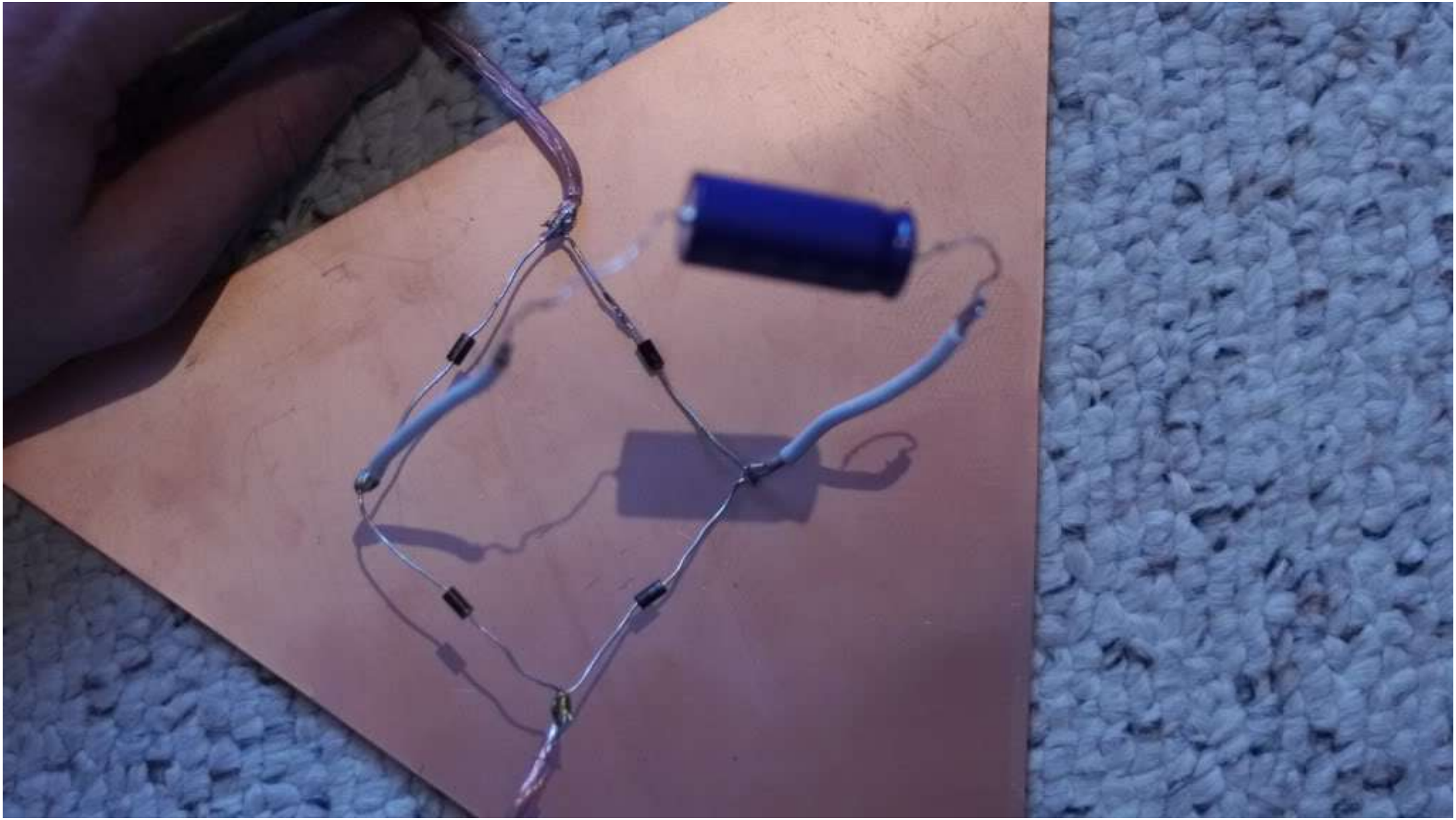
^^^view of the circuit , lid off

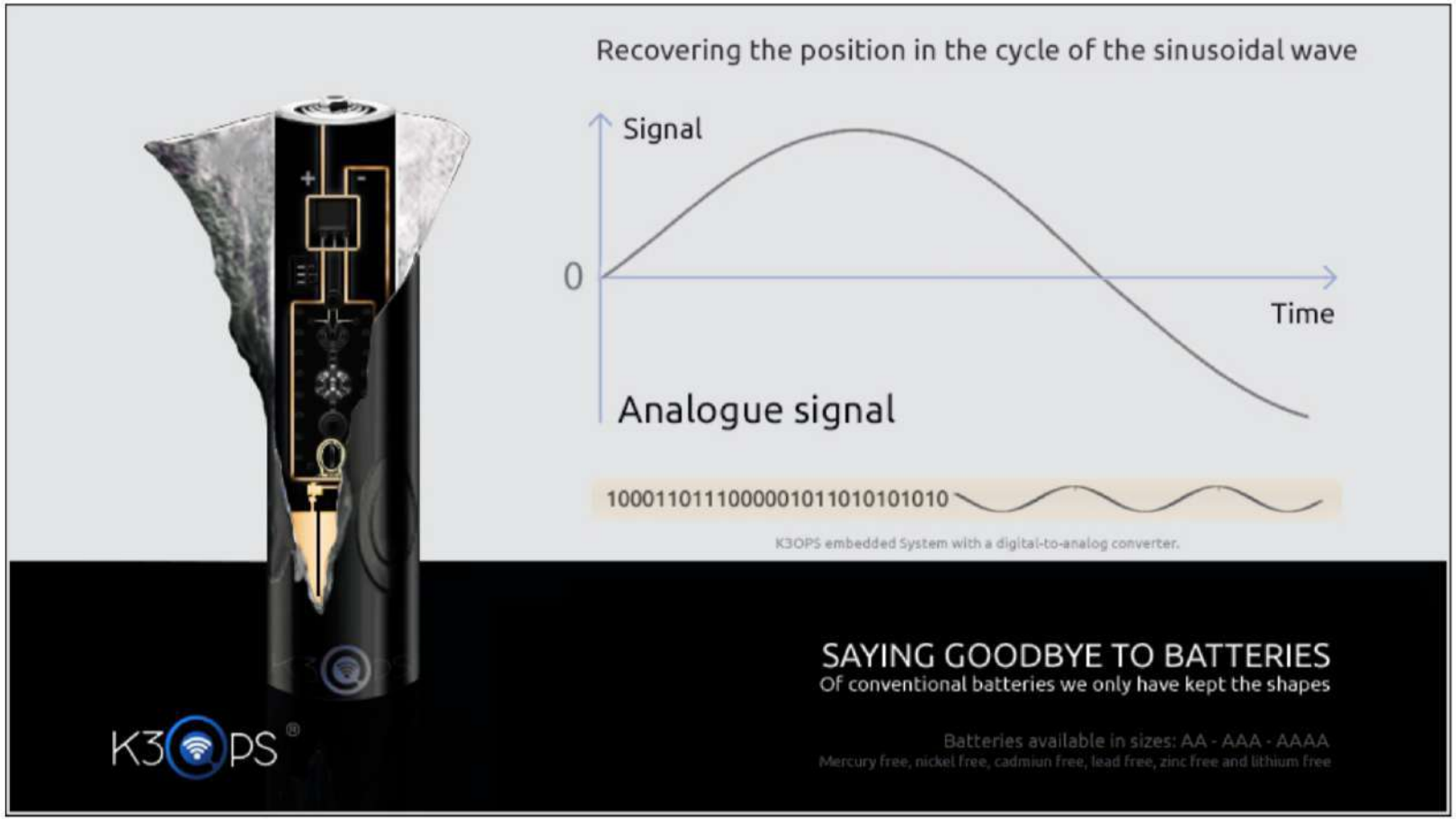


^^^ testing the cap 2.25volts (now at 2.81volts) with 3 antennas



^^^these are the pieces of copper that gets buried in the ground they syupply the (-) of electricity





An electromagnetic field uses the photon as an elementary particle to transmit force. It combines:

- **A magnetic field** *force resulting from the movement of loads μT.*
- **An electric field** *force created by the attraction of repulsion loads, measured in volts per meter - V/m.*

With an energy determined according to the speed of light, the RF are by far the best medium to transmit any kind of information.

The multiplication of wireless communications systems in our environment ensures sufficient microwave leakages to harvest from the ambiant and enough energy to convert into DC electricity. Electromagnetic fields are everywhere and since they carry energy, they became the best candidate to deliver an endless source of renewable energy.

$\vec{B}$ is the magnetic induction expressed in T refered to **Nikola Tesla**, "Father of Free Energy", which is at the origin of the electromagnetism.

Using meta-materials combined with nanotechnology has deeply increased the performance and miniaturization of rectennas embedded in K3OPS system. Our products operate autonomously, offering an endless supply of green energy in a respectful and environment-friendly approach.

1 - UNIQUE ID

Each K3OPS' product has a personal identification, which allows as well information exchange, management of the storage unit, the encryption protocols and remote control by means of applications dedicated to the different modes of system functions. This leads to a multitude of choices from direct power, power supply on demand or to power on a scheduled basis for Home Automation.

2 - THE ANTENNAS

Multilayer antennas network* - both wide-band and multi-band operation - working in cooperative relay scavenging ranges between 0.2 to 5.8 GHz (covering radiation from all of domestic appliances) and the use of other standard & specific protocol allowing signal isolation optimized for direct digital-to-analog conversion**.

3 - DIELECTRIC RESONATORS

Breaking the electric field symmetric in dielectric materials *** by acceleration of electrons under the action of specific frequencies, that warps the materials generating an electromagnetic field as a powerful resonator. Since a resonator is also a transmitter they make very efficient and also extremely tiny antennas.

4 - DYNAMIC FREQUENCIES SELECTION

Constant analysis of the environment based on any ambient changes, ensure self-correction of the frequencies to harvest in the appropriate source without interfering with any other wireless communication systems nearby.

5 - DOWNTIME POWER STAGES OPTIMIZED

Intelligent power management controlled by a microcontroller to optimize system-level power, an adaptive dead-time control between the phases with LP standby mode that shuts down most of the digital and analog circuitry and logarithmic step sizes between outputs with complex ultra-speed pulsed MrC digital modulation for low noise, increasing beam forming gain recovery.

6 - ASYMMETRY CORRECTION

The use of metamaterial for their electromagnetic properties, offer a signal isolation optimized for the asymmetry correction at the last stage of the harmonic in the ripples ensure a stable, efficient and a proper output DC.

** Rectenna invented in 1964 by William C. Brown*

*** Based from Alexander Graham Bell researches.*

**** Pierre Curie Dissymmetry Principle.*



EMF

K3OPS endlessly detects all ambient RF



TO CONVERT

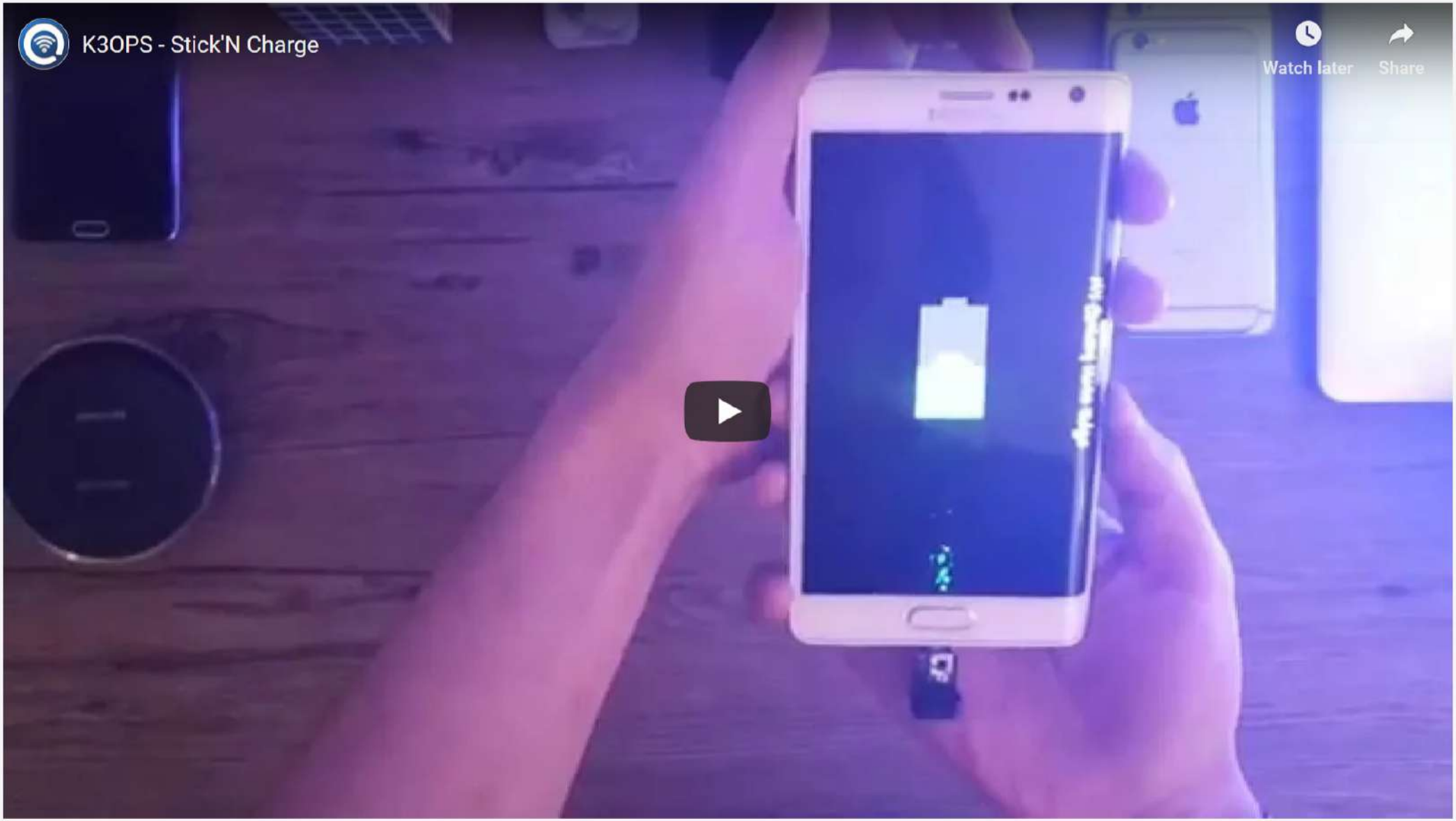
K3OPS converts RF to DC



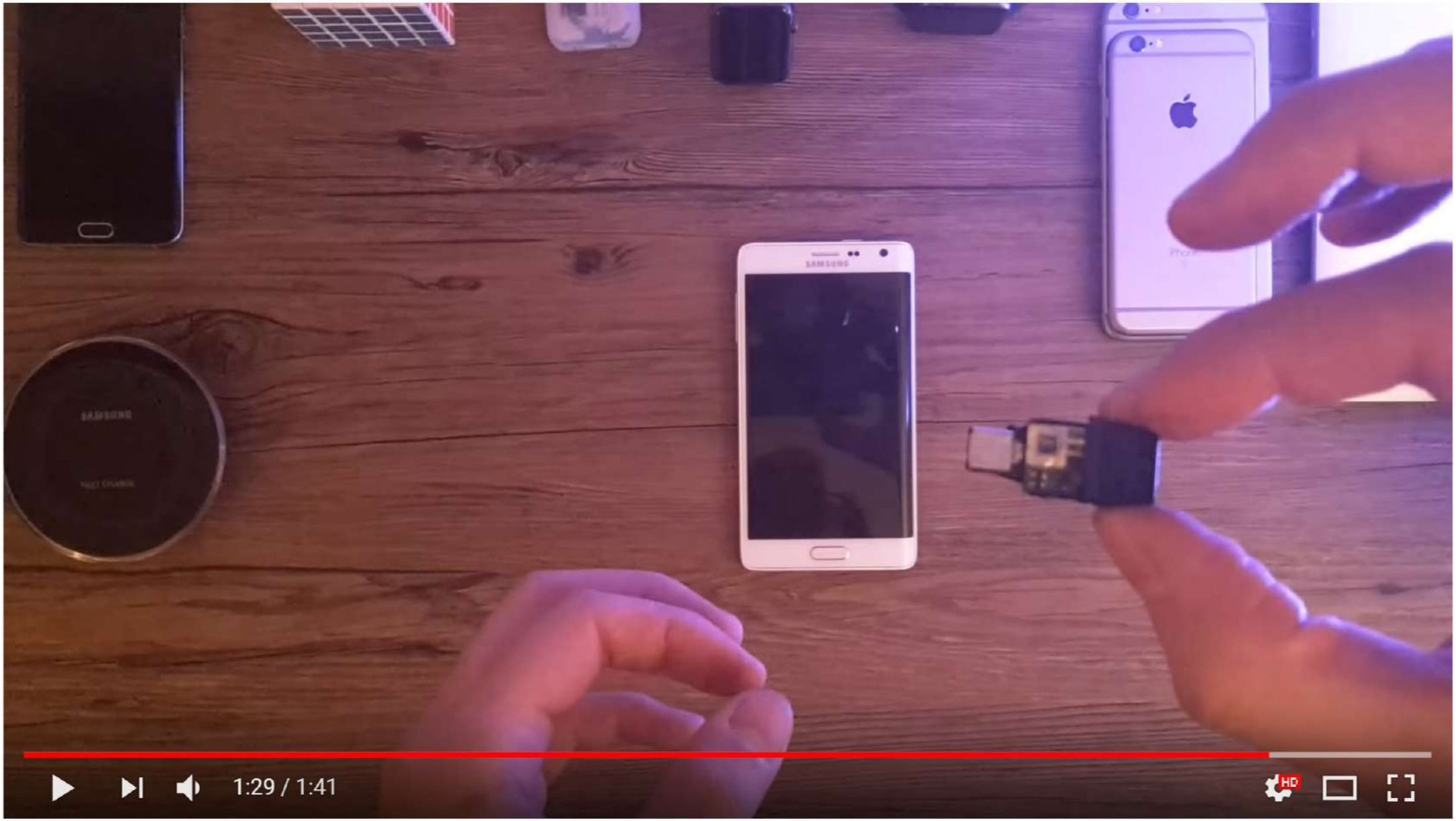
POWER

K3OPS runs or charges all electronic devices

Stick'N Charge™ provides a constant charge to any smartphones



Stick'N Charge™ to power source lights or cellphone with ambient RF



K3OPS - Stick'N Charge

OUR PRODUCTS



K3OPS BATTERY

AN ENDLESS SUPPLY OF ENERGY

That replaces all batteries. Any shapes of batteries including button cell



SQUID

THE WELLNESS WRISTBAND

A key element of education to cope with E-smog issues to develop healthy habits



K3-CASE

CHARGE YOUR PHONE WITH RF

You won't have to worry about the battery capacity or to seek for an outlet

K3OPS ® is a registered mark under the number: 4096517 | SQUID WELLNESS WRISTBAND ® is a registered trade mark - Number: 4085469

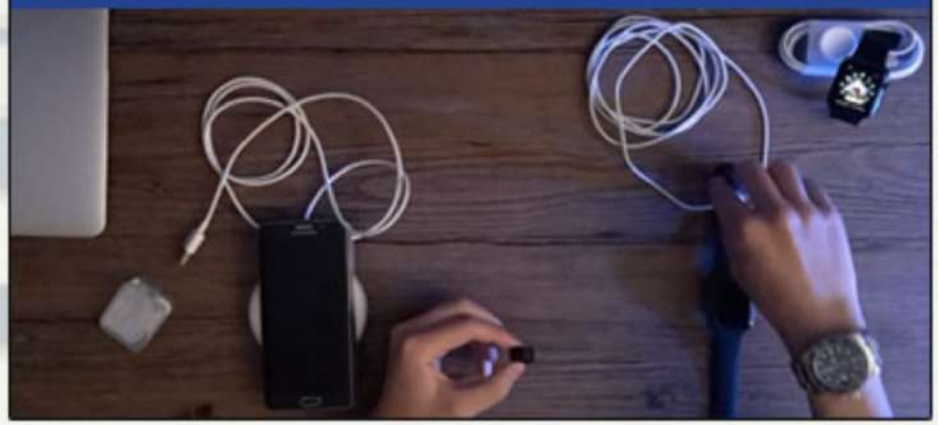
STICK'N CHARGE - ENERGY ON THE MOVE

Stick'n Charge™

Stick'N Charge is the most efficient RF Energy Harvester in the market.

Energy On the Move

Offering a never-ending supply of green energy to power or to charge any kind of smartphones and all connected devices.

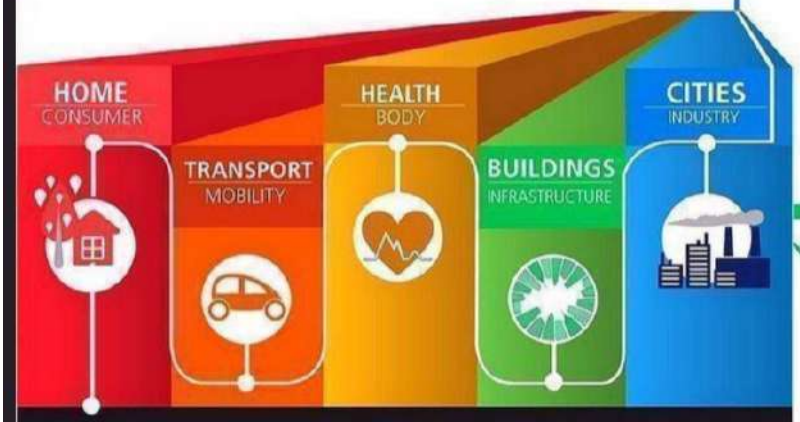






And quickly advancing

TO DIVERSE APPLICATIONS



Light bulbs
Security
Pet Feeding
Irrigation Controller
Smoke Alarm
Refrigerator
Infotainment
Washer / Dryer
Stove
Energy Monitoring

Traffic routing
Telematics
Package Monitoring
Smart Parking
Insurance Adjustments
Supply Chain
Shipping
Public Transport
Airlines
Trains

Patient Care
Elderly Monitoring
Remote Diagnostic
Equipment Monitoring
Hospital Hygiene
Bio Wearables
Food sensors

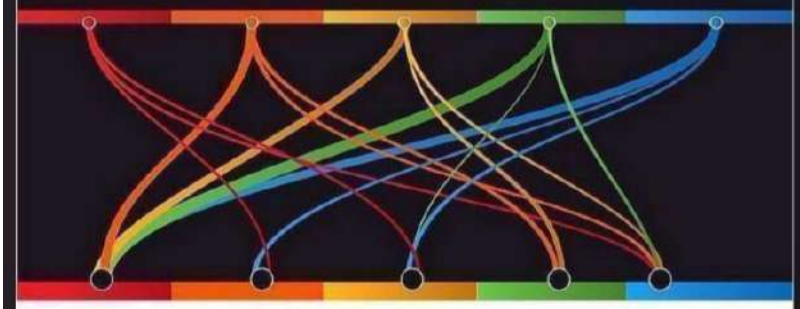
HVAC
Security
Lighting
Electrical
Transit
Emergency Alerts
Structural Integrity
Occupancy
Energy Credits

Electrical Distribution
Maintenance
Surveillance
Signage
Utilities / Smart Grid
Emergency Services
Waste Management

Things get interesting when these connected devices and services start creating

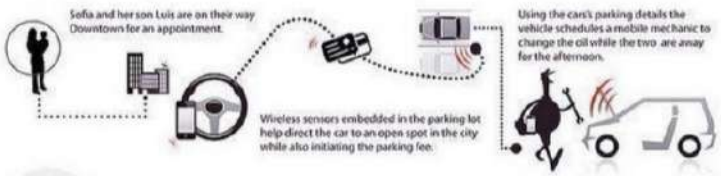
COMPOUND APPLICATIONS

within their own verticals and across industries:



FOR EXAMPLE

TRANSPORTATION + SMART CITIES



In Downtown San Francisco 20-30% of all traffic congestion is caused by people hunting for a parking spot.

- San Francisco Municipal Transportation Agency (SFMTA)

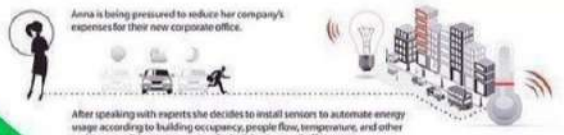
HEALTHCARE + SMART HOME



40 million adults age 65 and over will be living alone in the U.S, Canada and Europe.

- U.S. Department of Health and Human Services Administration for Community Living (ACL)

SMART BUILDINGS + MOBILITY



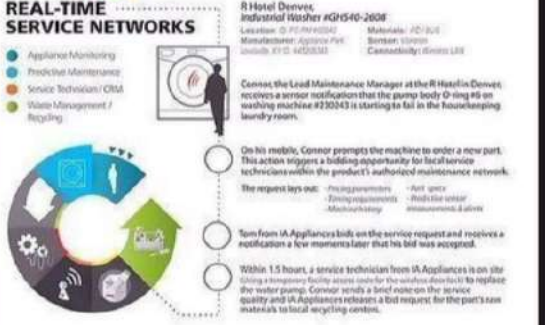
Energy used by commercial and industrial buildings in the US creates nearly 50% of our national emissions of greenhouse gases.

- United States Environmental Protection Agency

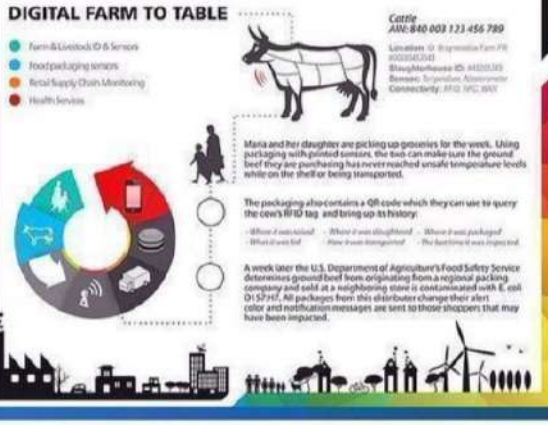


Inevitably these integrations become more tightly coupled across time, location & services.

REAL-TIME SERVICE NETWORKS



DIGITAL FARM TO TABLE



Postscapes

Harbor Research

Converting Radio waves into electrical power is not a new concept. The so called rectenna was conceived by William C. Brown back in 1964. Rectennas are also widely used today. RFID tags contain a small rectenna to supply the electronics with power when close to a scanner. K3OPS, a startup founded by Xin Wei and Alexandre Despallieres developed a rectenna that is powerful enough to charge a smartphone like the Galaxy S6.



Radio waves are everywhere this days with the abundance of mobile networks and Wi-fi hotspots. Technology that can efficiently harvest that ambient energy can dramatically change how gadgets are powered. K3OPS works on RF energy harvesting smartphone case K3-Case and also on standard battery with integrated RF harvesting technology.

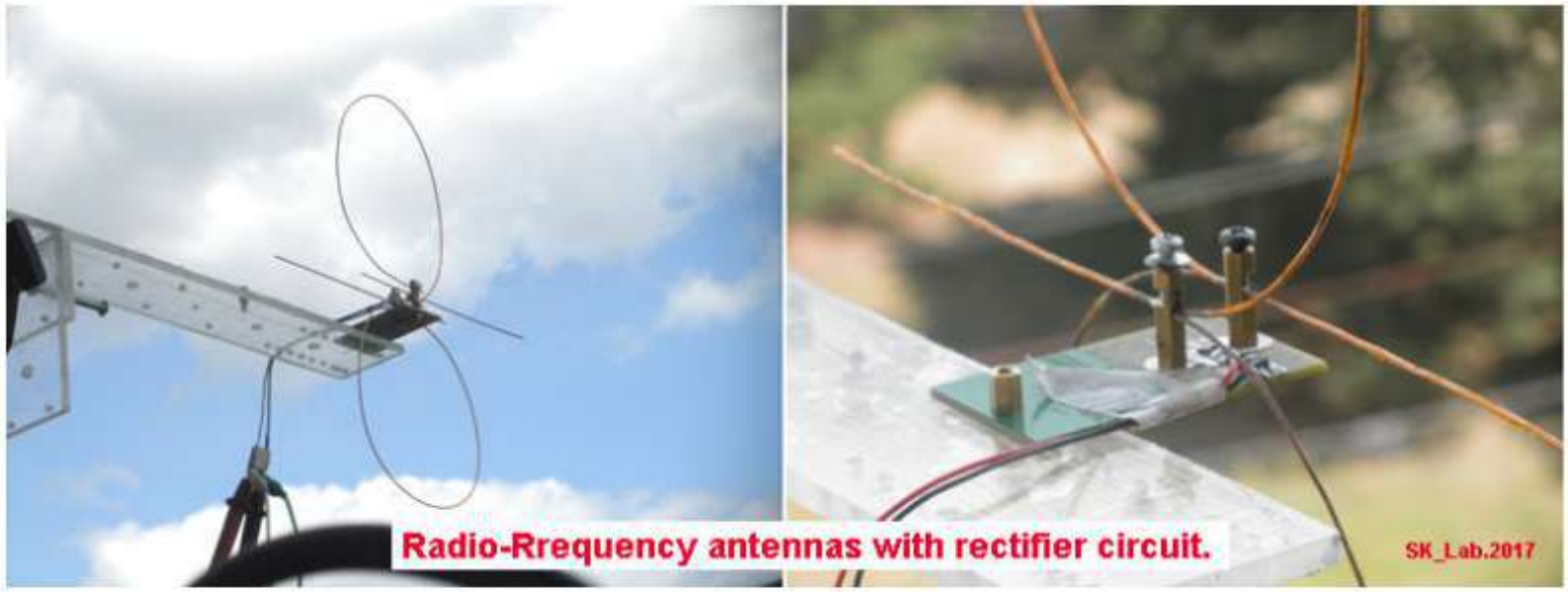


The K3Ops RF energy harvesting technology can tap the energy of WiFi, 4G, Bluetooth, LTE radio waves. As miniaturization will evolve in the future RF harvesting could become the power source for wearable devices such as smartwatches and fitness trackers.

K3Ops will launch the K3-Case in September. The RF energy harvesting smartphone case only works with smartphones that have a QI compliant wireless charging feature like the Galaxy S6. There will be options to configure the K3-Case via an app to optimize the frequencies the case will harvest for energy to avoid interference with other devices.

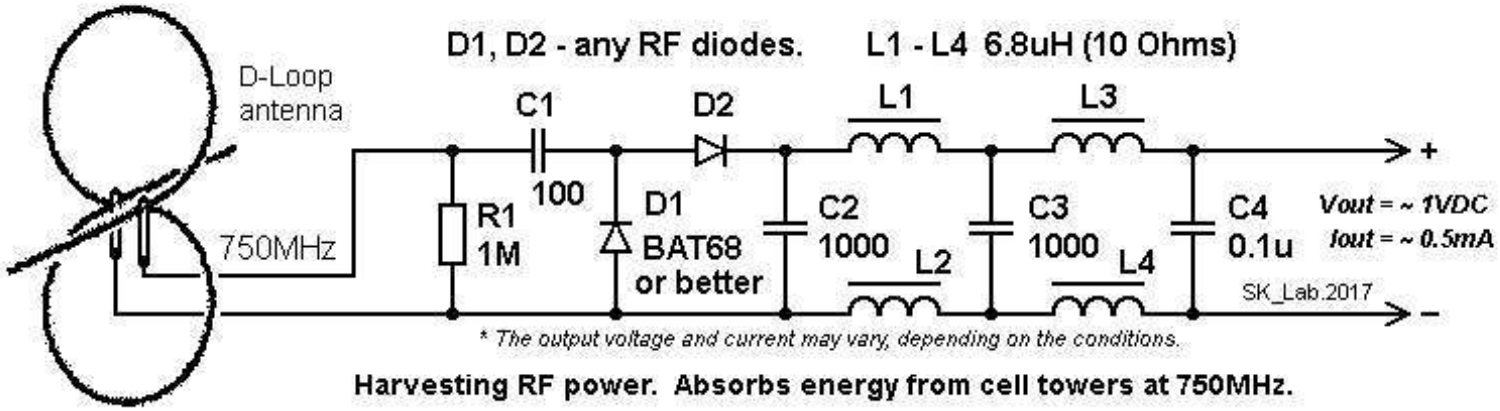
K3Ops' Xin Wei will be a speaker at the upcoming Wearable-Technologies Conference in San Francisco in July. This presentation will be one of the highlights of this conference. We learned that attendees of the K3Ops presentation will be receiving a K3-Case. It will be interesting to learn how far the K3Ops RF energy harvesting technology has been developed into a consumer ready product.

On the banner, two '**Dual-Loop**' directional antennas, designed specifically to collect power at 750MHz. One is connected to 100uA (700Ohms) head, and the average current you can see on it. Both antennas have 'on-board' rectifiers.

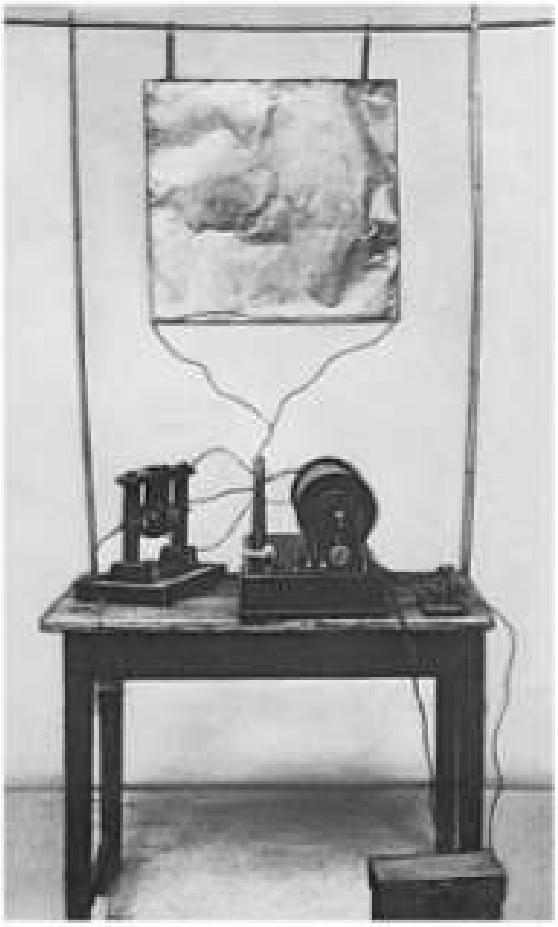


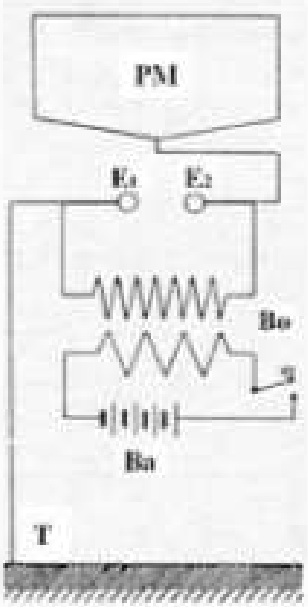
Reality is not as good as we would like. One antenna produces about 1 volt (at 10MOhms), and a current of about 0,4 mA (at 700OHms).

The circuit is simple as a crystal receiver. Diodes with capacitors work as a voltage doubler (rectifier). The remaining inductors and capacitors isolate the output from high frequency.

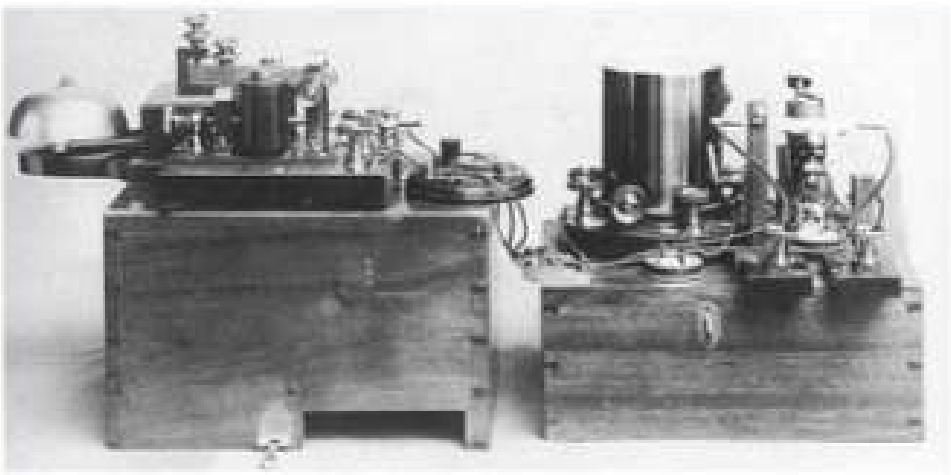


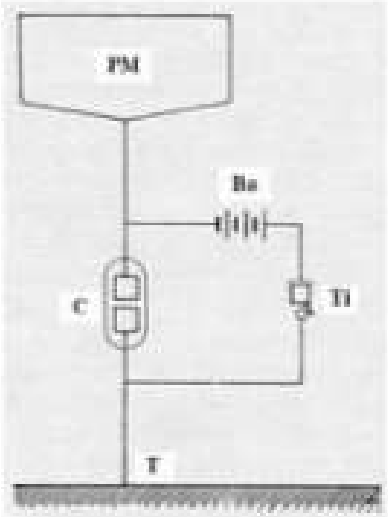
Any RF diodes with junction capacitance less then 1.5pF will be suitable for this application. See the end of this page for a suitable choice.



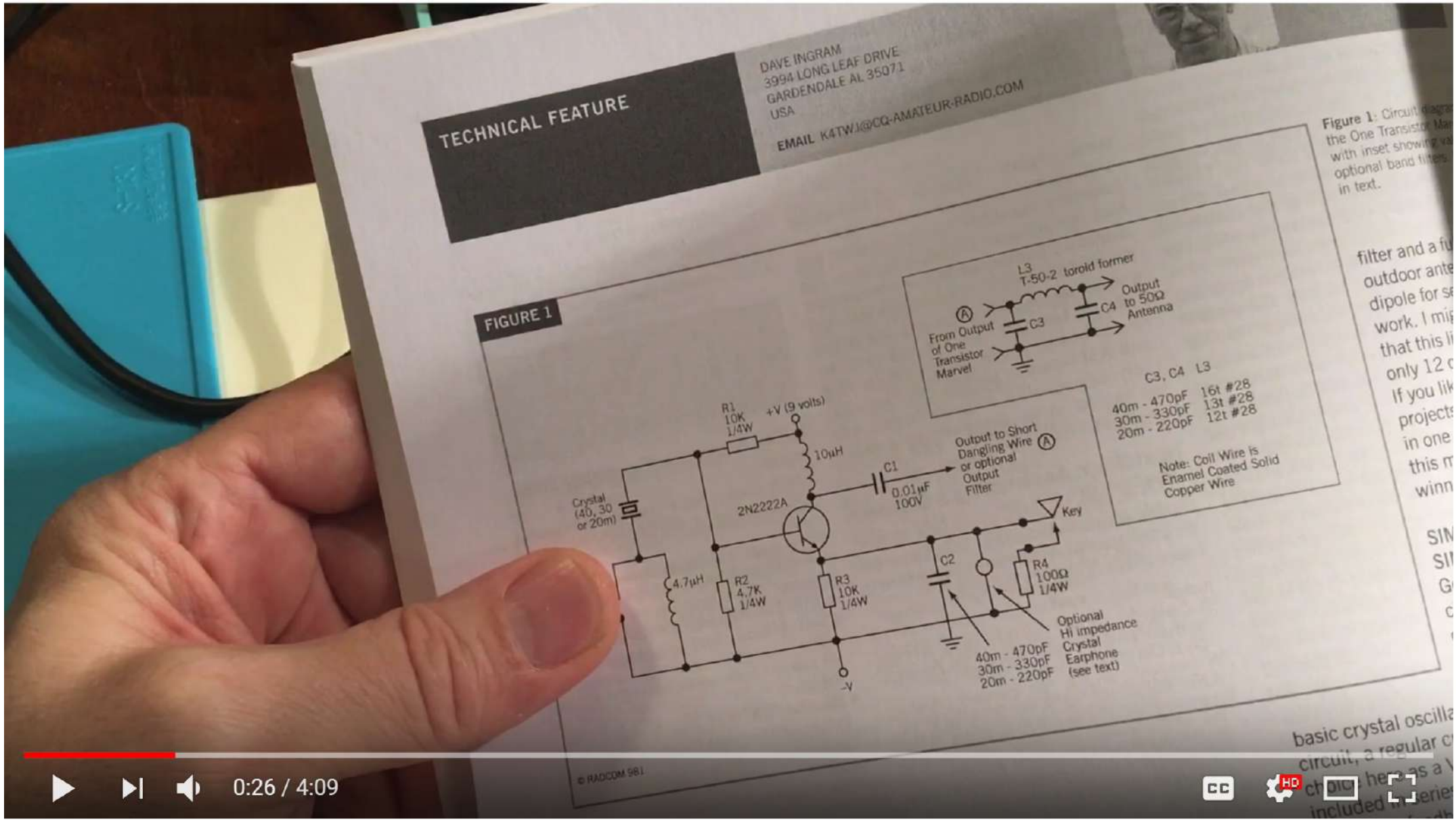


Transmisor Marconi, c. 1895.

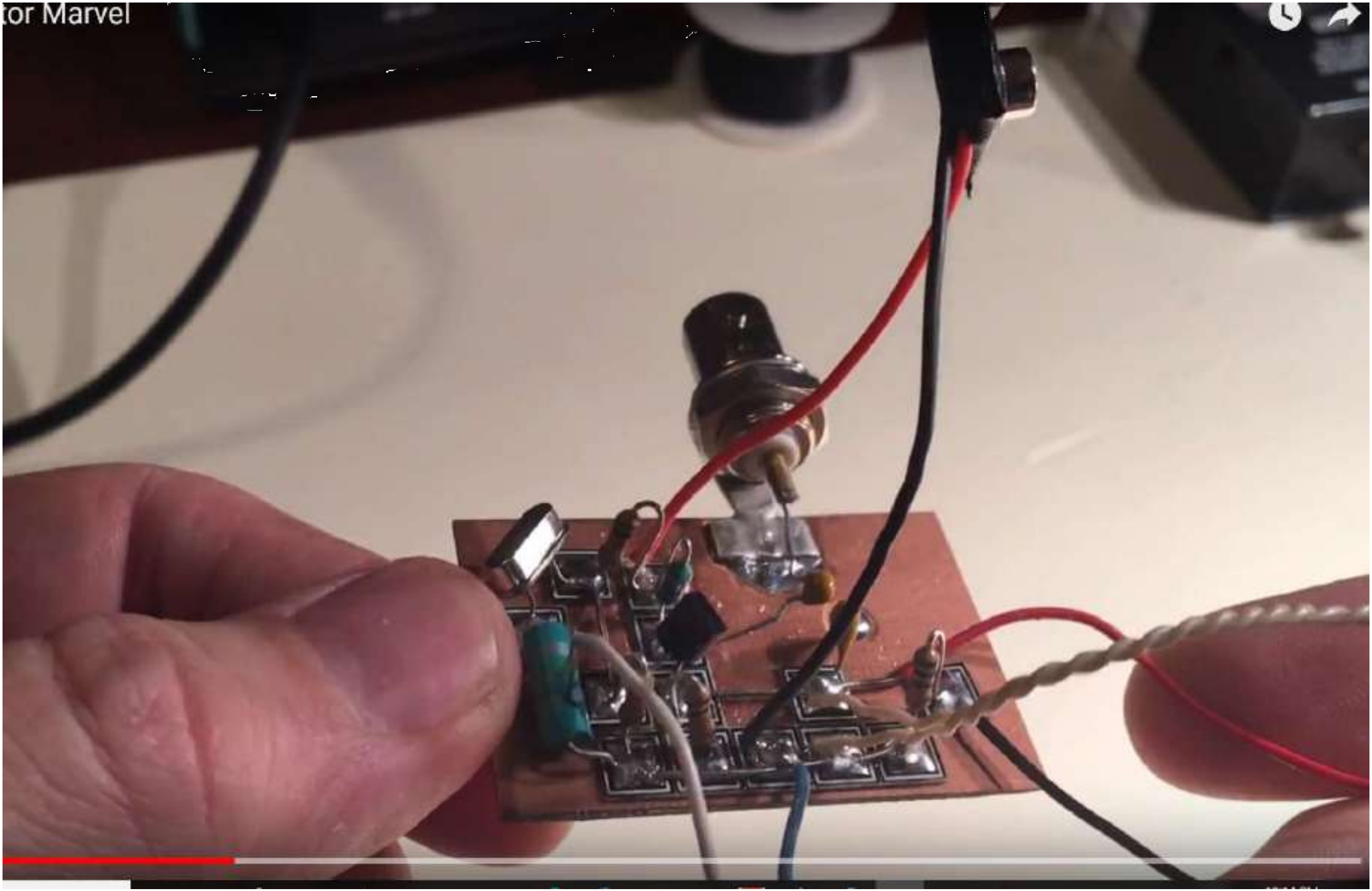


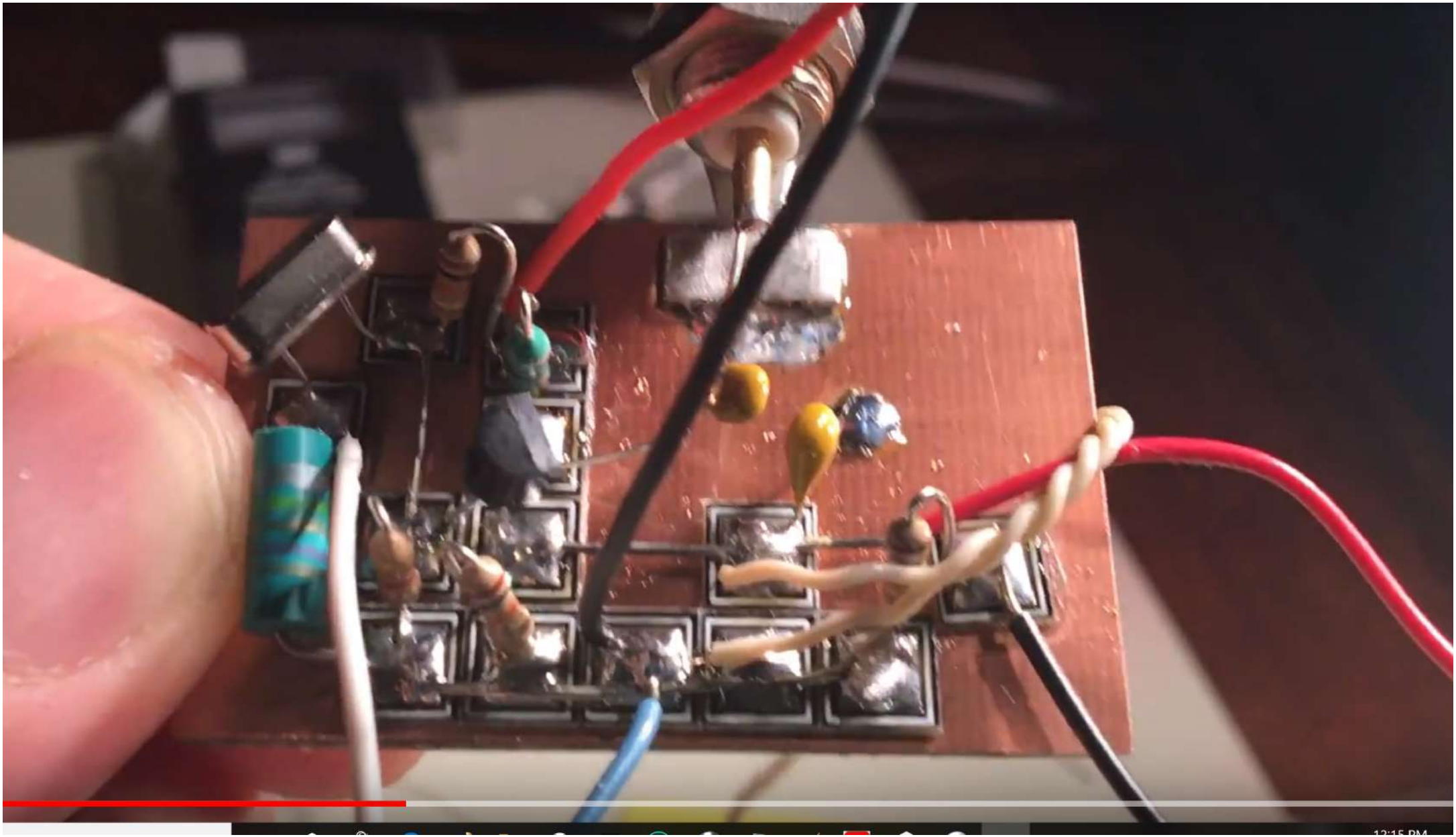


Receptor Marconi, c. 1895.

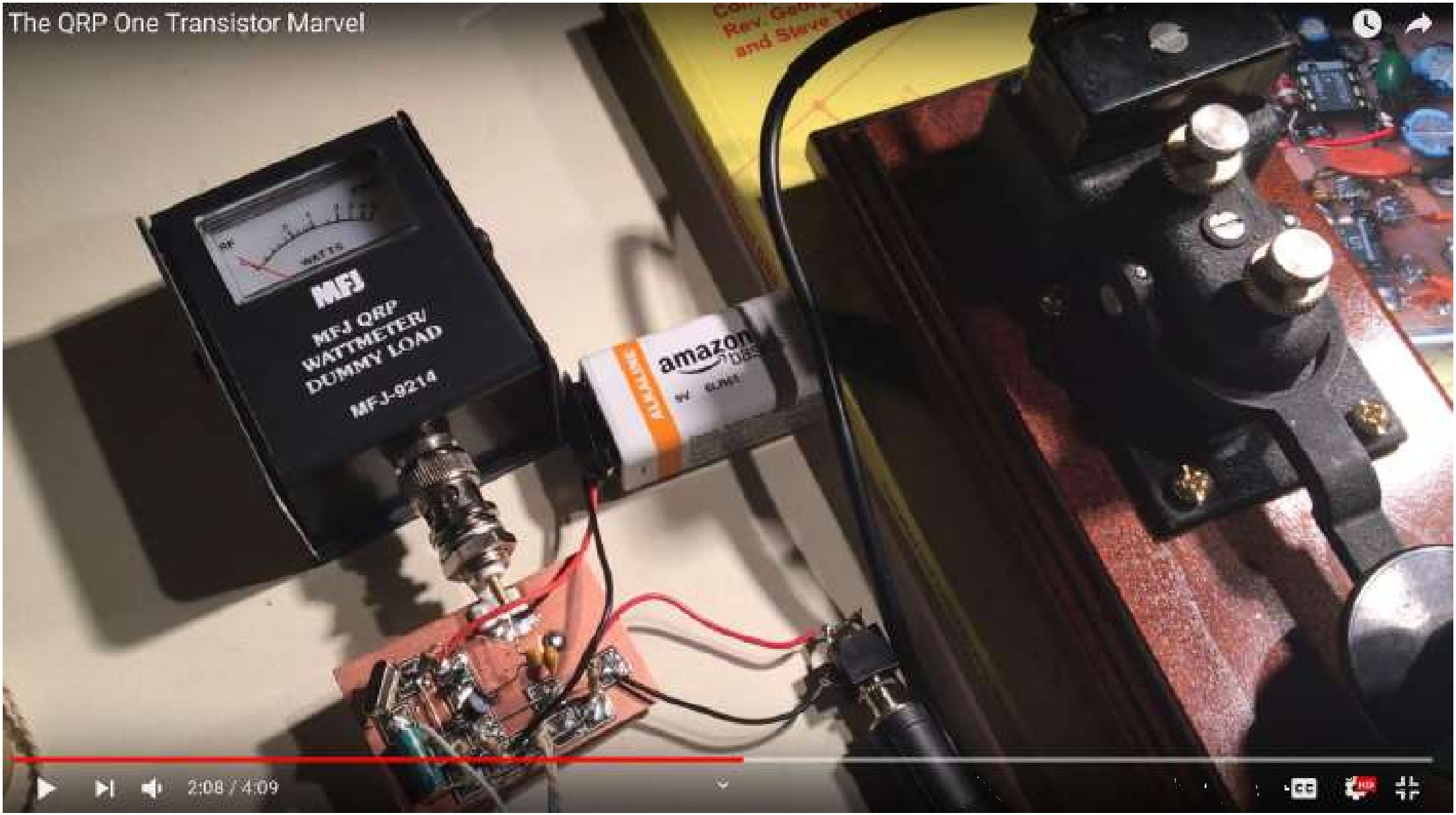


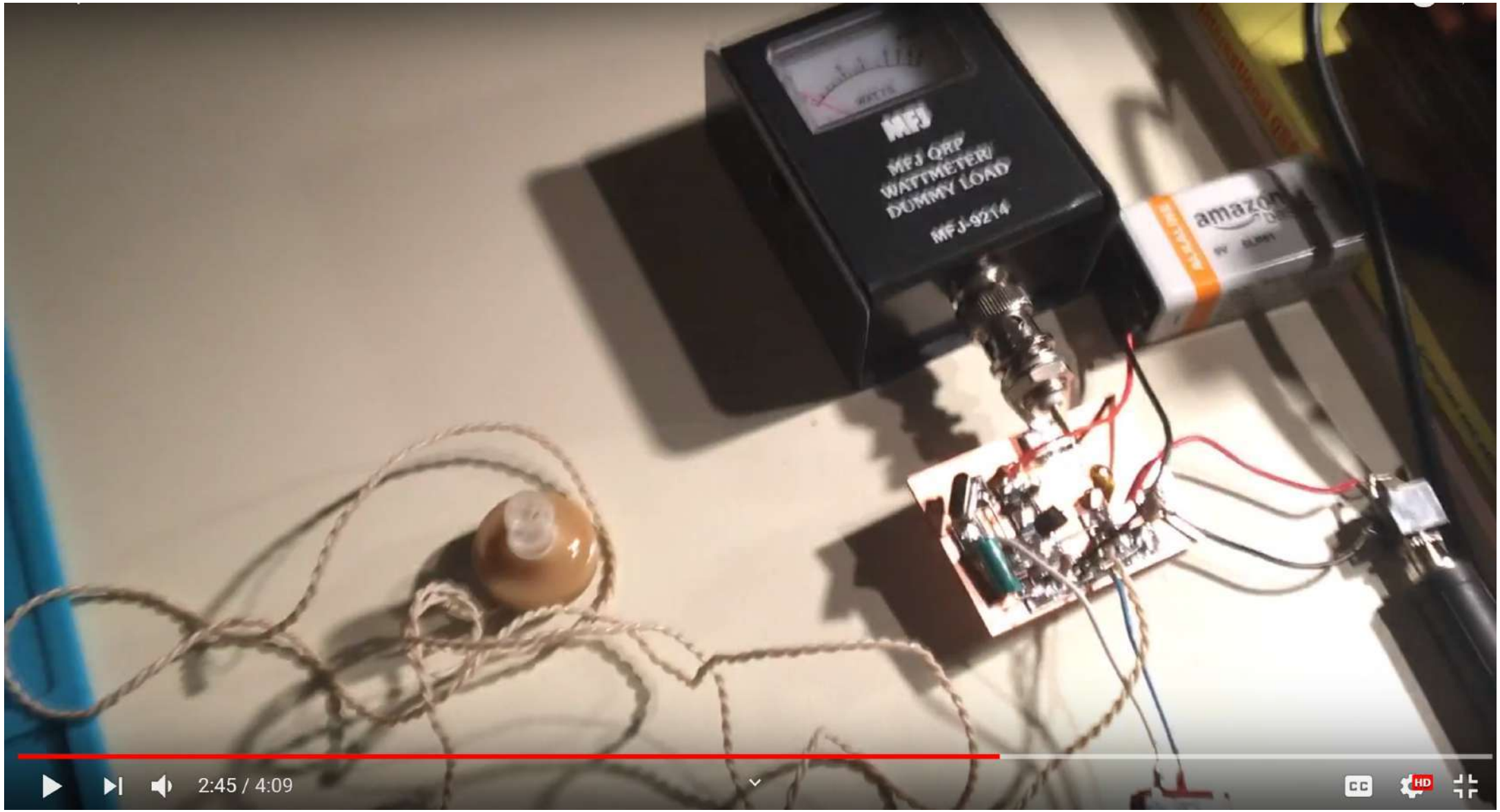
The QRP One Transistor Marvel

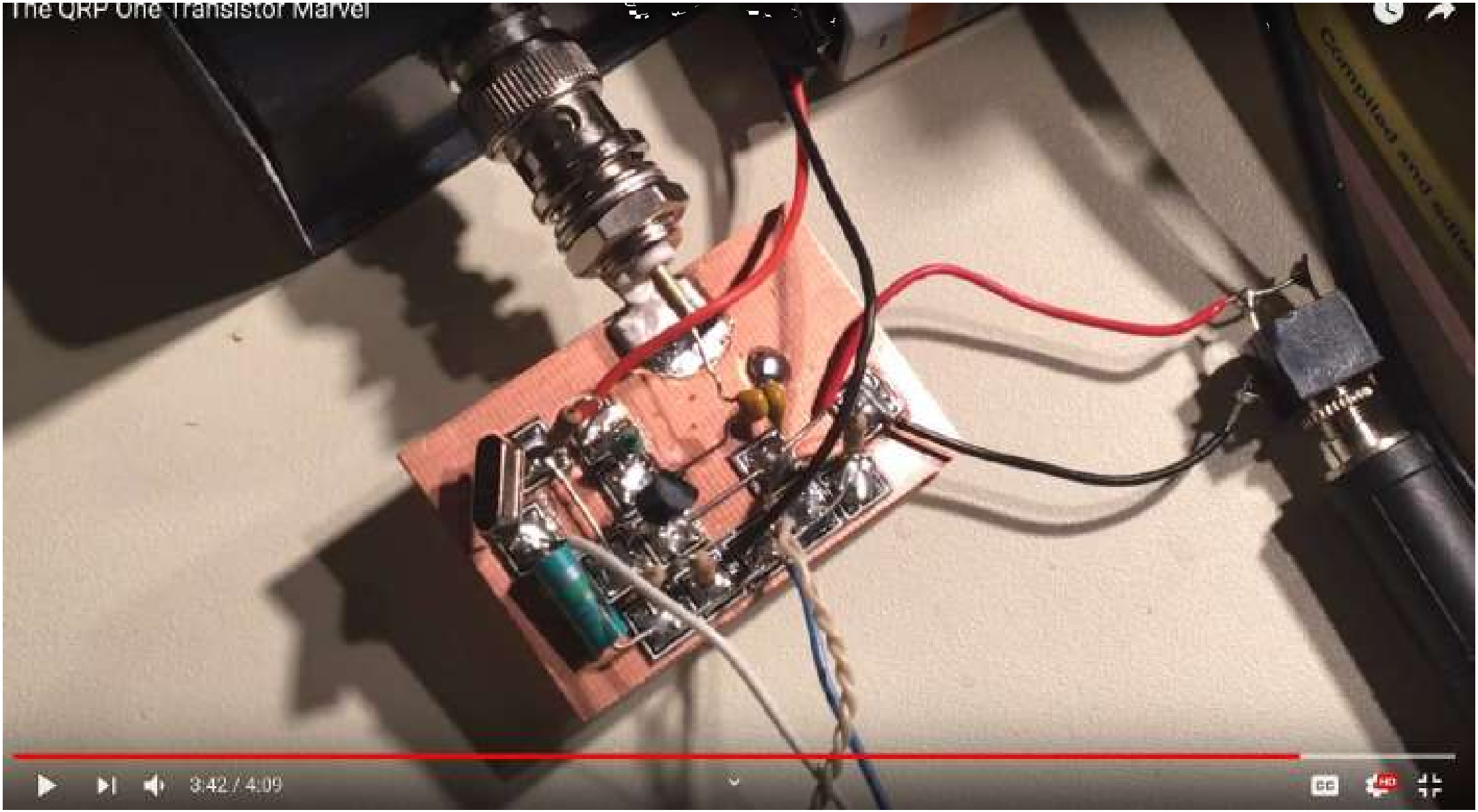

tor Marvel

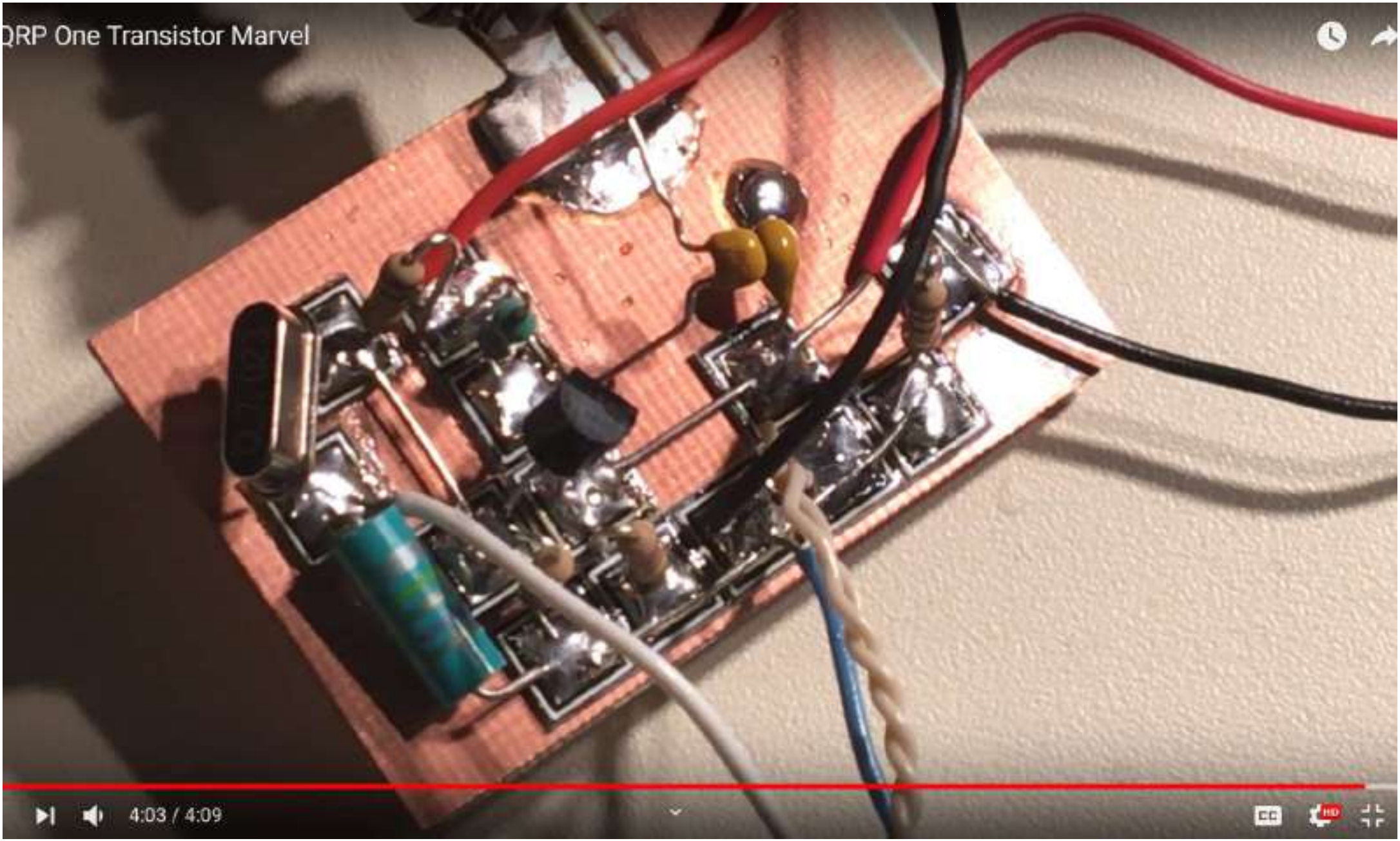





The QRP One Transistor Marvel
MFJ
MFJ QRP
WATTMETER/
DUMMY LOAD
MFJ-9214
amazon
2:08 / 4:09


MFJ
MFJ QRP
WATTMETER/
DUMMY LOAD
MFJ-9214
2:45 / 4:09
CC
HD

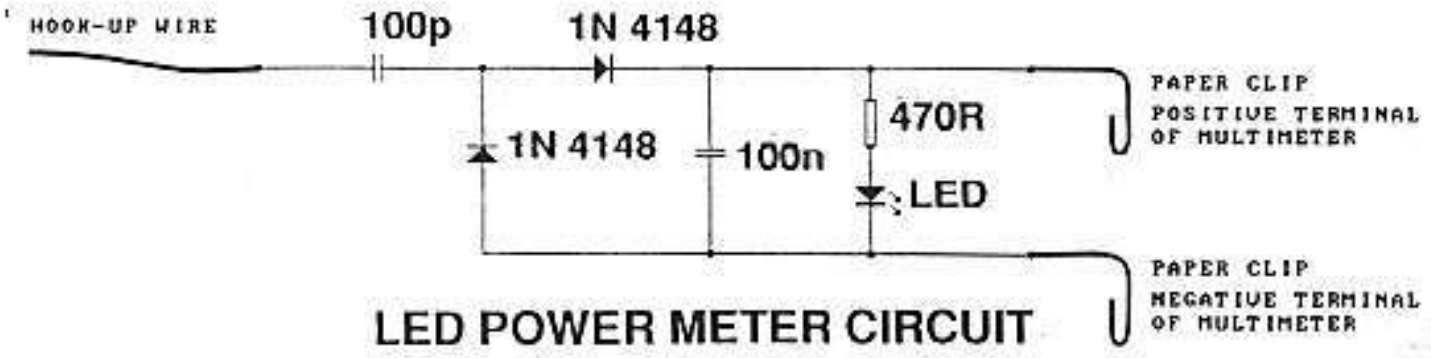

The QRP One Transistor Marvel
3:42 / 4:09

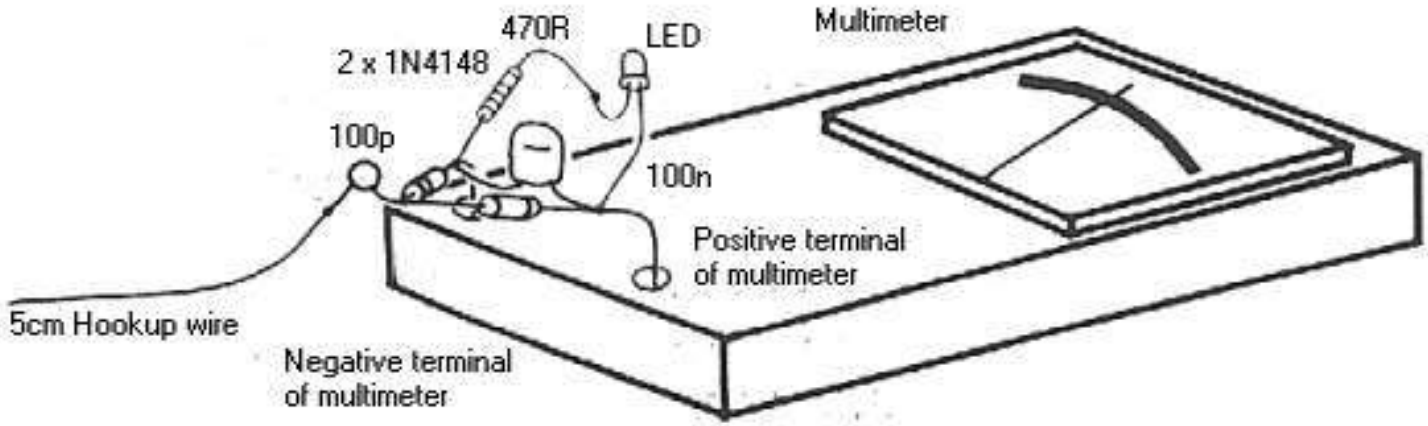

QRP One Transistor Marvel
4:03 / 4:09

What you will need:

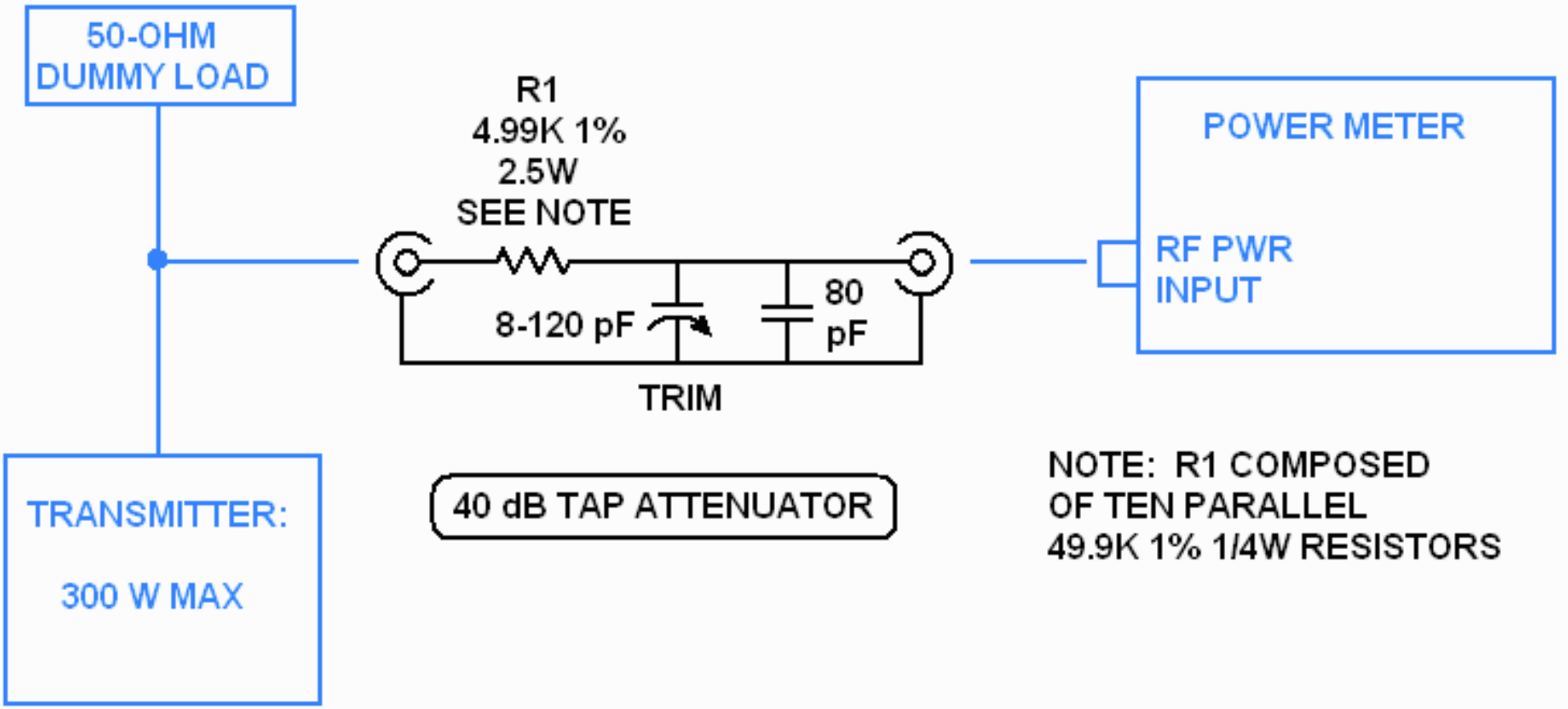
- 1 x 470 ohm resisitor
- 1 x 100p ceramic capacitor
- 1 x 100n greencap capacitor
- 2 x 1N4148 signal diodes
- 1 x 5mm red LED
- 1 x 5cm hook-up wire
- 2 x paper clips

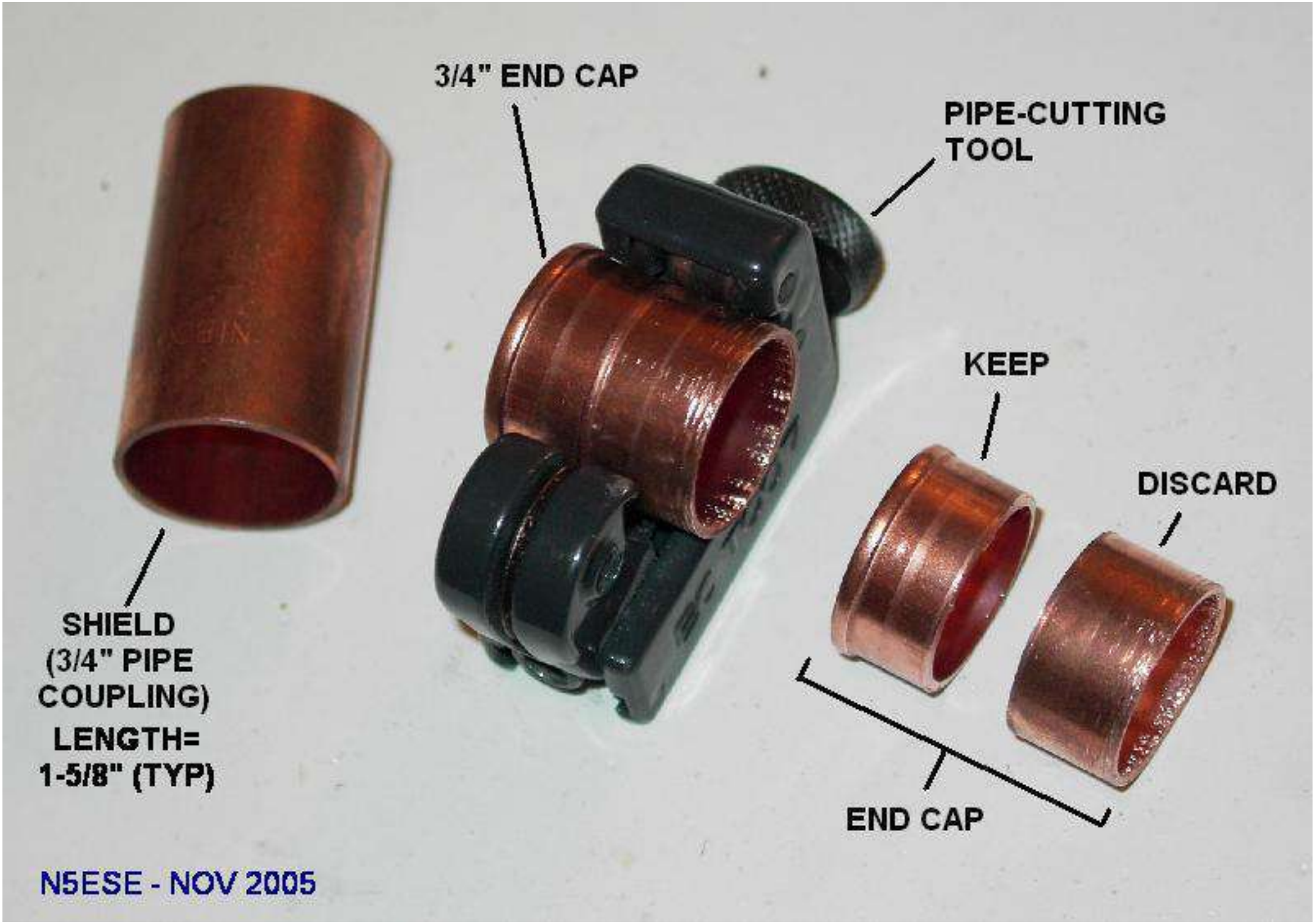
Build the circuit up as shown below:

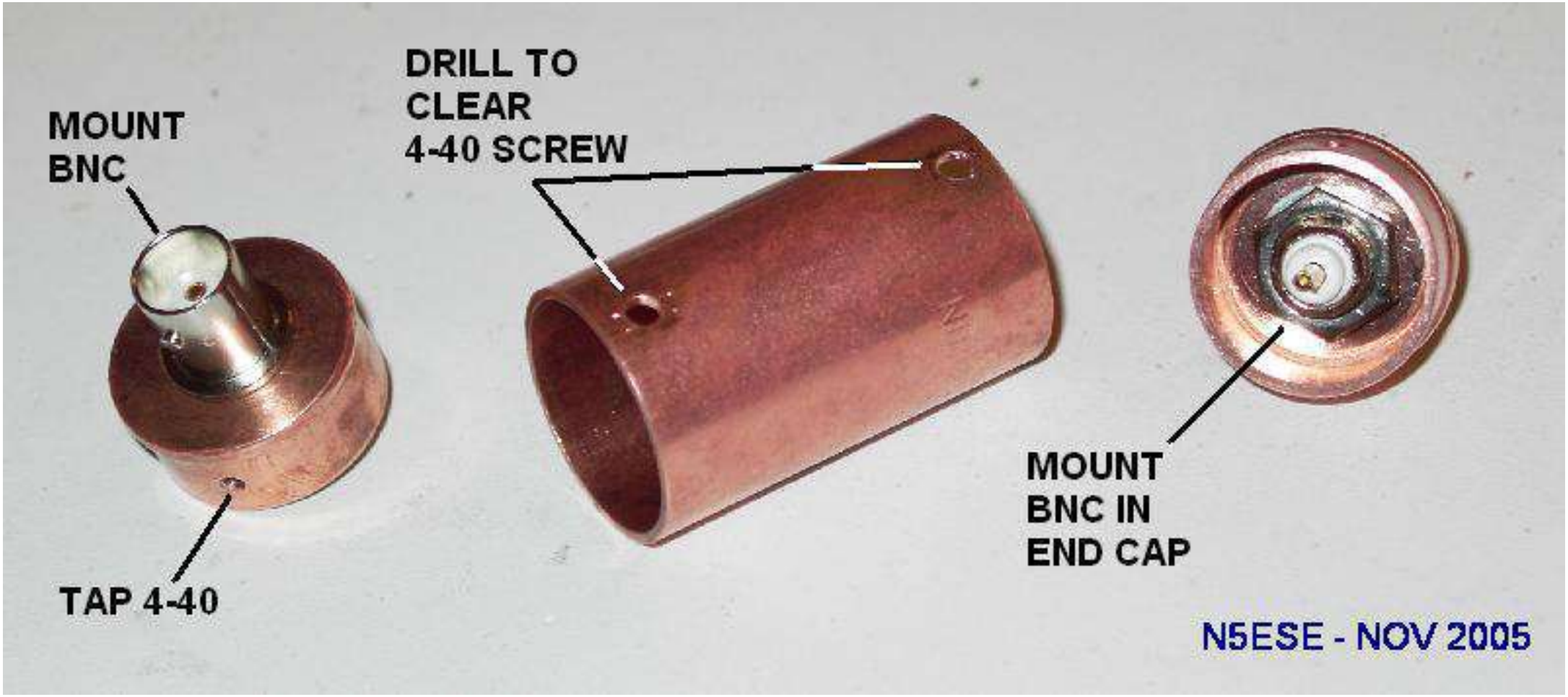


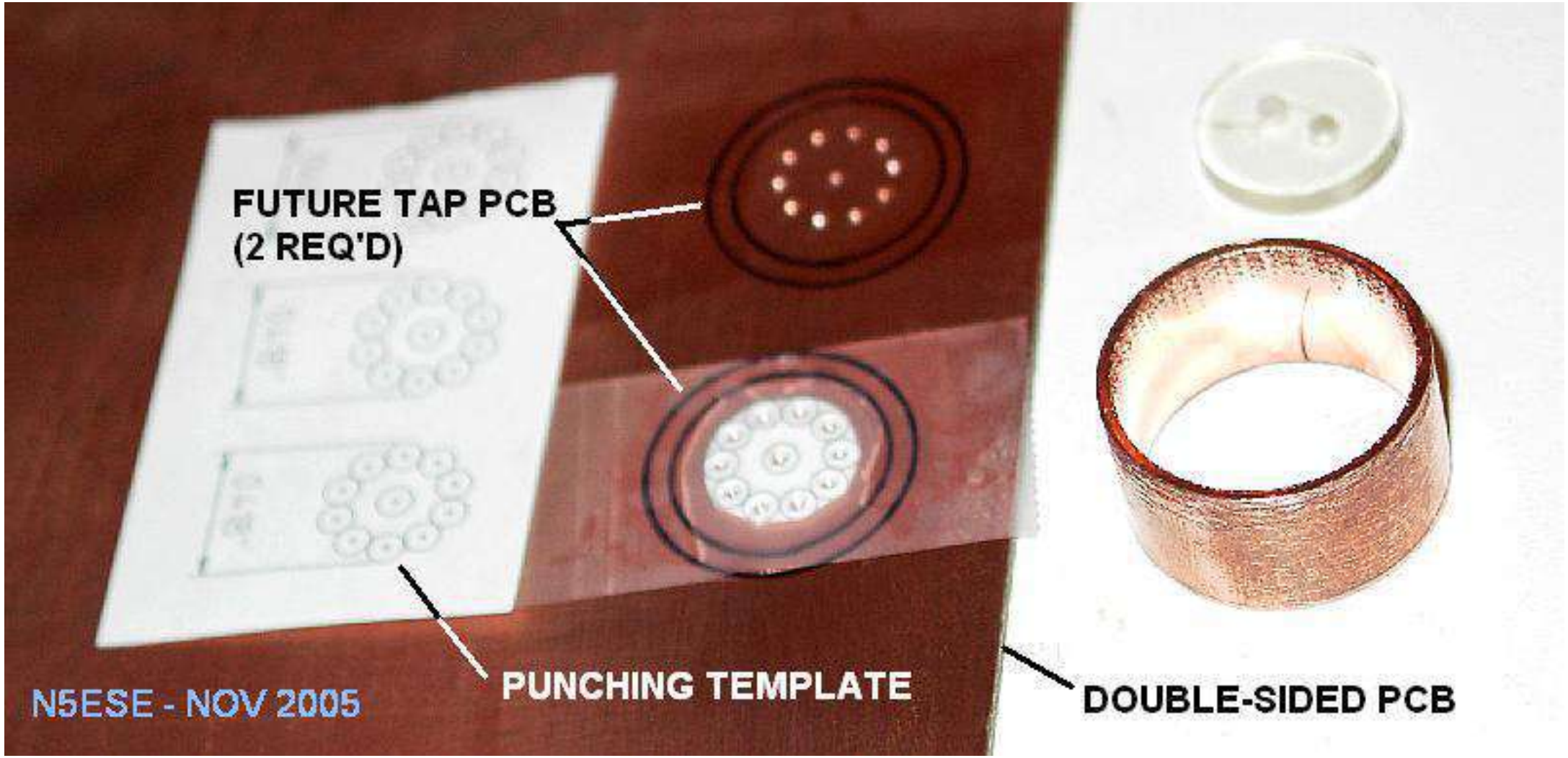


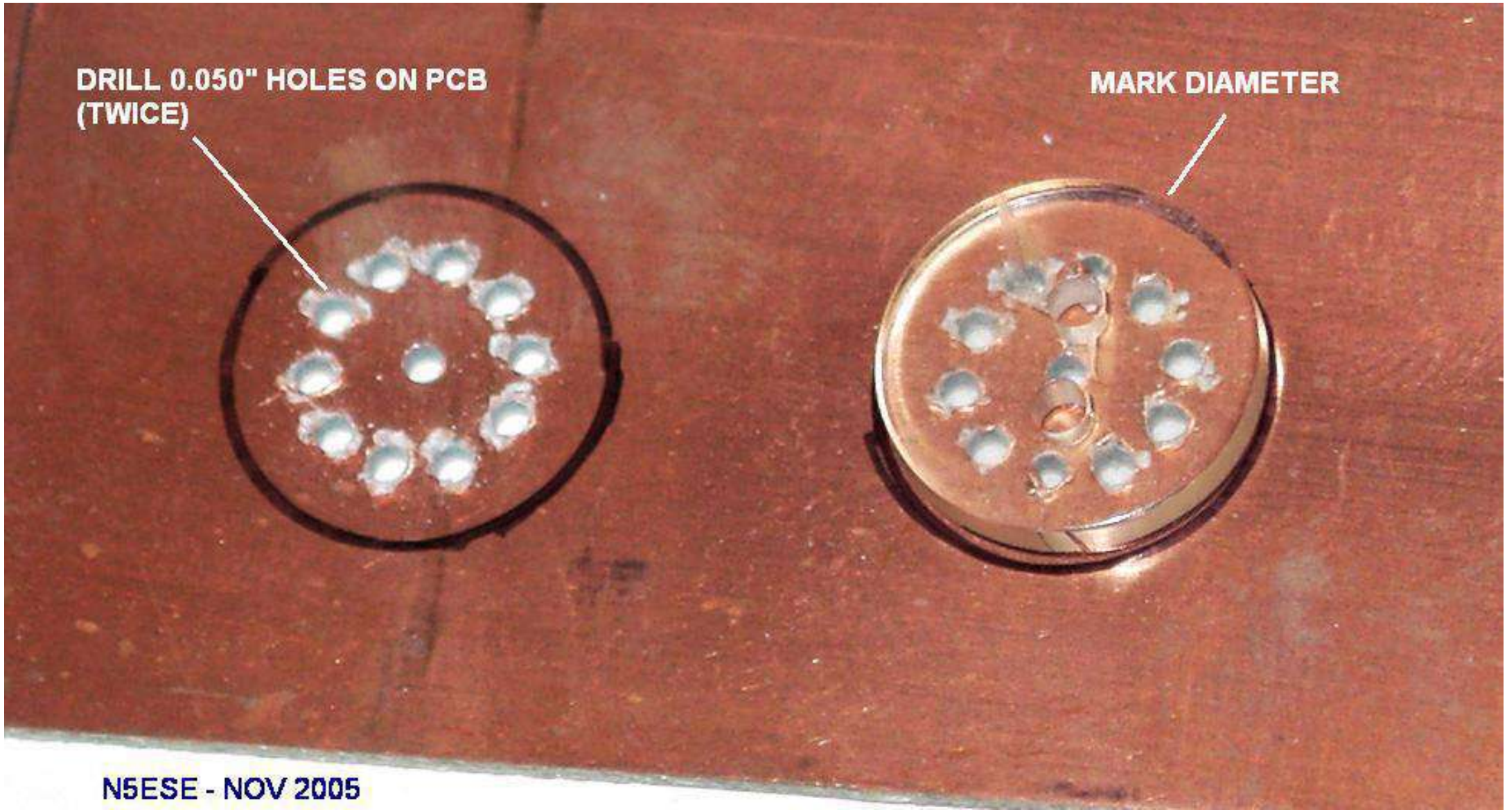

N5ESE - NOV 2005


50-OHM
DUMMY LOAD
R1
4.99K 1%
2.5W
SEE NOTE
8-120 pF
80
pF
TRIM
POWER METER
RF PWR
INPUT
TRANSMITTER:
300 W MAX
40 dB TAP ATTENUATOR
NOTE: R1 COMPOSED
OF TEN PARALLEL
49.9K 1% 1/4W RESISTORS
N5ESE - NOV 2005

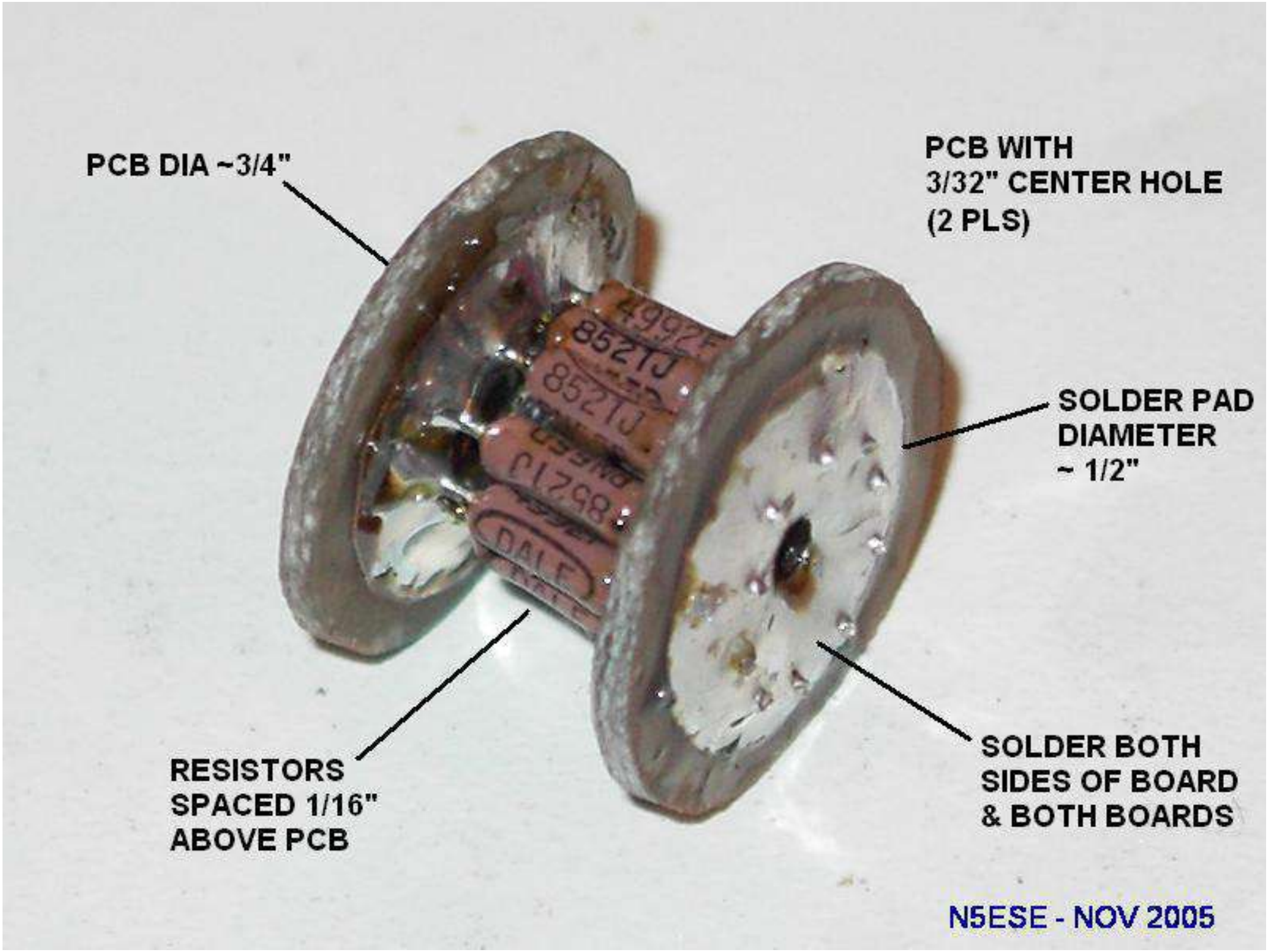

3/4" END CAP
PIPE-CUTTING TOOL
KEEP
DISCARD
SHIELD (3/4" PIPE COUPLING) LENGTH= 1-5/8" (TYP)
END CAP
N5ESE - NOV 2005

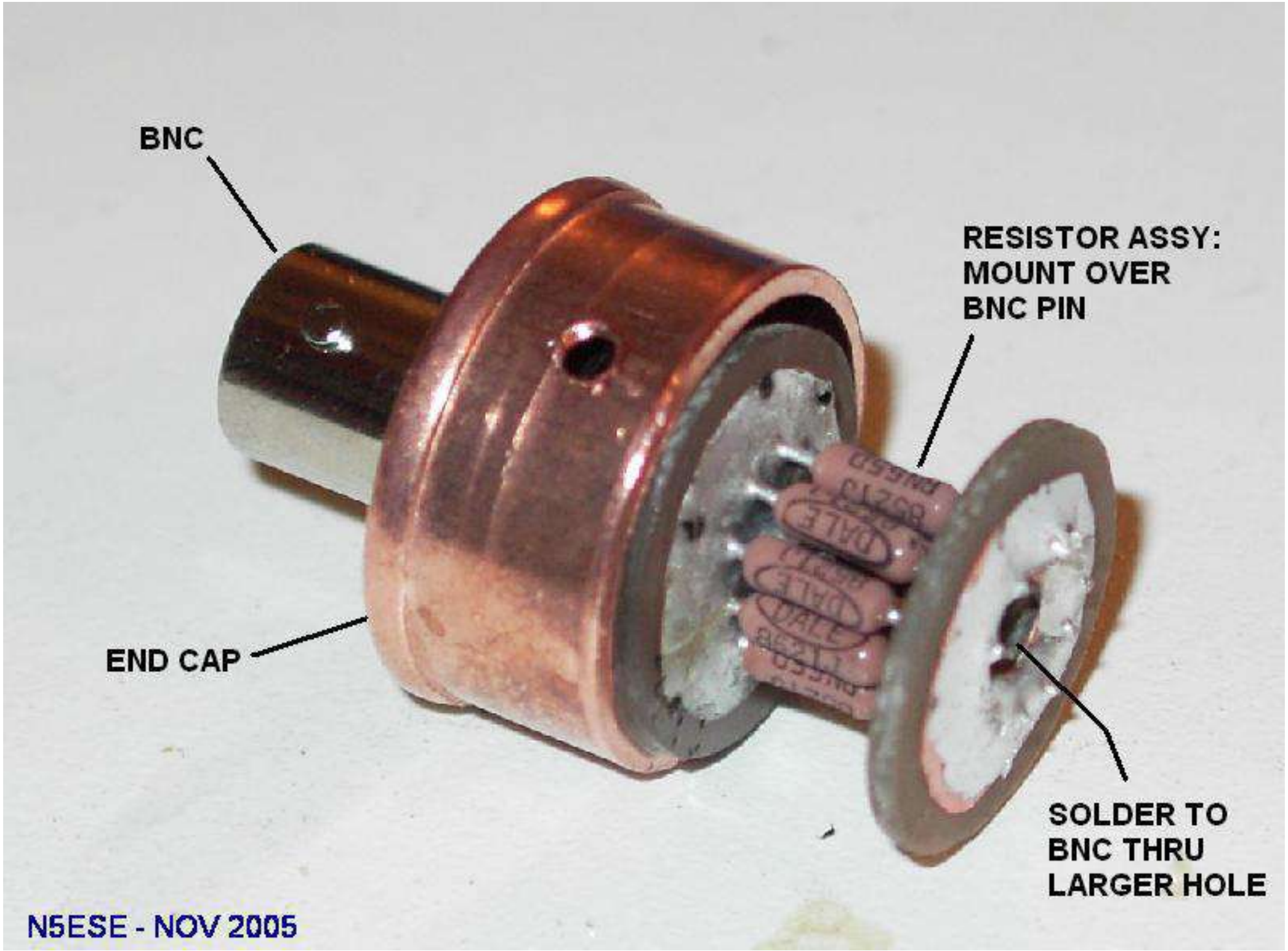

MOUNT
BNC
DRILL TO
CLEAR
4-40 SCREW
MOUNT
BNC IN
END CAP
TAP 4-40
N5ESE - NOV 2005

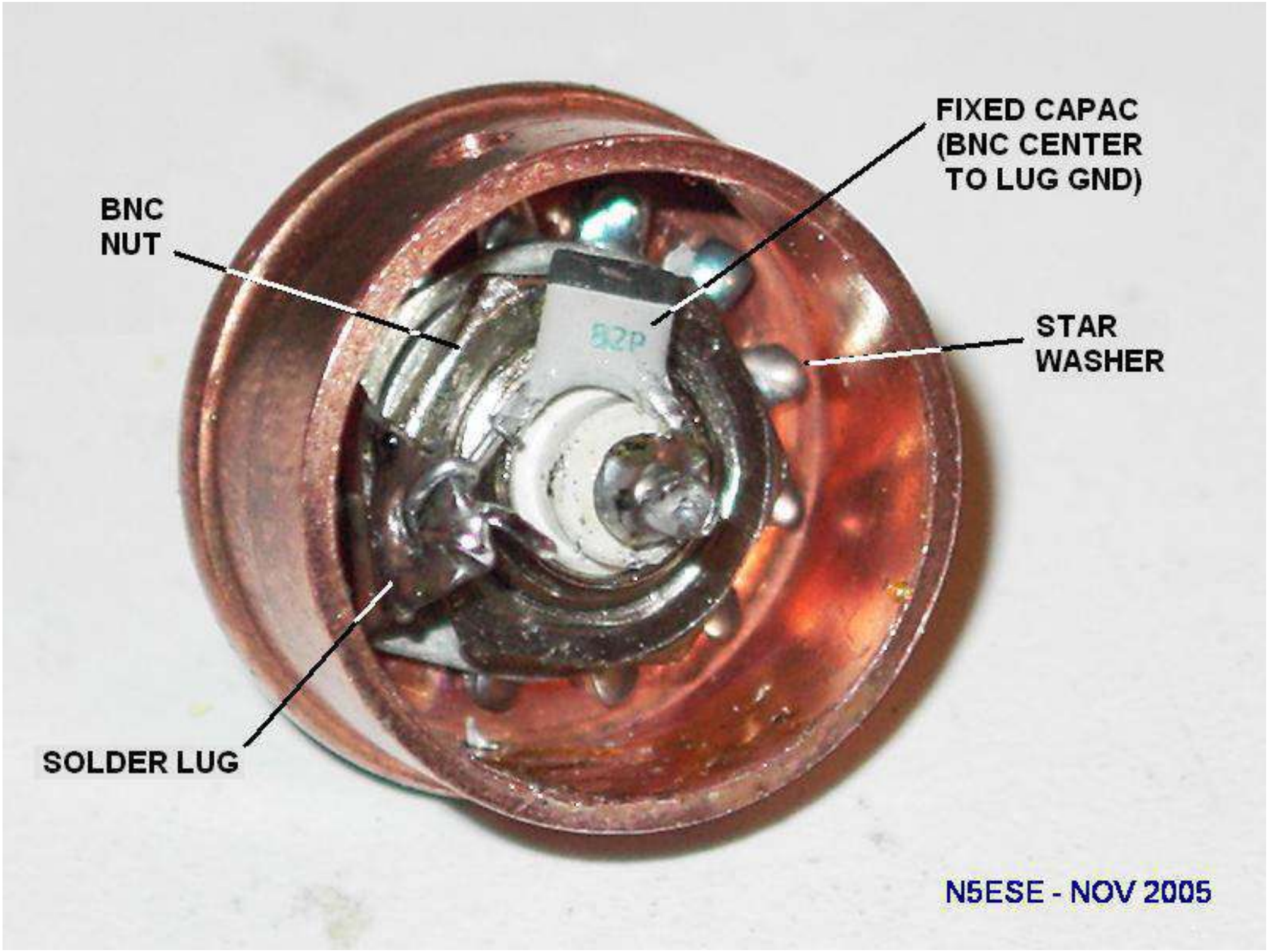

FUTURE TAP PCB
(2 REQ'D)
PUNCHING TEMPLATE
DOUBLE-SIDED PCB
N5ESE - NOV 2005

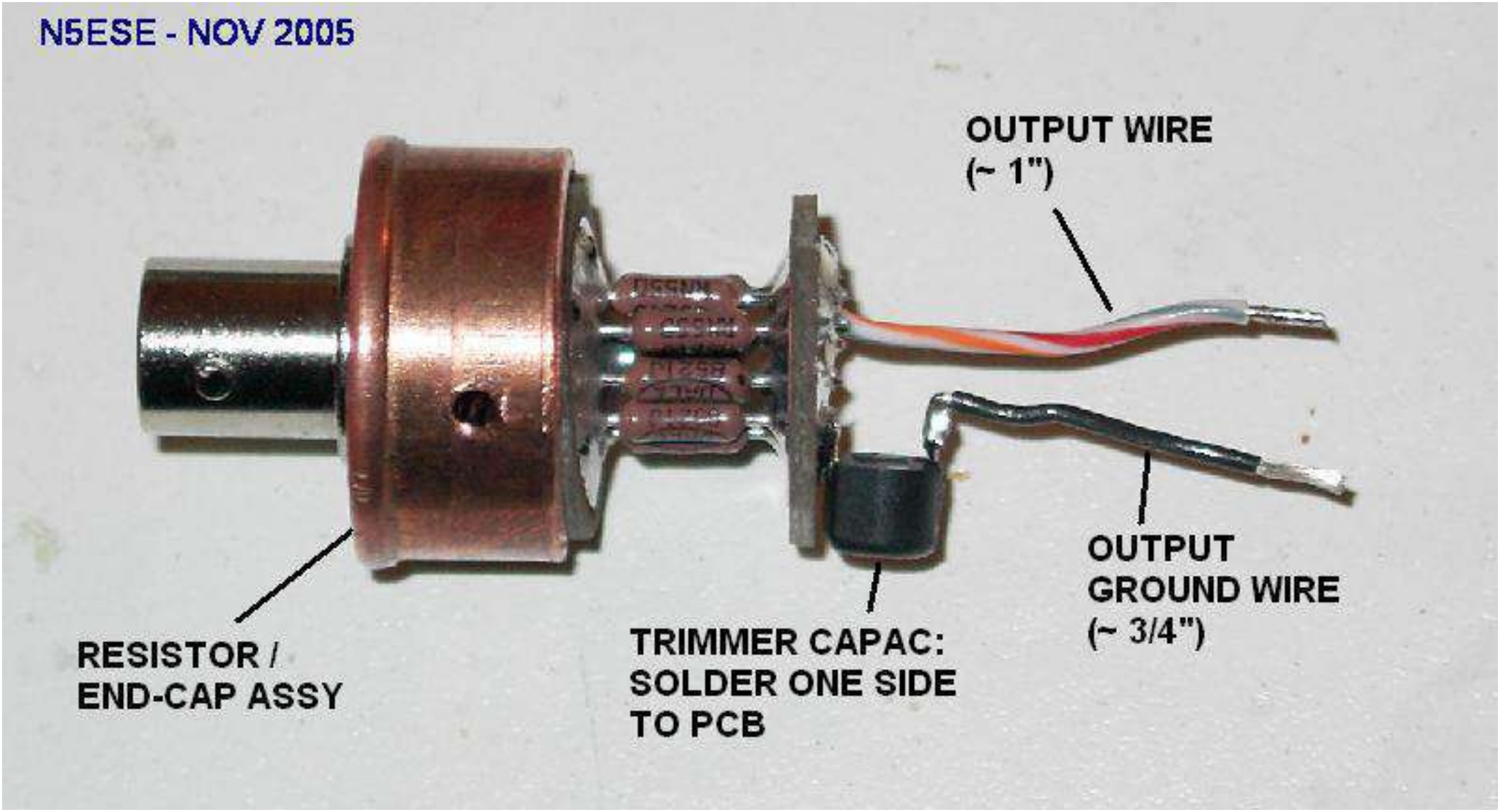

DRILL 0.050" HOLES ON PCB
(TWICE)
MARK DIAMETER
N5ESE - NOV 2005


#186
Flux-Pen
ROSIN FLUX, TYPE RMA
CODE SYMBOL 75297, QPL #14256-528-90
Do not take internally.
KEEP OUT OF REACH OF
CHILDREN BEFORE USING
CUT, CLEAN,
AND FLUX
PCB (BOTH SIDES)
REMOVE COPPER
AROUND EDGE
(BOTH SIDES)
N5ESE - NOV 2005


PCB DIA ~3/4"
PCB WITH
3/32" CENTER HOLE
(2 PLS)
SOLDER PAD
DIAMETER
~ 1/2"
RESISTORS
SPACED 1/16"
ABOVE PCB
SOLDER BOTH
SIDES OF BOARD
& BOTH BOARDS
N5ESE - NOV 2005

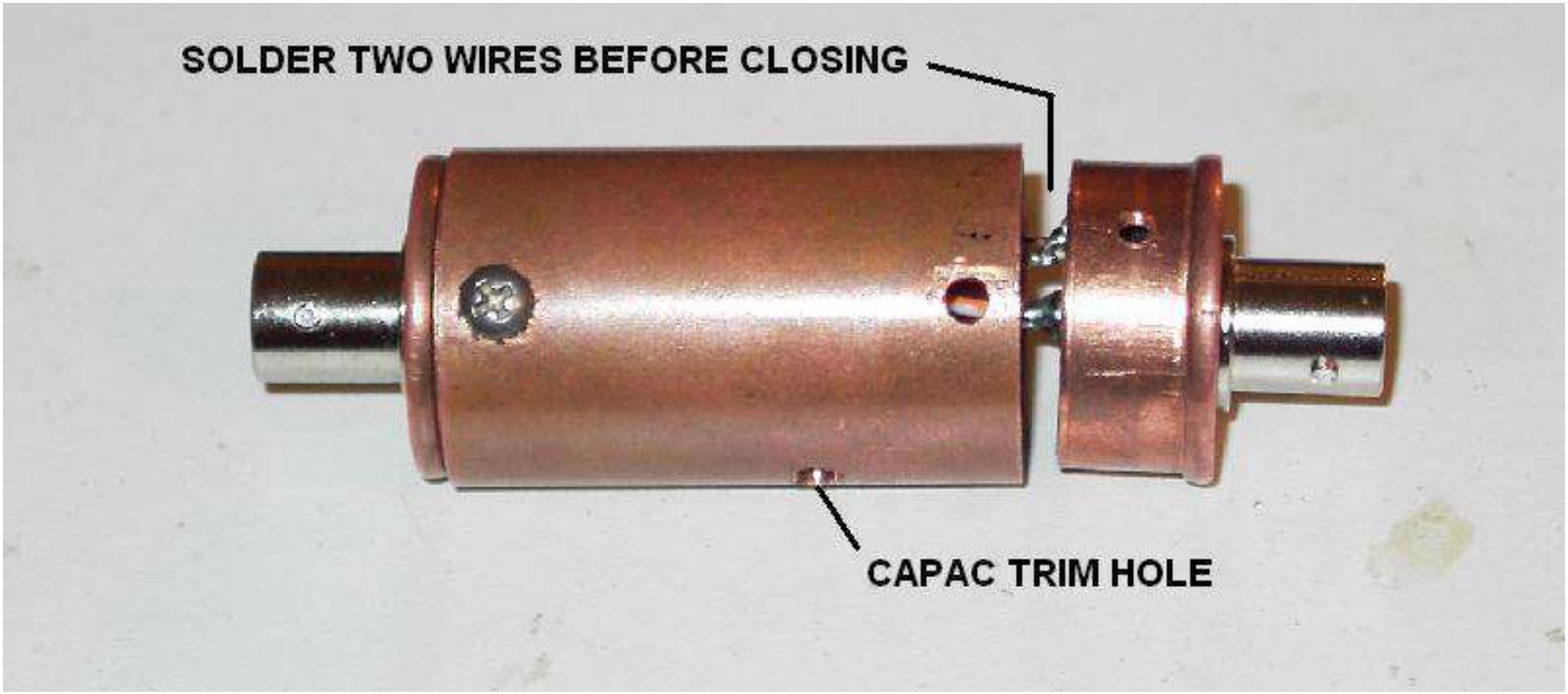

BNC
RESISTOR ASSY:
MOUNT OVER
BNC PIN
END CAP
SOLDER TO
BNC THRU
LARGER HOLE
N5ESE - NOV 2005


FIXED CAPAC
(BNC CENTER
TO LUG GND)
BNC
NUT
STAR
WASHER
SOLDER LUG
N5ESE - NOV 2005

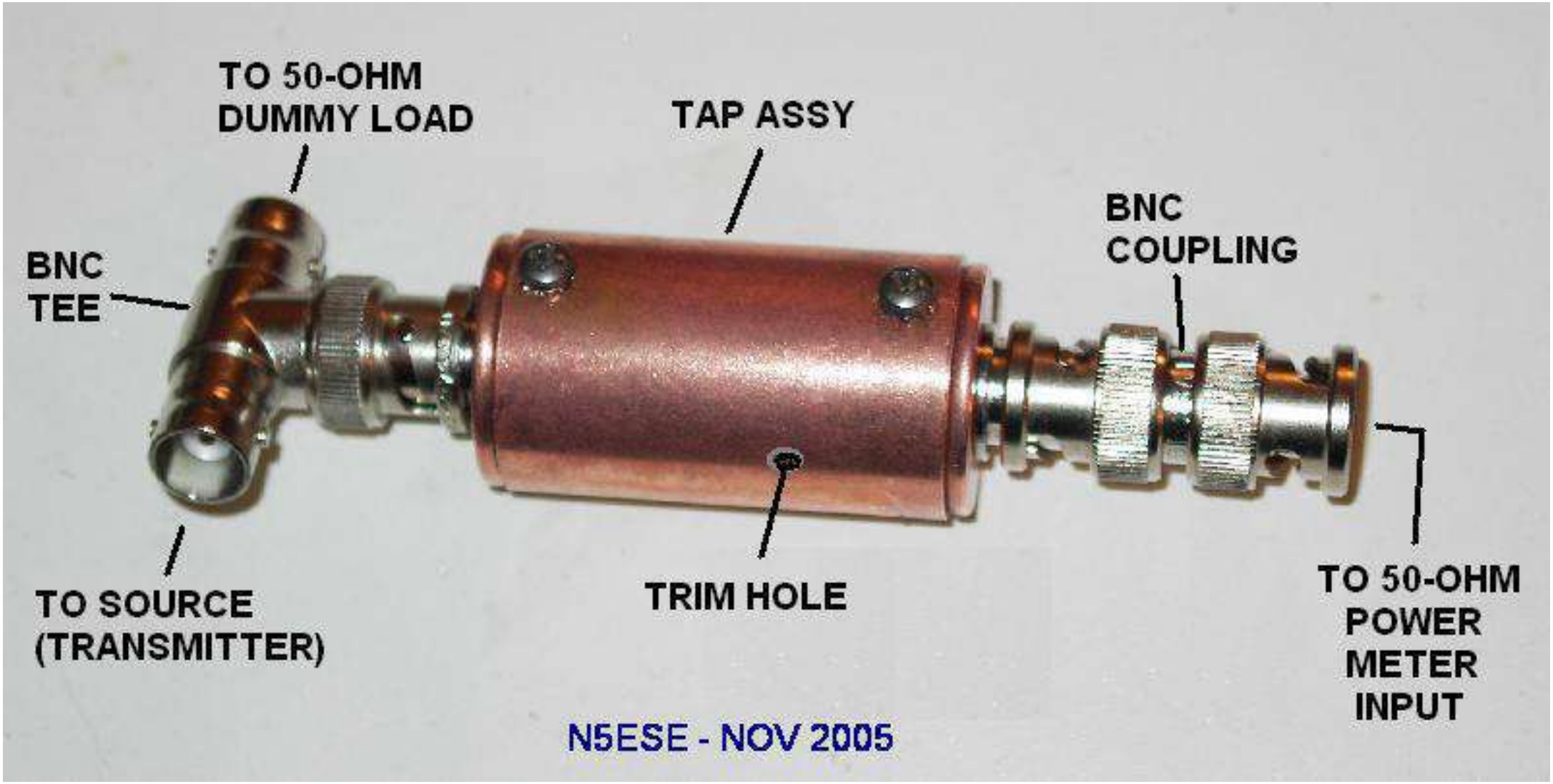

N5ESE - NOV 2005
OUTPUT WIRE
(~ 1")
OUTPUT
GROUND WIRE
(~ 3/4")
RESISTOR /
END-CAP ASSY
TRIMMER CAPAC:
SOLDER ONE SIDE
TO PCB

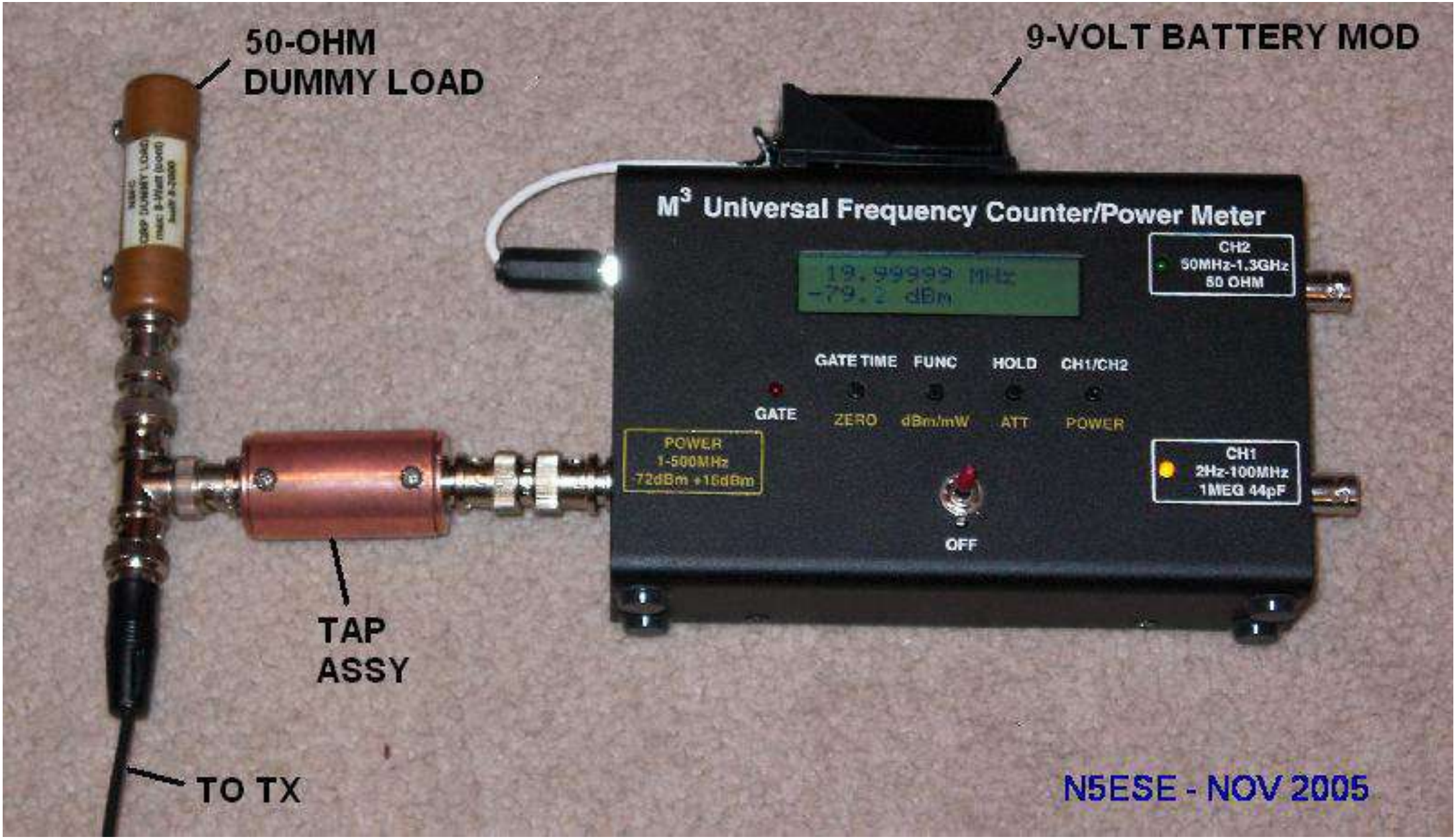
N5ESE - NOV 2005



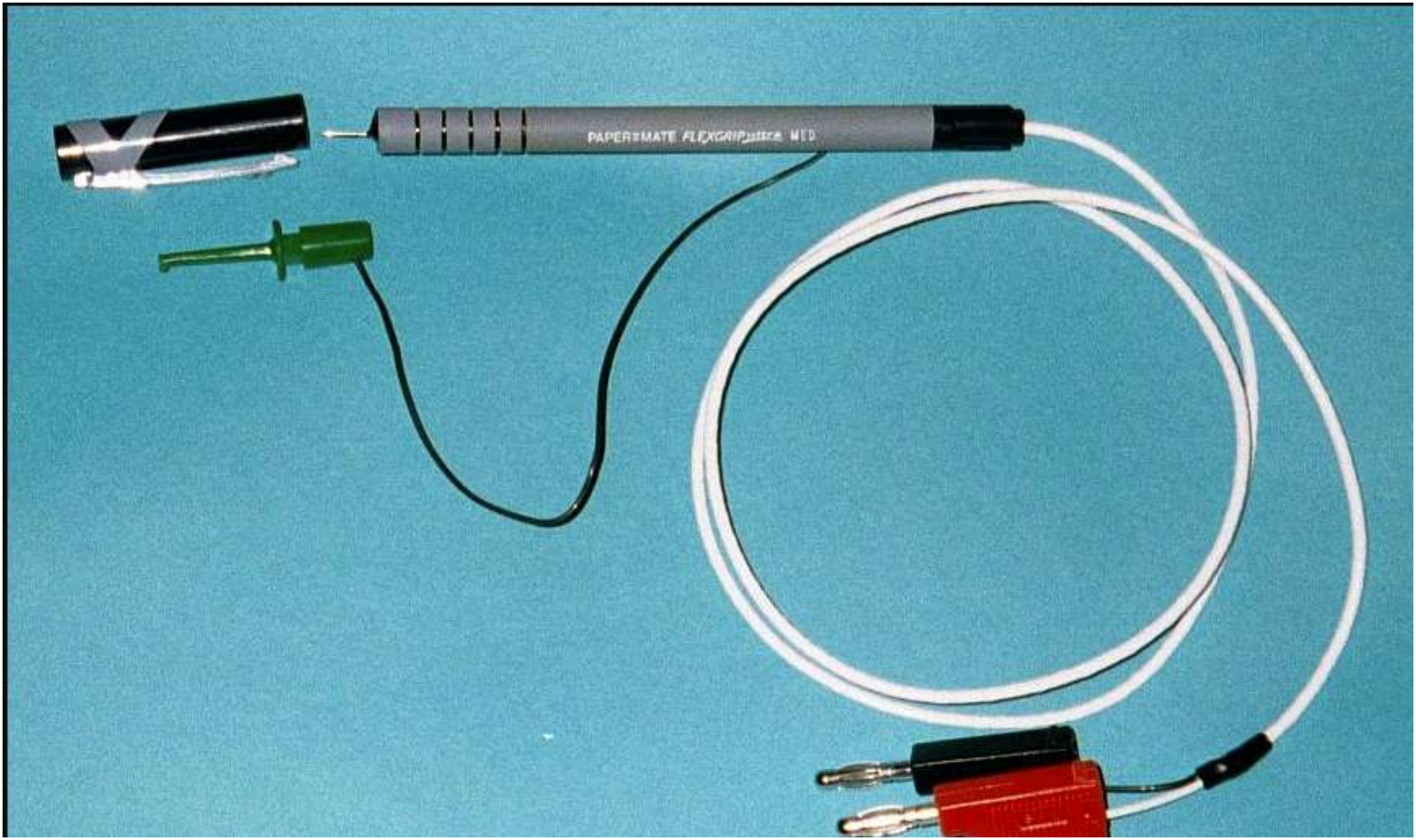

SOLDER TWO WIRES BEFORE CLOSING
CAPAC TRIM HOLE


4-40 SCREWS
HI-POWER SIDE (TO TX AND 50-OHM LOAD)
LOW-POWER SIDE (TO 50-OHM INPUT)
TRIM
N5ESE - NOV 2005

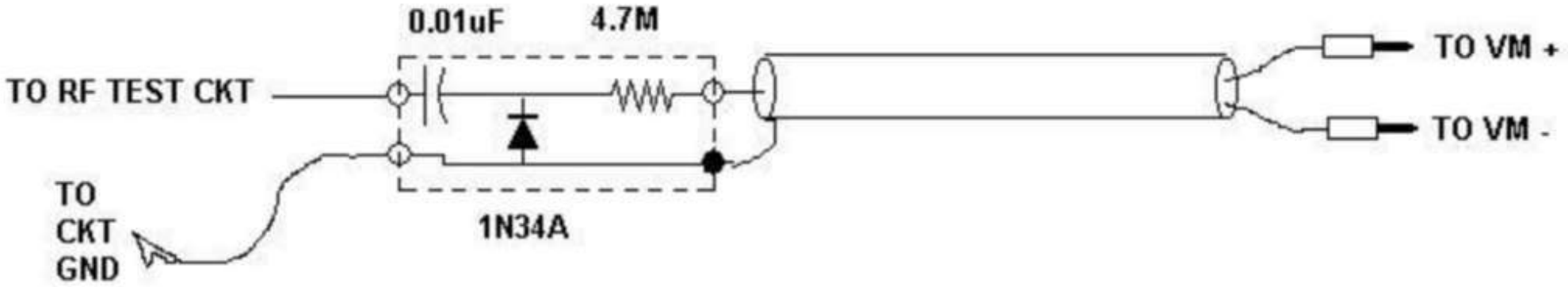

TO 50-OHM
DUMMY LOAD
TAP ASSY
BNC
TEE
BNC
COUPLING
TO SOURCE
(TRANSMITTER)
TRIM HOLE
TO 50-OHM
POWER
METER
INPUT
N5ESE - NOV 2005


50-OHM
DUMMY LOAD
9-VOLT BATTERY MOD
M3 Universal Frequency Counter/Power Meter
19.99999 MHz
-79.2 dBm
CH2
50MHz-1.3GHz
50 OHM
GATE TIME
FUNC
HOLD
CH1/CH2
GATE
ZERO
dBm/mW
ATT
POWER
POWER
1-500MHz
72dBm +15dBm
CH1
2Hz-100MHz
1MEG 44pF
OFF
TAP
ASSY
TO TX
N5ESE - NOV 2005


M3 Universal Frequency Counter/Power Meter
7.040000 MHz
5.01 W ATT
CH2
50MHz-1.3GHz
50 OHM
GATE TIME
FUNC
HOLD
CH1/CH2
GATE
ZERO
dBm/mW
ATT
POWER
POWER
1-500MHz
-72dBm +16dBm
CH1
2Hz-100MHz
1MEG 44pF
OFF
ELECRAFT K2 TRANSCEIVER
7040.00c
BAND+
DISPLAY
RCL
RF/ALC
BAND-
ANT 1/2
STORE
TUNE
MENU
NB
EDIT
LEVEL
KEYER
POWER
AF GAIN
RF GAIN
RATE
LOCK
MODE
A/B
A=B
VOX
REV
SPLIT
PRE/ATT
AGC
XFIL
SPOT
GW RV
AFIL
RIT
XIT
MSG
PF1
PF2
REC
ON
OFF

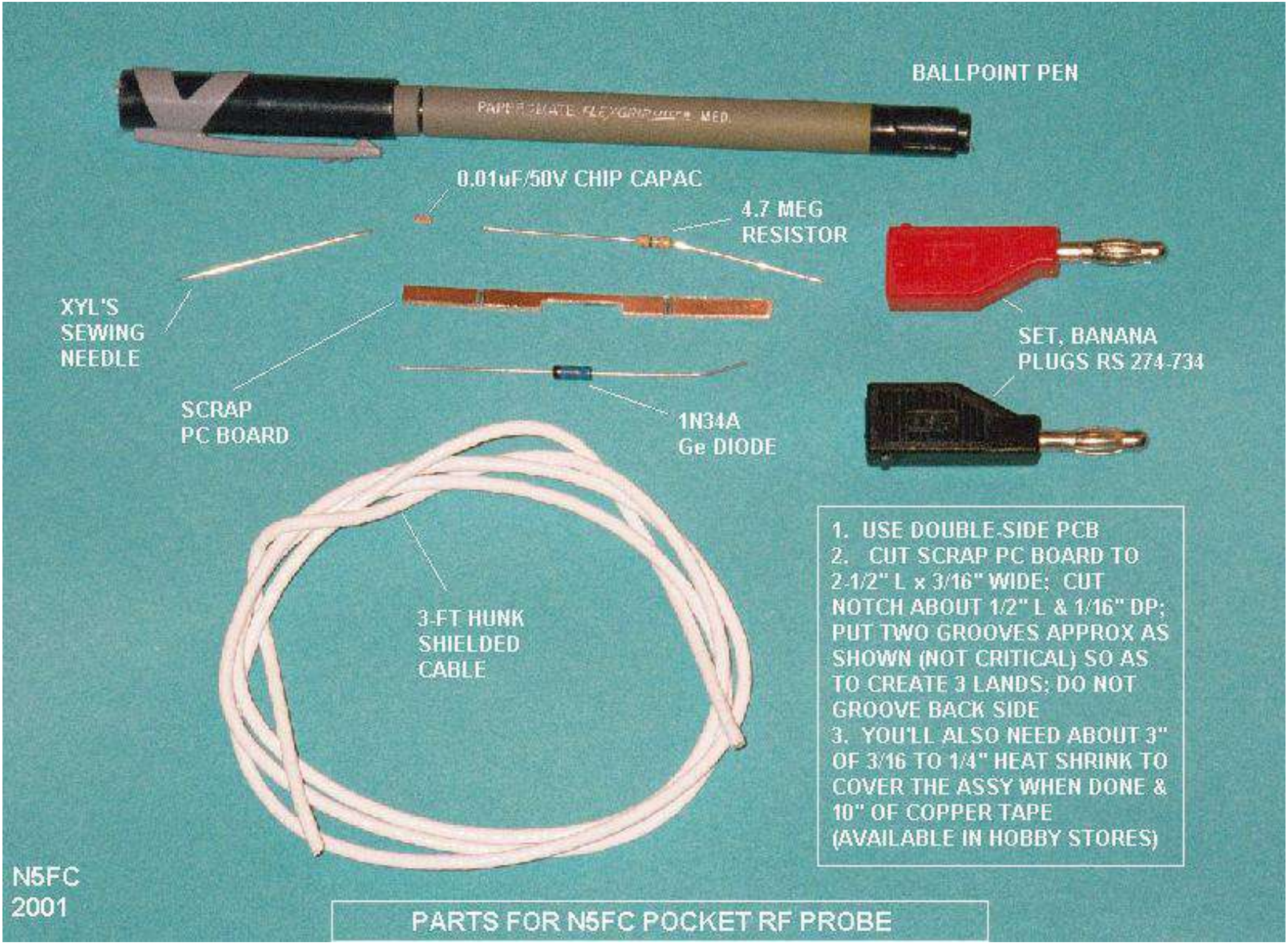

PAPER-MATE FLEXGRIP

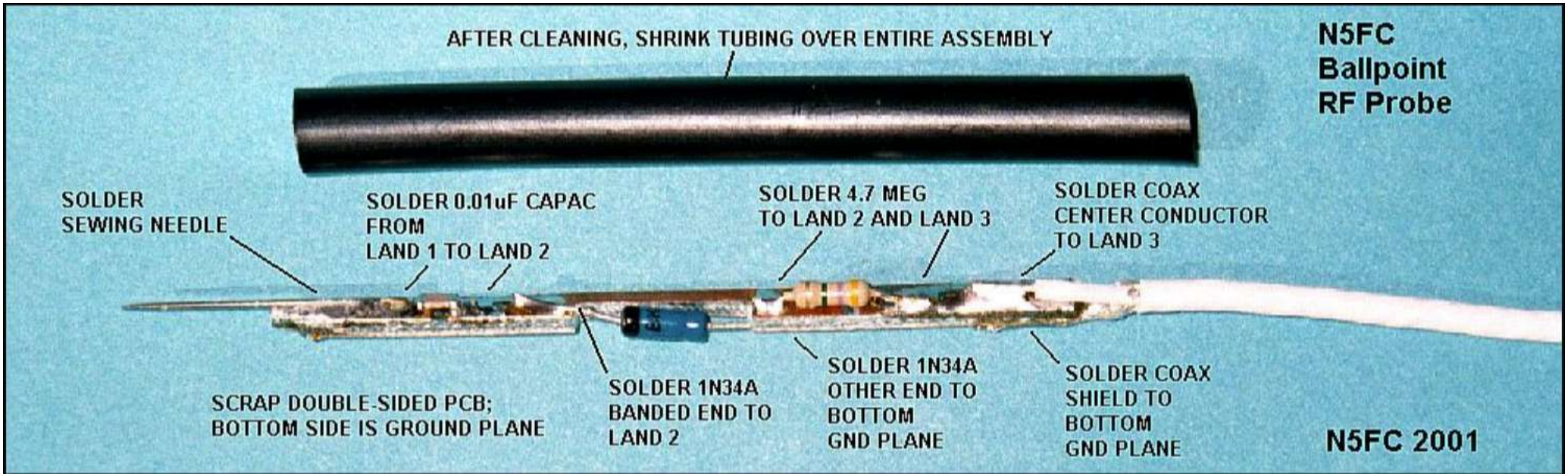
N5FC 2001

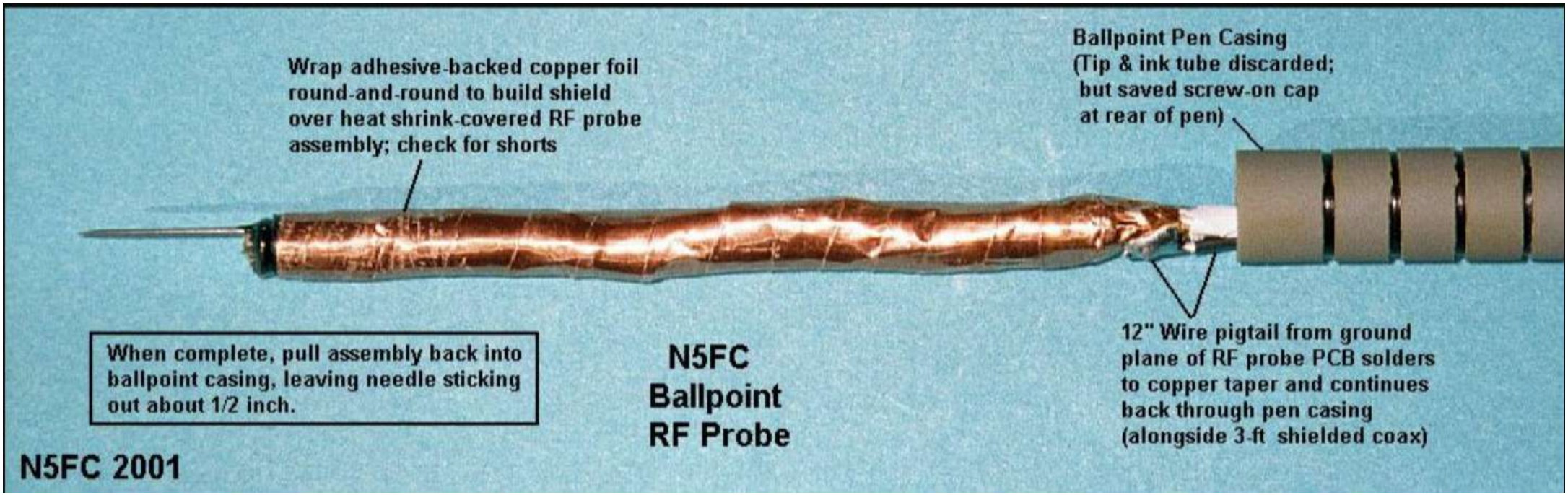


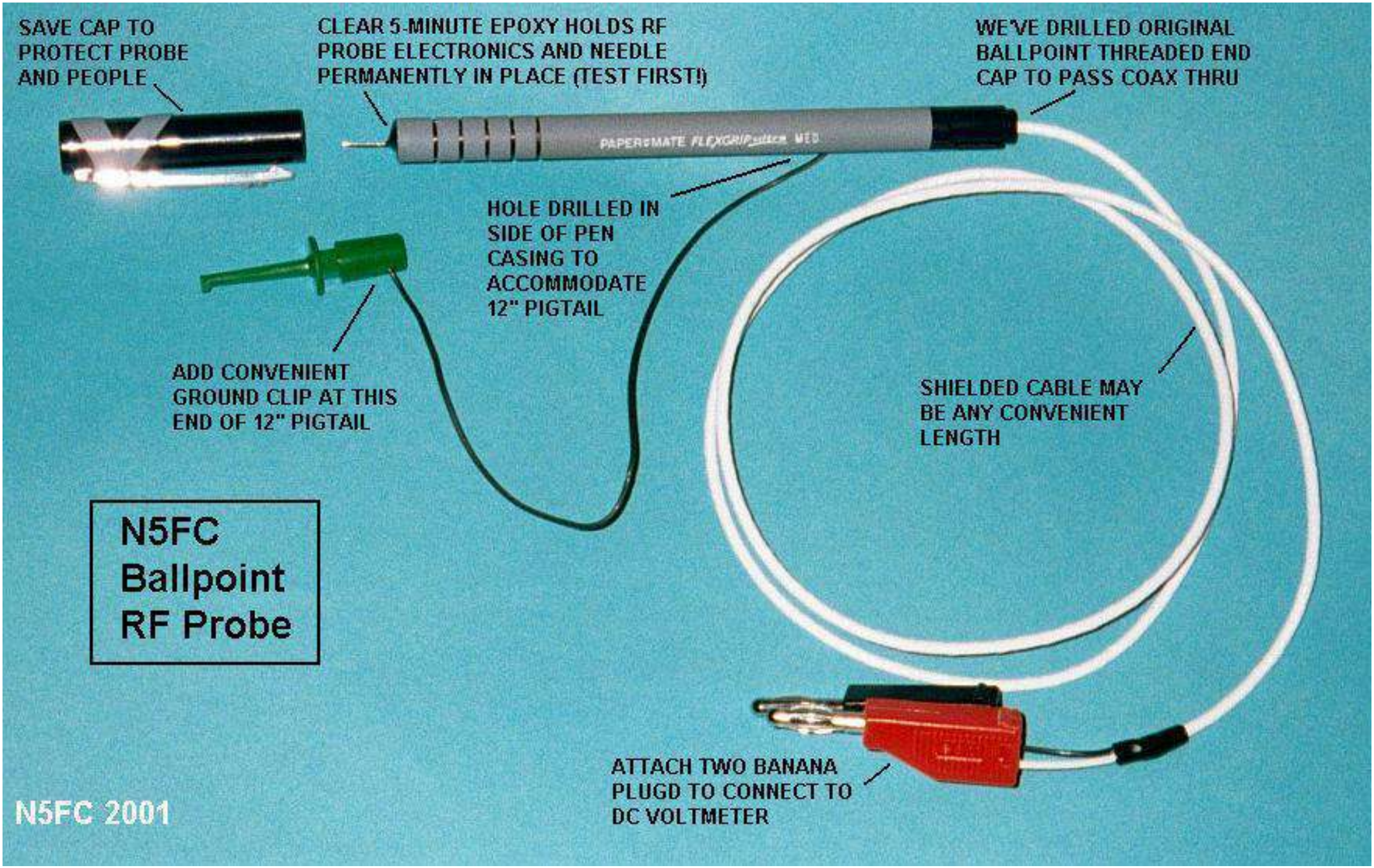
CLASSIC RF PROBE

Reads RMS Equivalent Voltage in test circuit, if Voltmeter is 10 -11 Meg Input Impedance;
Reads 4X RMS Equiv Voltage if VM is 1Meg Input Impedance (Set VM to measure DCV)


BALLPOINT PEN
0.01uF/50V CHIP CAPAC
4.7 MEG
RESISTOR
XYL'S
SEWING
NEEDLE
SET, BANANA
PLUGS RS 274-734
SCRAP
PC BOARD
1N34A
Ge DIODE
3-FT HUNK
SHIELDED
CABLE
1. USE DOUBLE-SIDE PCB
2. CUT SCRAP PC BOARD TO 2-1/2" L x 3/16" WIDE; CUT NOTCH ABOUT 1/2" L & 1/16" DP; PUT TWO GROOVES APPROX AS SHOWN (NOT CRITICAL) SO AS TO CREATE 3 LANDS; DO NOT GROOVE BACK SIDE
3. YOU'LL ALSO NEED ABOUT 3" OF 3/16 TO 1/4" HEAT SHRINK TO COVER THE ASSY WHEN DONE & 10" OF COPPER TAPE (AVAILABLE IN HOBBY STORES)
N5FC
2001
PARTS FOR N5FC POCKET RF PROBE

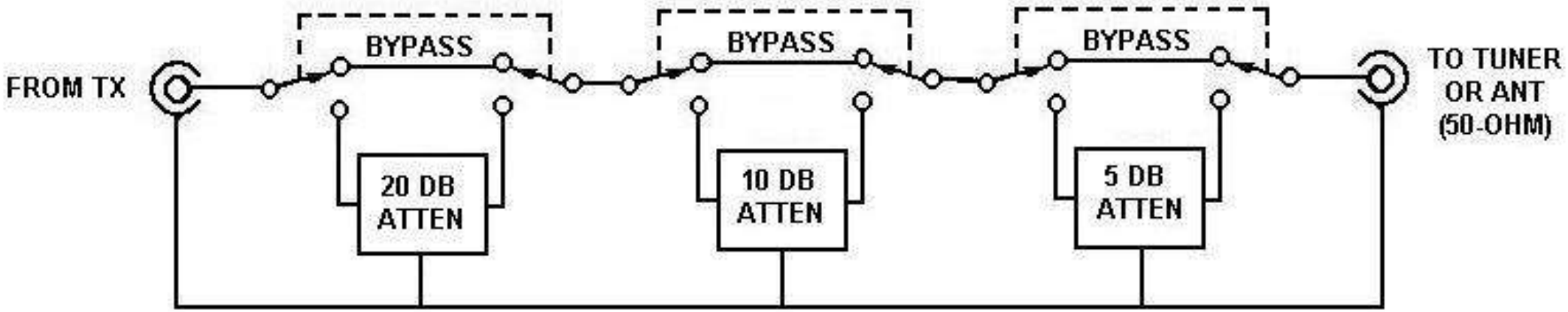

AFTER CLEANING, SHRINK TUBING OVER ENTIRE ASSEMBLY
N5FC
Ballpoint
RF Probe
SOLDER
SEWING NEEDLE
SOLDER 0.01uF CAPAC
FROM
LAND 1 TO LAND 2
SOLDER 4.7 MEG
TO LAND 2 AND LAND 3
SOLDER COAX
CENTER CONDUCTOR
TO LAND 3
SCRAP DOUBLE-SIDED PCB;
BOTTOM SIDE IS GROUND PLANE
SOLDER 1N34A
BANDED END TO
LAND 2
SOLDER 1N34A
OTHER END TO
BOTTOM
GND PLANE
SOLDER COAX
SHIELD TO
BOTTOM
GND PLANE
N5FC 2001


Wrap adhesive-backed copper foil round-and-round to build shield over heat shrink-covered RF probe assembly; check for shorts
Ballpoint Pen Casing (Tip & ink tube discarded; but saved screw-on cap at rear of pen)
12" Wire pigtail from ground plane of RF probe PCB solders to copper taper and continues back through pen casing (alongside 3-ft shielded coax)
When complete, pull assembly back into ballpoint casing, leaving needle sticking out about 1/2 inch.
N5FC Ballpoint RF Probe
N5FC 2001

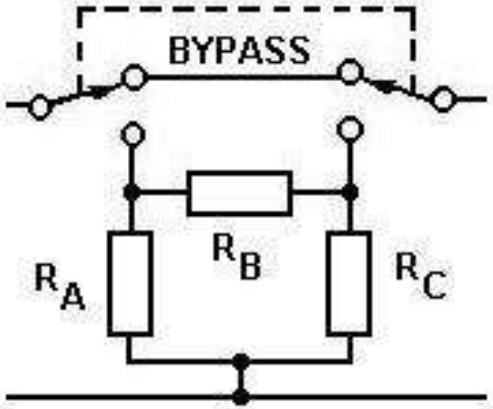

SAVE CAP TO PROTECT PROBE AND PEOPLE
CLEAR 5-MINUTE EPOXY HOLDS RF PROBE ELECTRONICS AND NEEDLE PERMANENTLY IN PLACE (TEST FIRST!)
WE'VE DRILLED ORIGINAL BALLPOINT THREADED END CAP TO PASS COAX THRU
HOLE DRILLED IN SIDE OF PEN CASING TO ACCOMMODATE 12" PIGTAIL
ADD CONVENIENT GROUND CLIP AT THIS END OF 12" PIGTAIL
SHIELDED CABLE MAY BE ANY CONVENIENT LENGTH
N5FC Ballpoint RF Probe
ATTACH TWO BANANA PLUGD TO CONNECT TO DC VOLTMETER
N5FC 2001


N5FC 2001


N5FC 4-2001
N5FC
0-5-10-15-20-25-30-35 DB
5-Watt Attenuator
ATU
IN
5 DB
OUT
IN
10 DB
OUT
IN
20 DB
OUT
TX



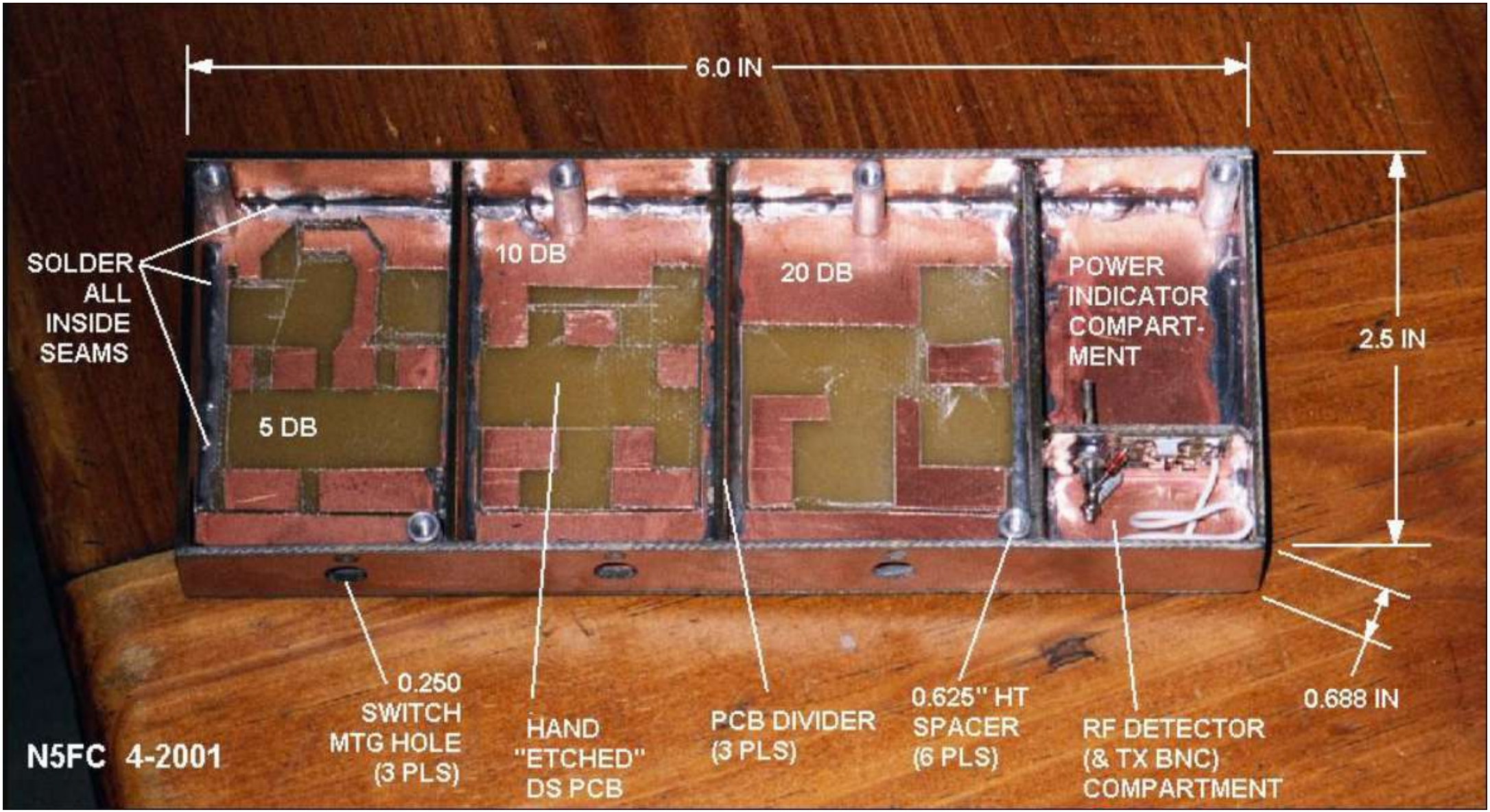
N5FC QRP Switchable 0-5-10-15-20-25-30-35 db Attenuator

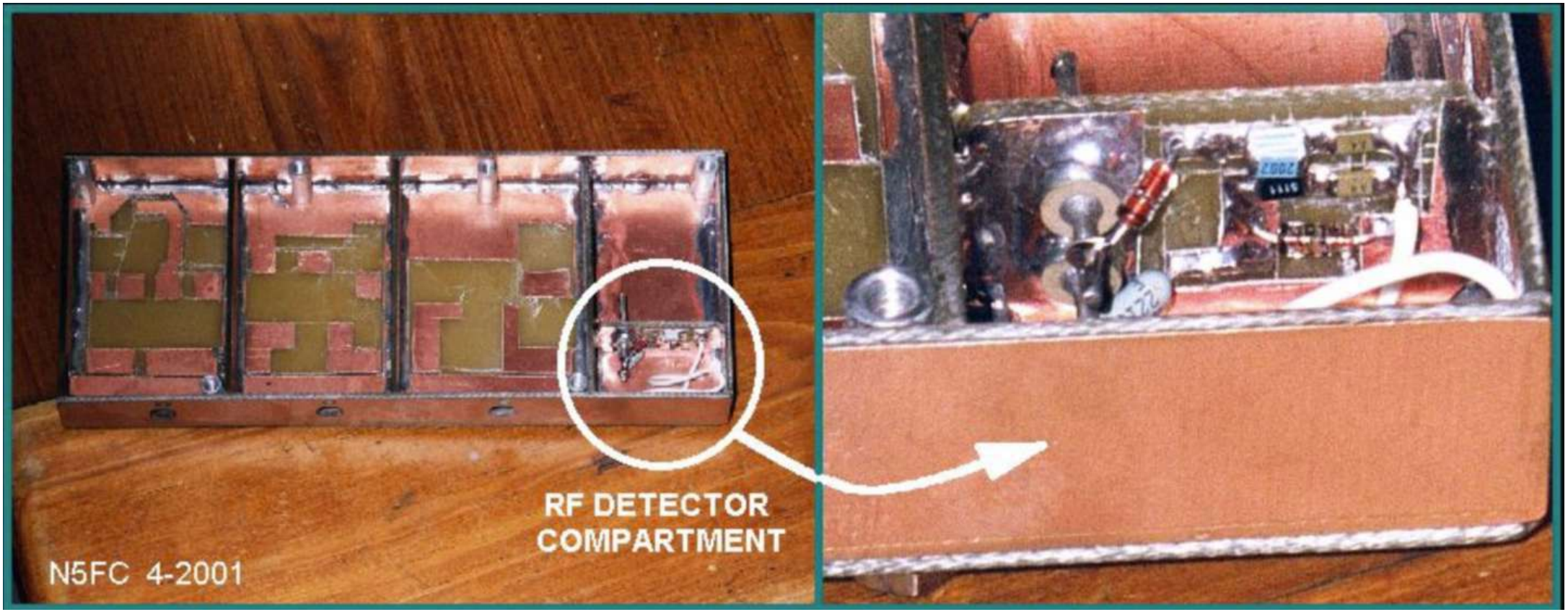


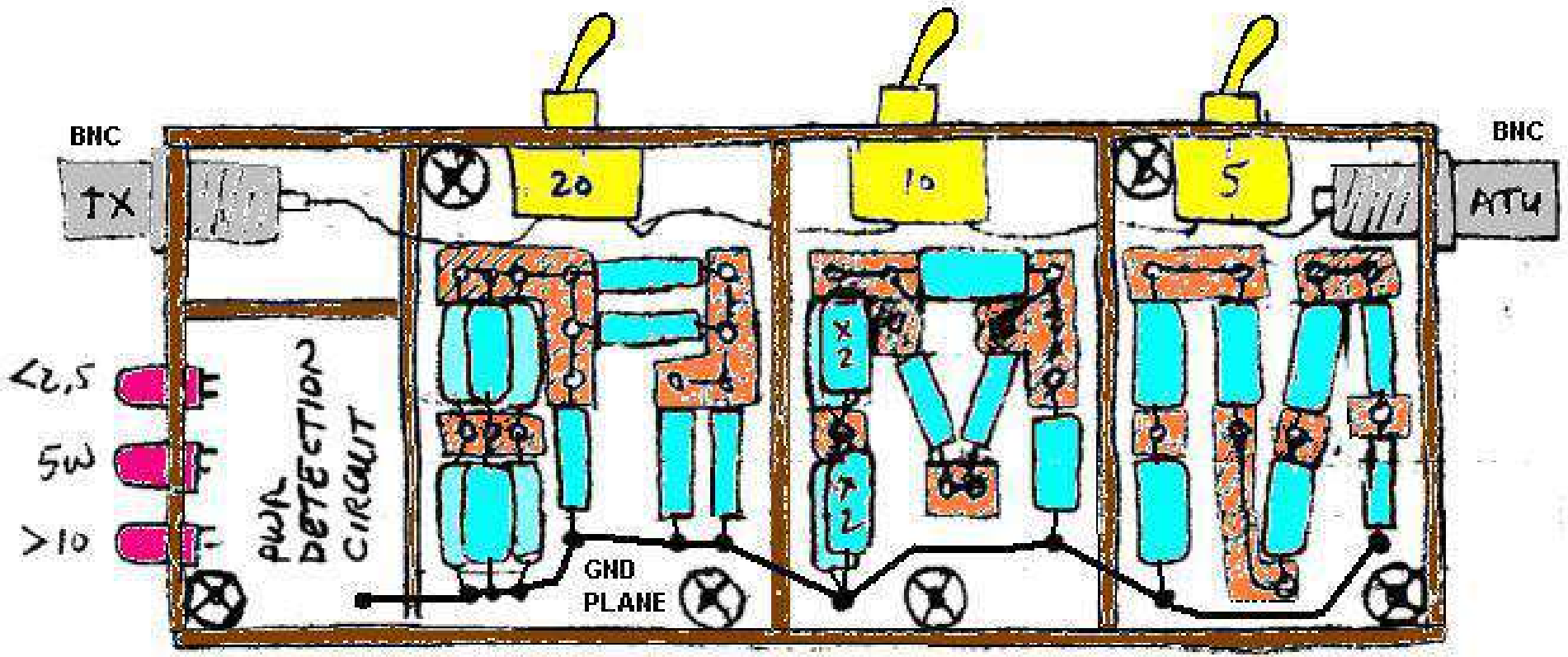
ATTENUATOR SECTION CIRCUIT

		NOM'L	ACT'L	IMPLEMENT WITH
20 db (NOM) ACT=19.7db	R_A	61.1	67	6 ea 100/1W SERIES-PAR'L & 1K PAR'L
	R_B	247.5	235	2 ea 470 / 0.5W IN PARALLEL
	R_C	61.1	62	68/0.5W IN PAR'L with 680/0.5W
10 db (NOM) ACT = 9.7 db	R_A	96.2	100	4 ea 100/1W in SERIES-PARALLEL
	R_B	71.2	67	100/1W IN PAR'L w: 2 ea 100/.5W IN SER
	R_C	96.2	100	100/0.5W
5 db (NOM) ACT = 4.9 db	R_A	247.5	200	2 ea 100/1W IN SERIES
	R_B	30.4	30	3 ea 10/1W IN SERIES
	R_C	247.5	200	2 ea 100/0.5W IN SERIES

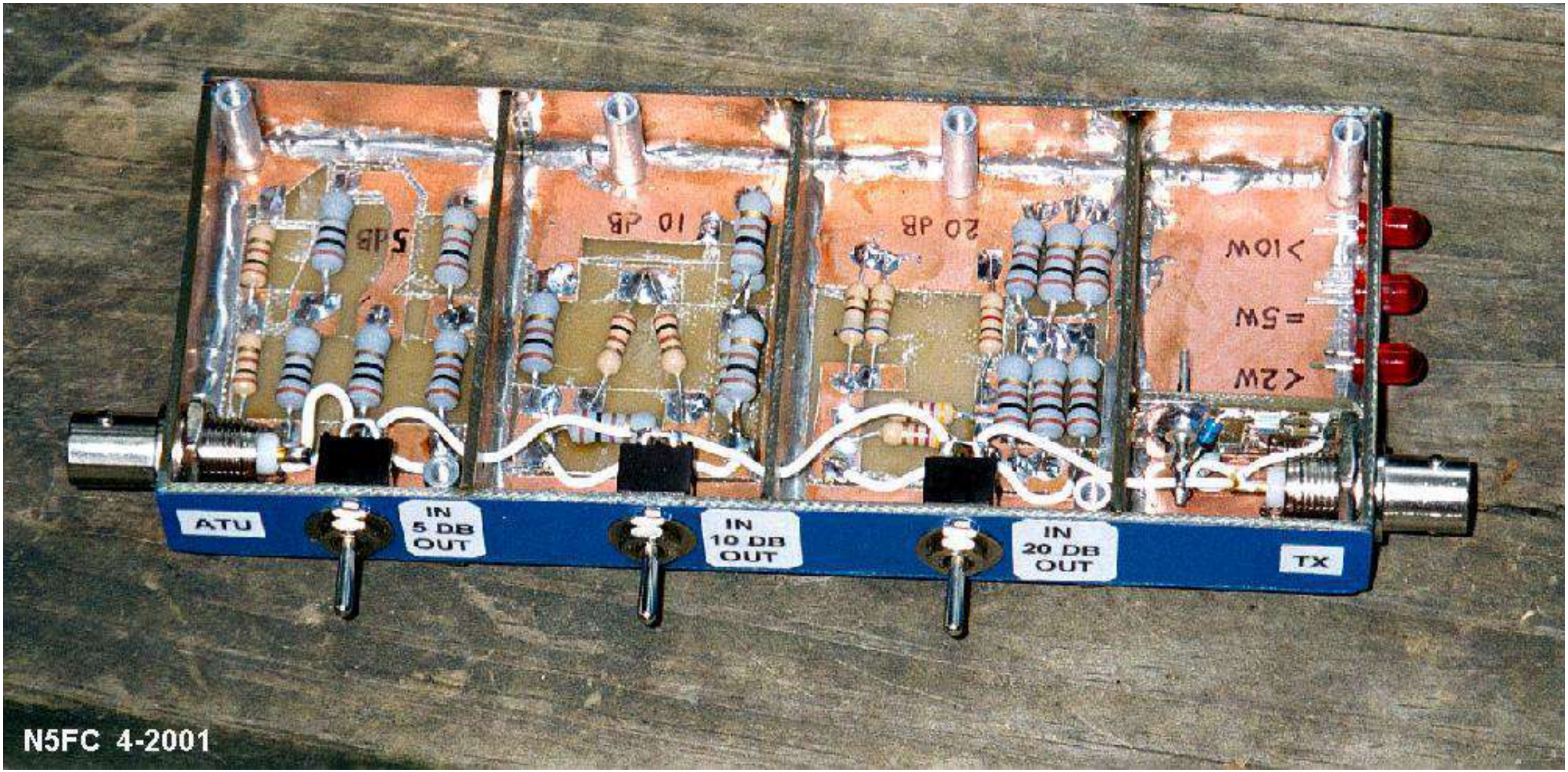
N5FC 4-2001

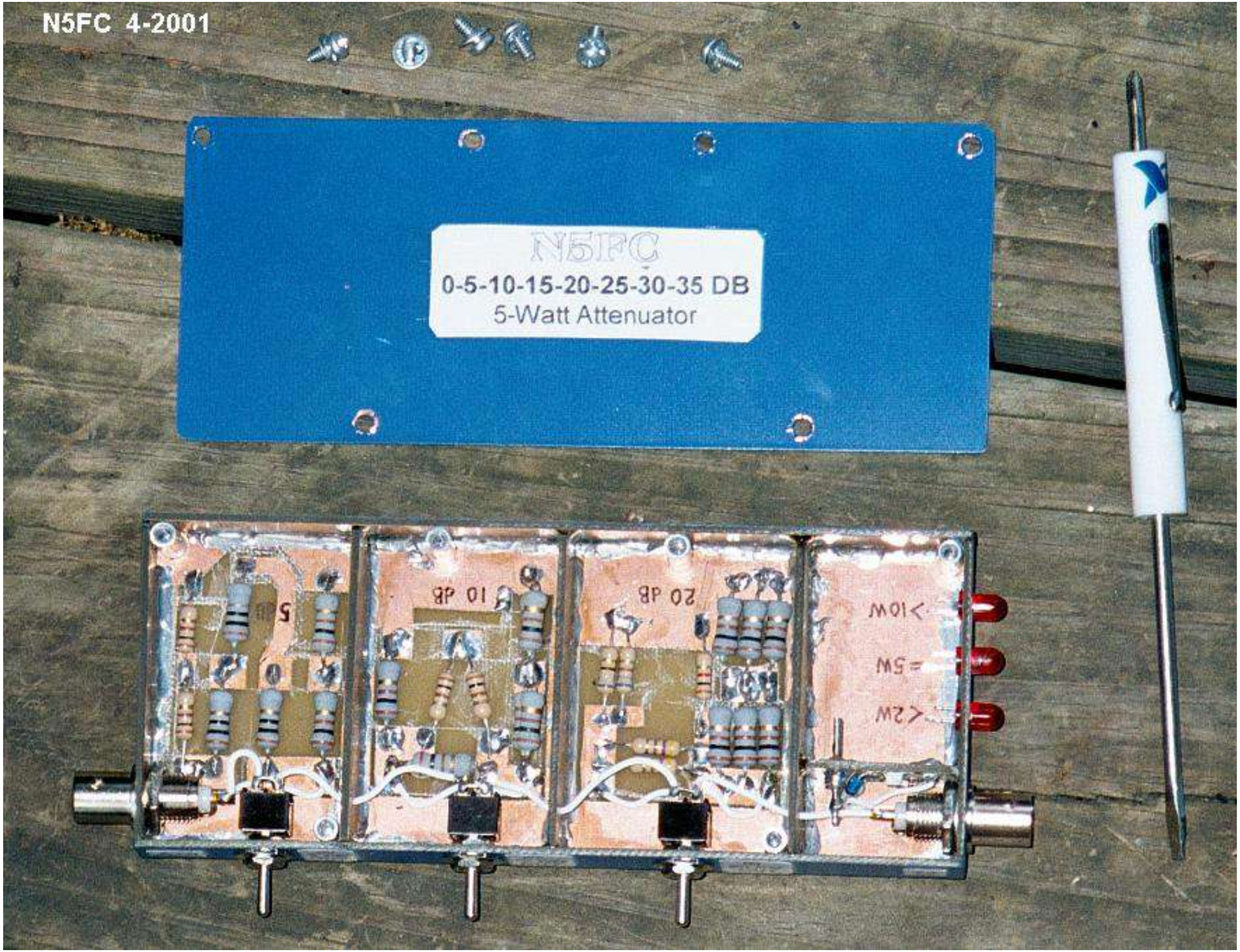

6.0 IN
2.5 IN
SOLDER ALL INSIDE SEAMS
5 DB
10 DB
20 DB
POWER INDICATOR COMPART-MENT
0.250 SWITCH MTG HOLE (3 PLS)
HAND "ETCHED" DS PCB
PCB DIVIDER (3 PLS)
0.625" HT SPACER (6 PLS)
RF DETECTOR (& TX BNC) COMPARTMENT
0.688 IN
N5FC 4-2001

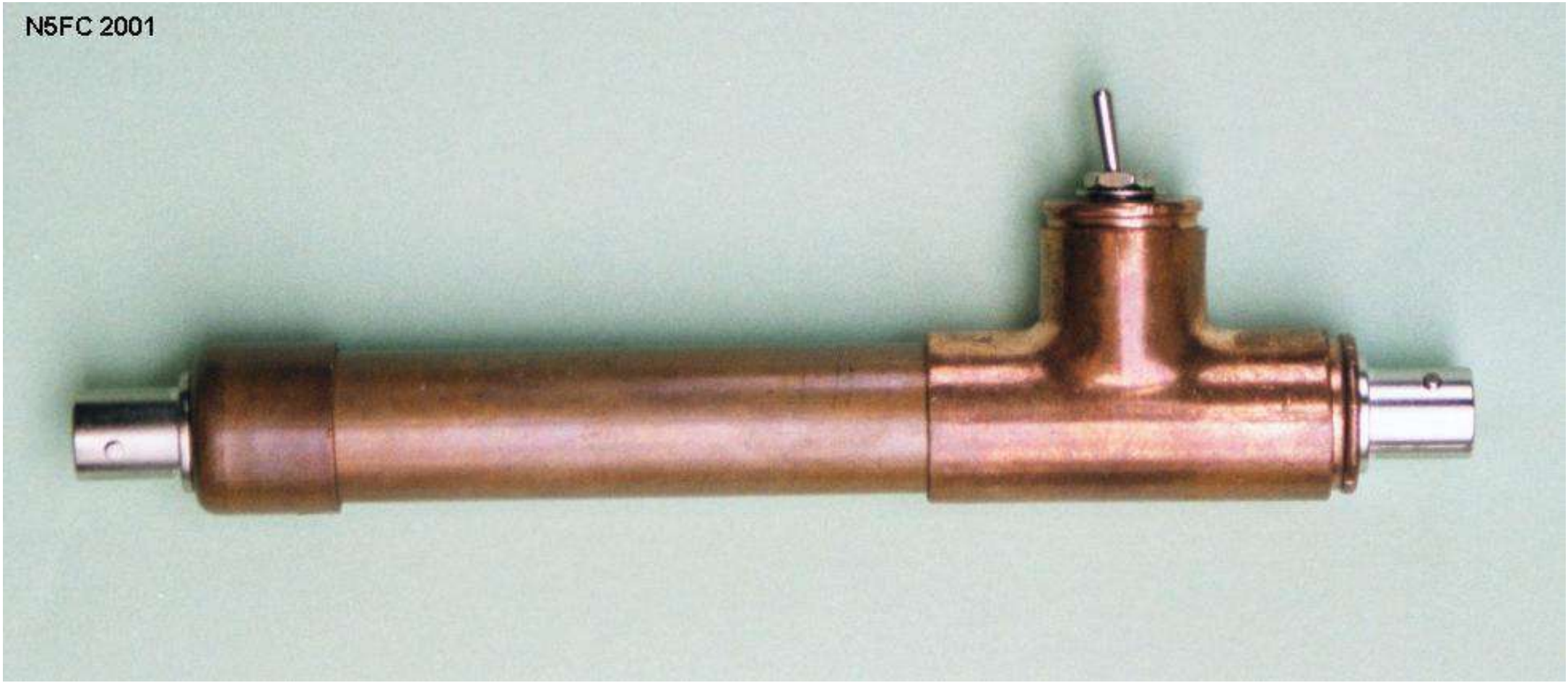

RF DETECTOR
COMPARTMENT
N5FC 4-2001


BNC
TX
20
10
5
BNC
ATU
<2,5
5W
>10
PWR DETECTION CIRCUIT
GND PLANE
x2
x2

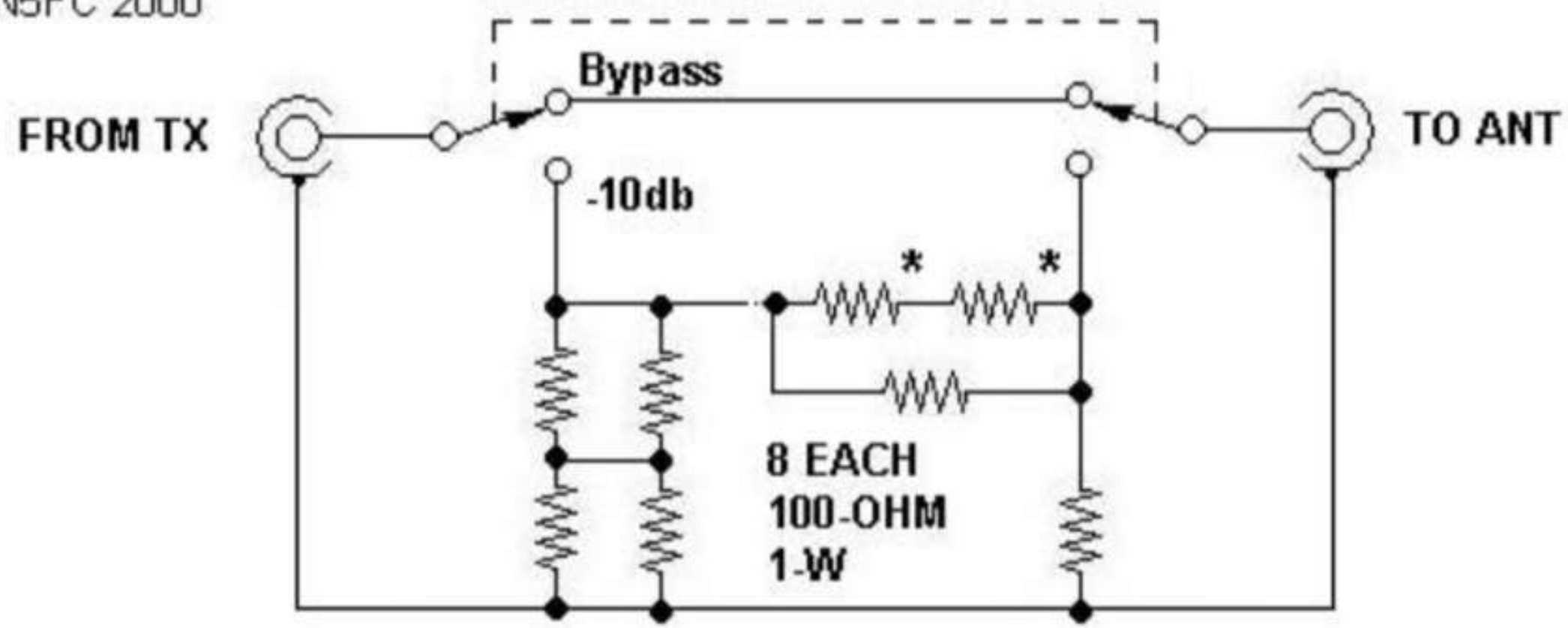
N5FC 4-2001


ATU
IN
5 DB
OUT
IN
10 DB
OUT
IN
20 DB
OUT
TX
5dB
10 dB
20 dB
<2W
=5W
>10W
N5FC 4-2001


N5FC 4-2001
N5FC
0-5-10-15-20-25-30-35 DB
5-Watt Attenuator
5 dB
10 dB
20 dB
>10W
=5W
<2W

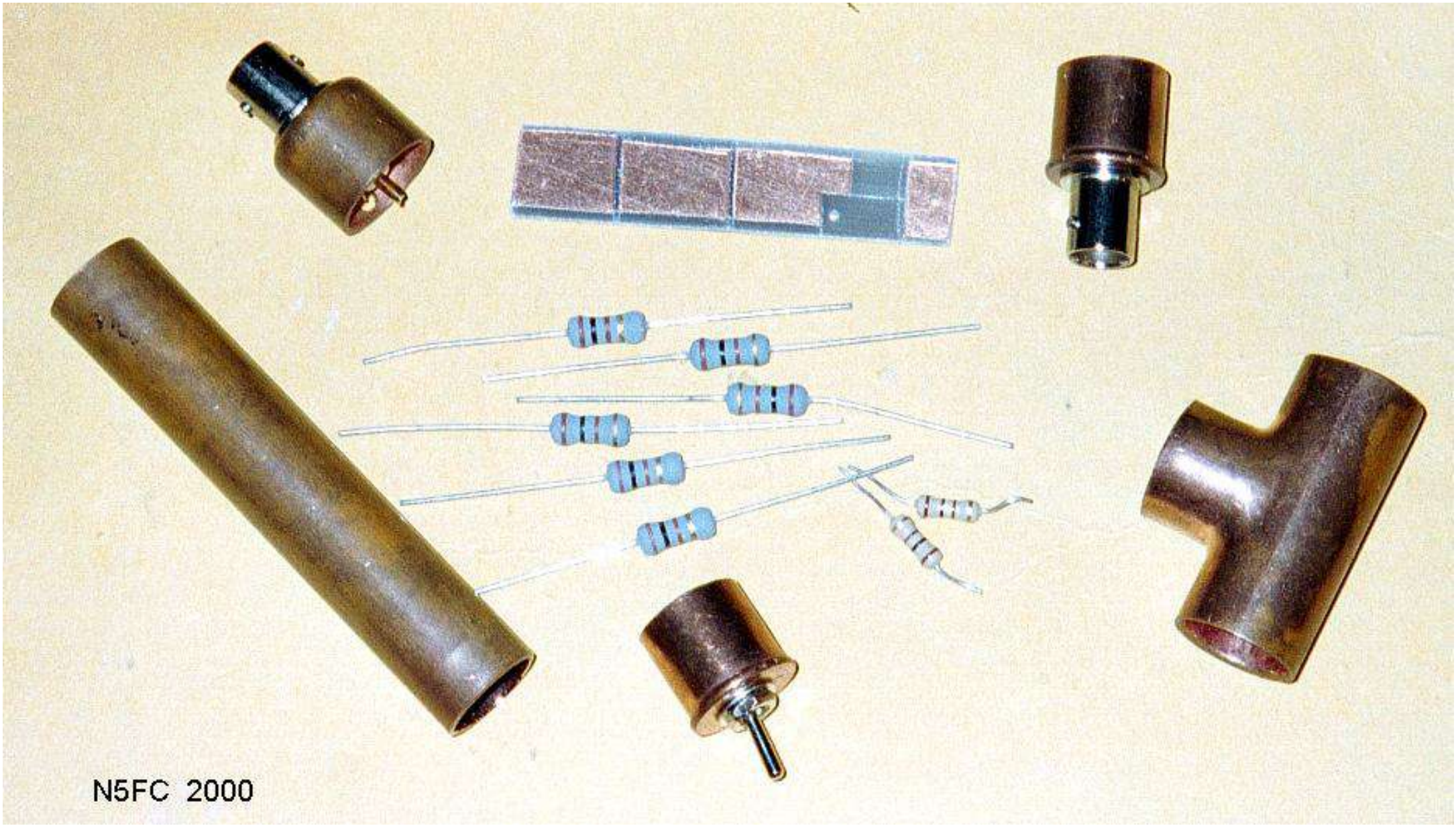

N5FC 2001

N5FC 2000

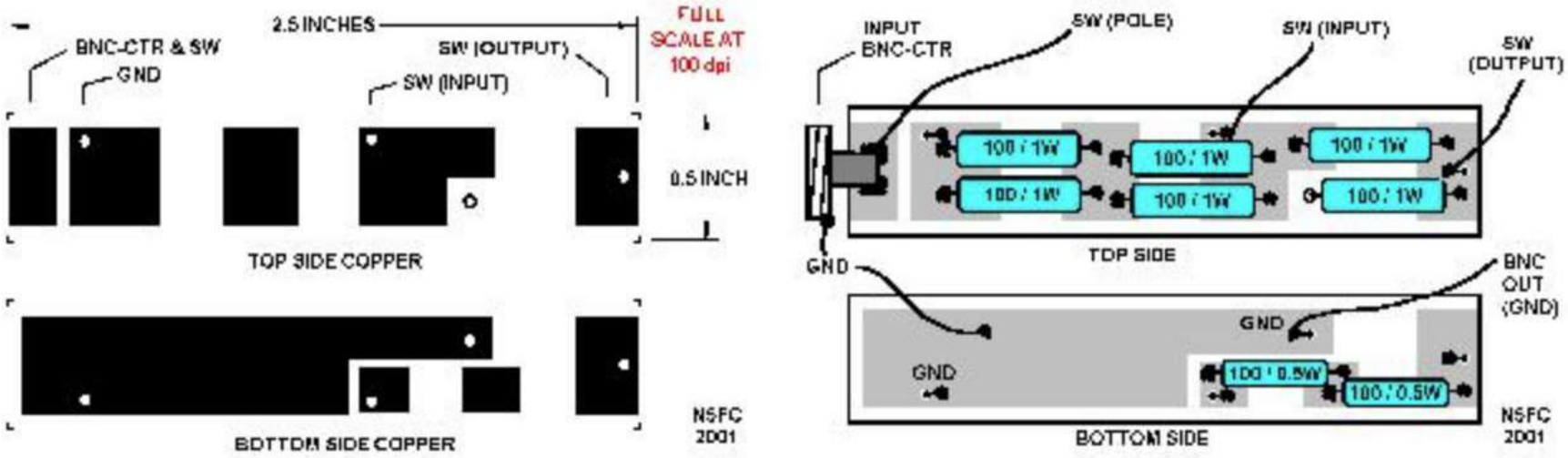


NOTE: 2 RESISTORS MARKED WITH '*' MAY BE RATED 1/2 W

QRP Switchable 10 db Attenuator


N5FC 2000

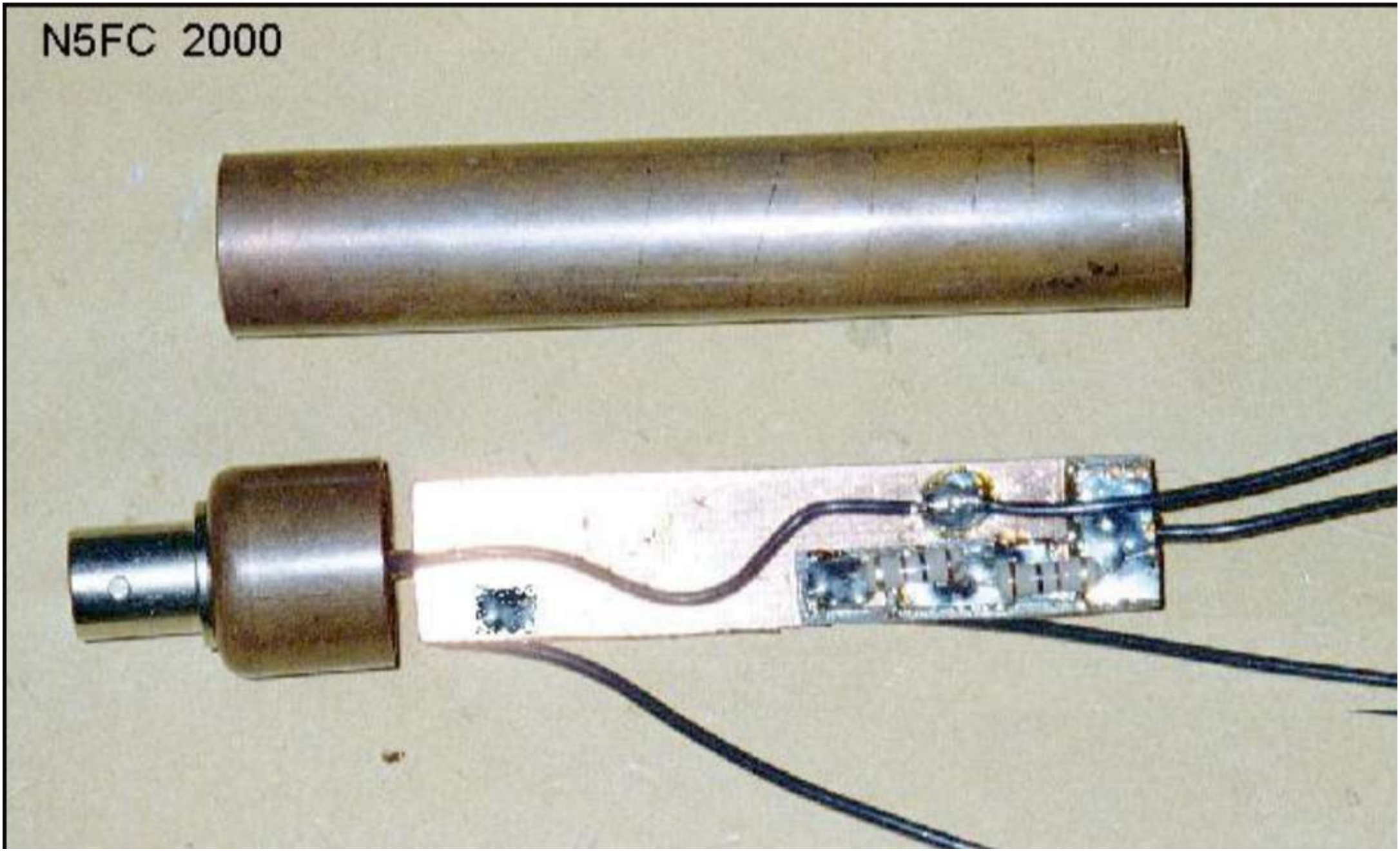
were then tack-soldered to the pc board. Sorry, but you'll have to use teflon-coated wire for the wiring, because the resistors can get very hot in this application. Here's a sketch of the pc board copper and component layout:

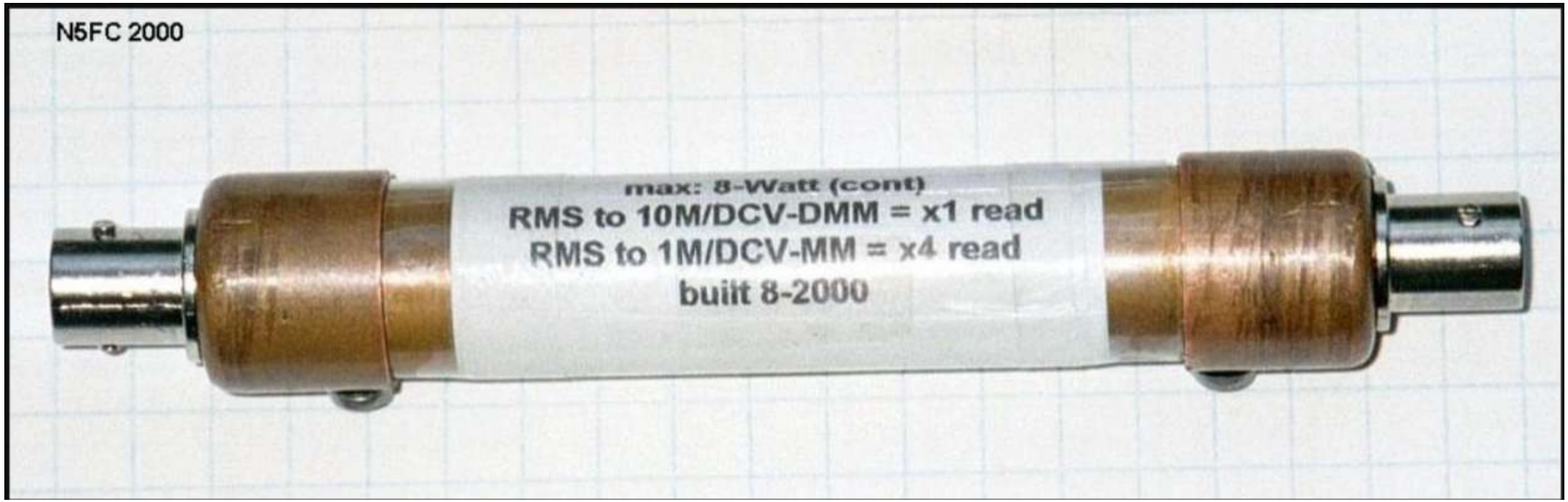


Click on either of the above images to see a larger, more readable image

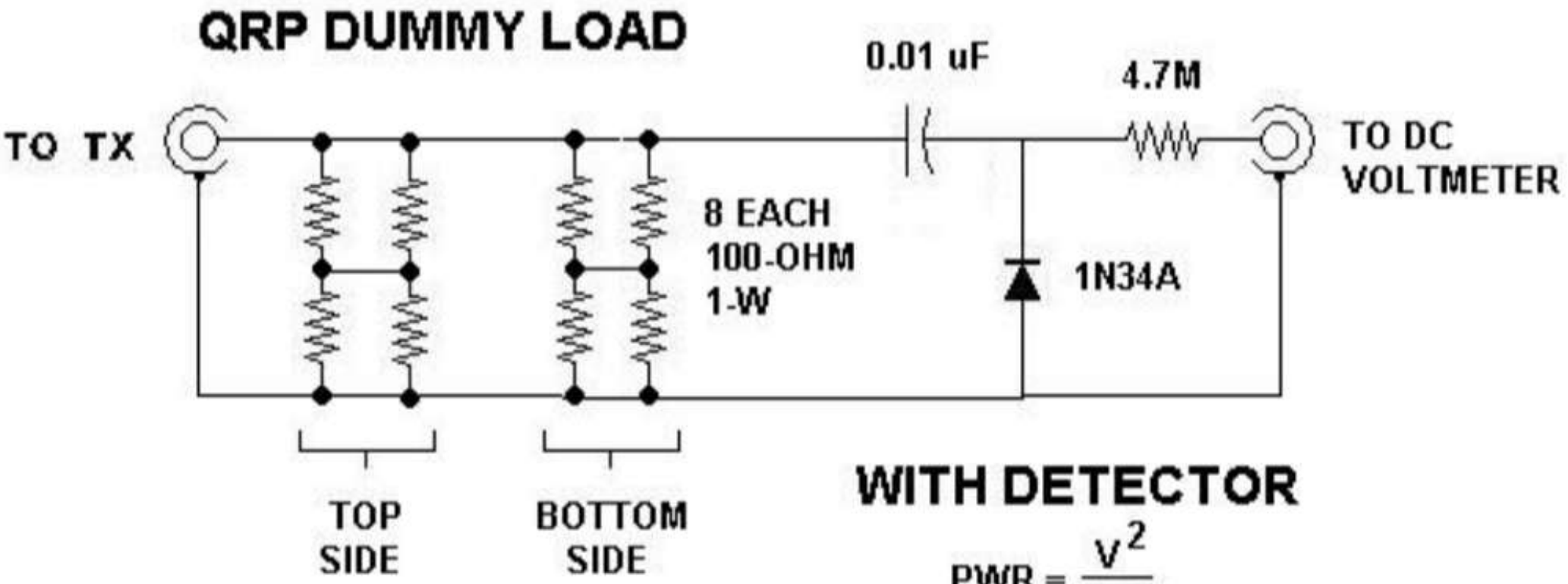
Note that where holes are drilled through the board, a wire provides continuity from top to bottom (solder on both sides)... otherwise, everything is soldered "surface-mount" style, with a big blob of solder holding the components down (don't get carried away). The center pin of the input BNC connector gets soldered directly to the foil where shown.


N5FC 2000


N5FC 2000


N5FC 2000
max: 8-Watt (cont)
RMS to 10M/DCV-DMM = x1 read
RMS to 1M/DCV-MM = x4 read
built 8-2000

QRP DUMMY LOAD



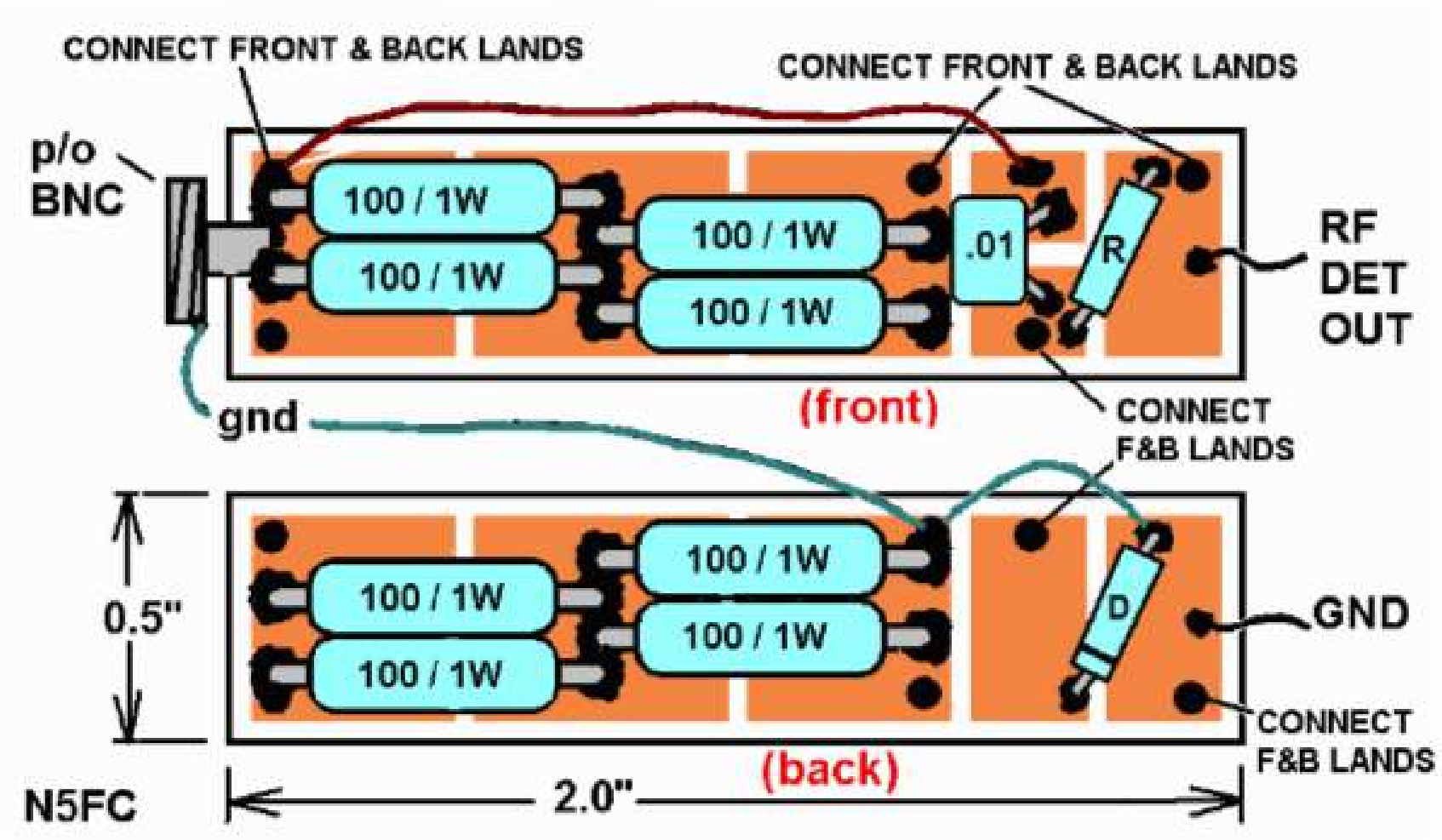
WITH DETECTOR

$$PWR = \frac{V^2}{50}$$

(FOR DC-VM WITH 11 MEG Z_{in})

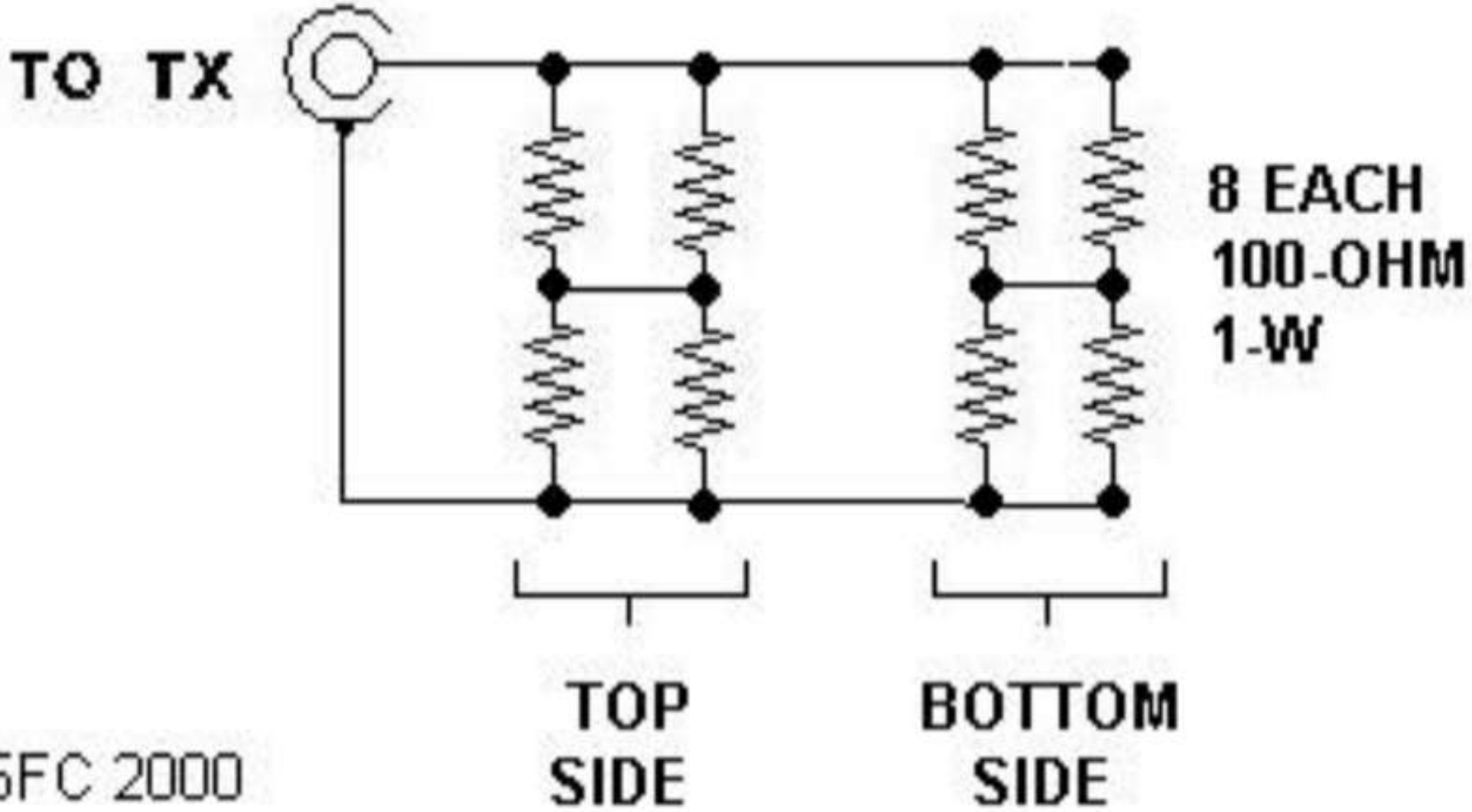
N5FC 2000




CONNECT FRONT & BACK LANDS
CONNECT FRONT & BACK LANDS
p/o
BNC
100 / 1W
100 / 1W
100 / 1W
100 / 1W
.01
R
RF
DET
OUT
(front)
gnd
CONNECT
F&B LANDS
100 / 1W
100 / 1W
100 / 1W
100 / 1W
D
GND
CONNECT
F&B LANDS
0.5"
(back)
2.0"
N5FC

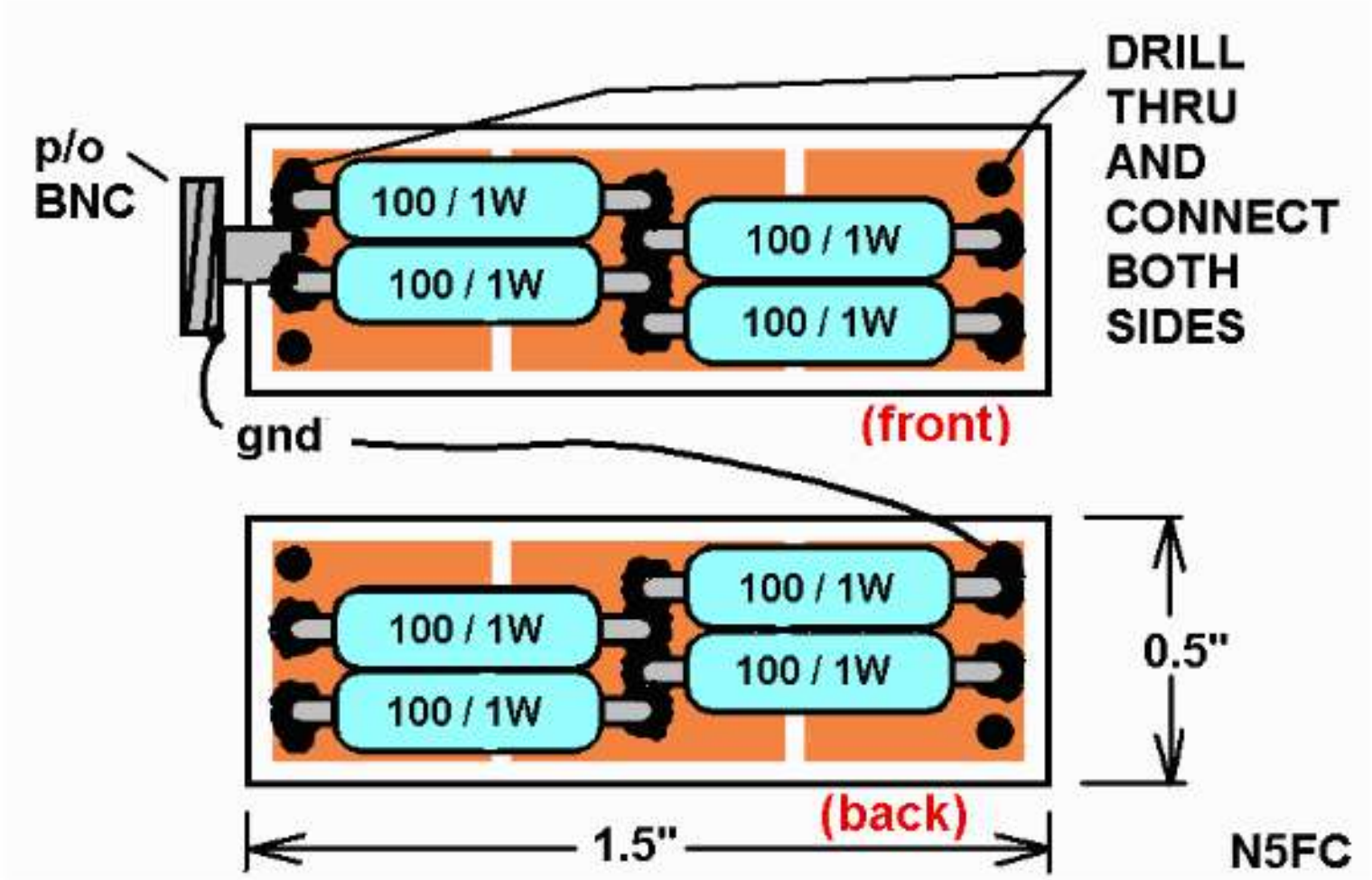

N5FC
QRP DUMMY LOAD
max: 8-Watt (cont)
Built
N5FC 2000

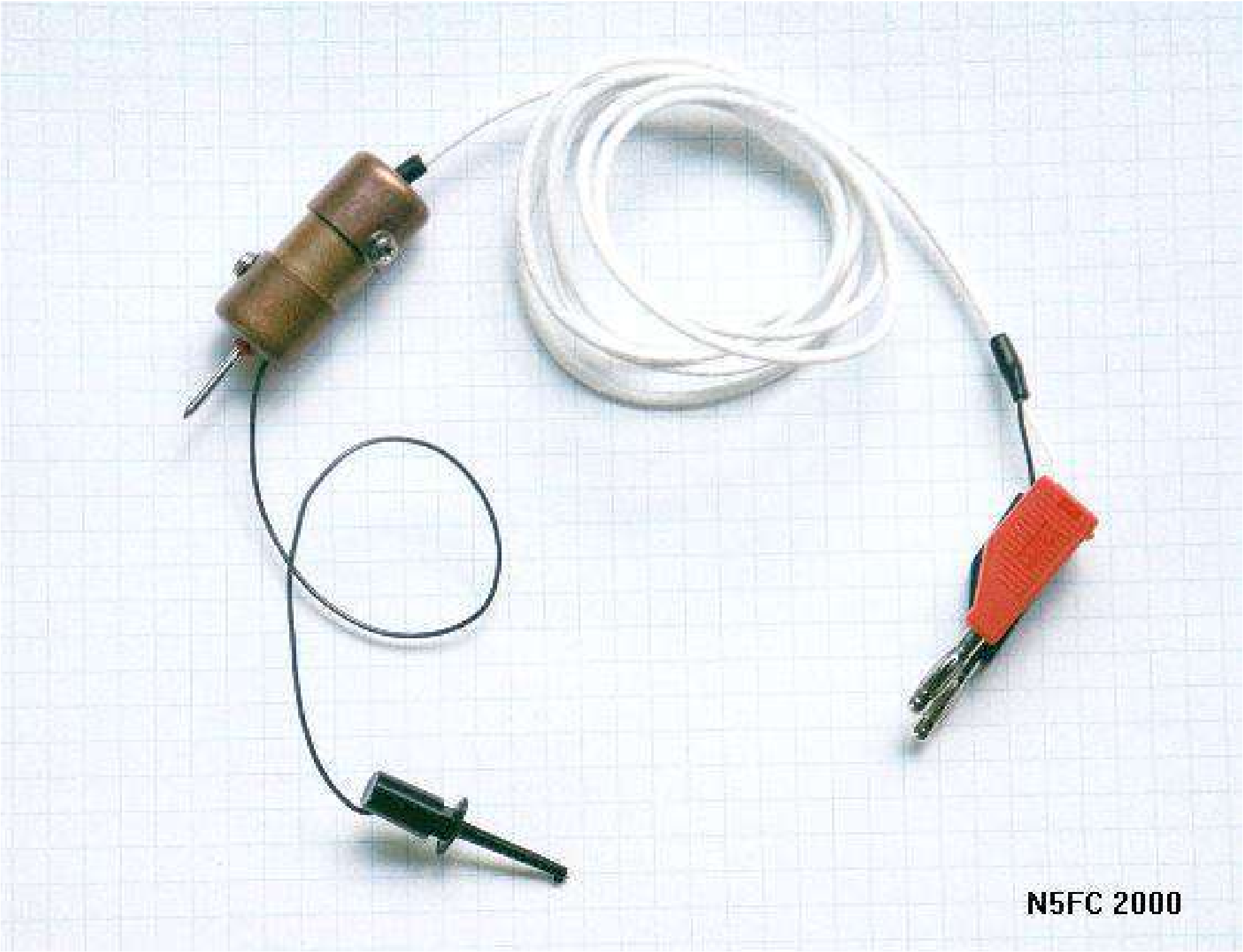
QRP DUMMY LOAD



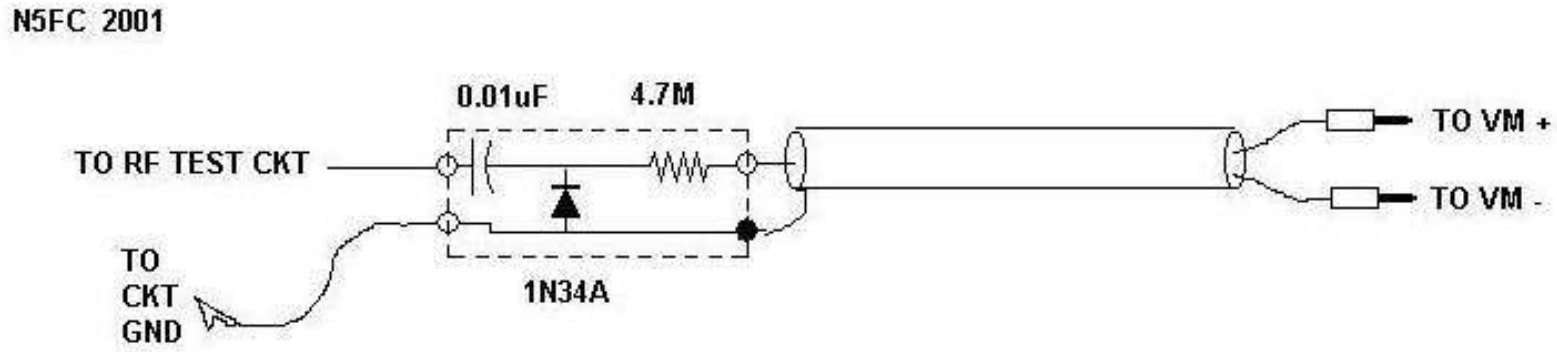
N5FC 2000




p/o
BNC
gnd
100 / 1W
100 / 1W
100 / 1W
100 / 1W
DRILL
THRU
AND
CONNECT
BOTH
SIDES
(front)
100 / 1W
100 / 1W
100 / 1W
100 / 1W
0.5"
(back)
1.5"
N5FC


N5FC 2000

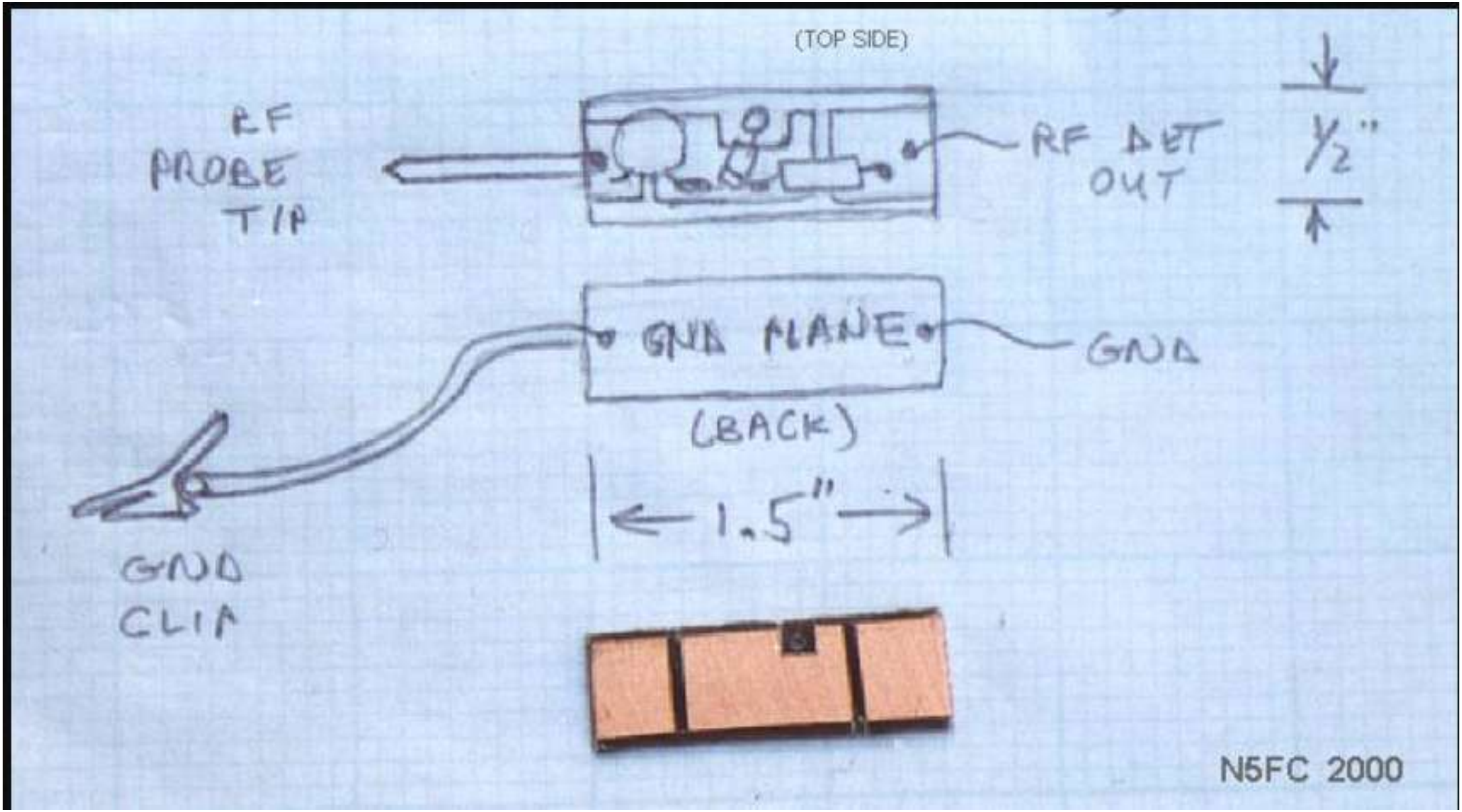
sic RF Probe. Simple, eh?



CLASSIC RF PROBE

Reads RMS Equivalent Voltage in test circuit, if Voltmeter is 10 -11 Meg Input Impedance;
Reads 4X RMS Equiv Voltage if VM is 1Meg Input Impedance (Set VM to measure DCV)

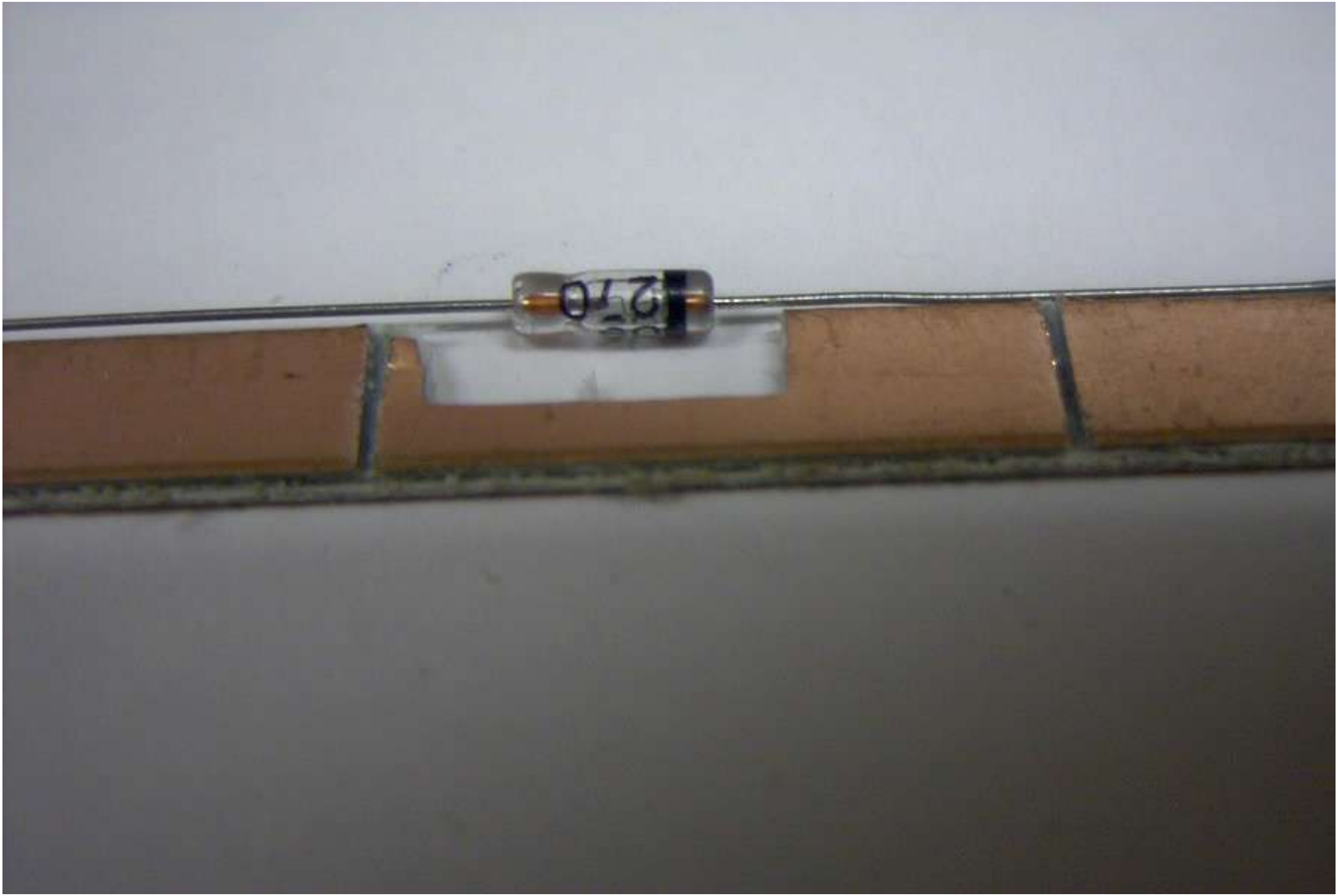
›retical discussion that we'll make short note of. Obviously, for "probing" we need a "probe". (Hey! No wonder I get paid the big bucks...). We add a SH(
›be goes to our test circuit, where we're probing. Brilliant! We don't want either of these to be long leads, because we're talking RF here, and long leads =


(TOP SIDE)
RF
PROBE
TIP
RF DET
OUT
½"
GND PLANE
GND
(BACK)
1.5"
GND
CLIP
N5FC 2000


BIC round stic med/mov USA

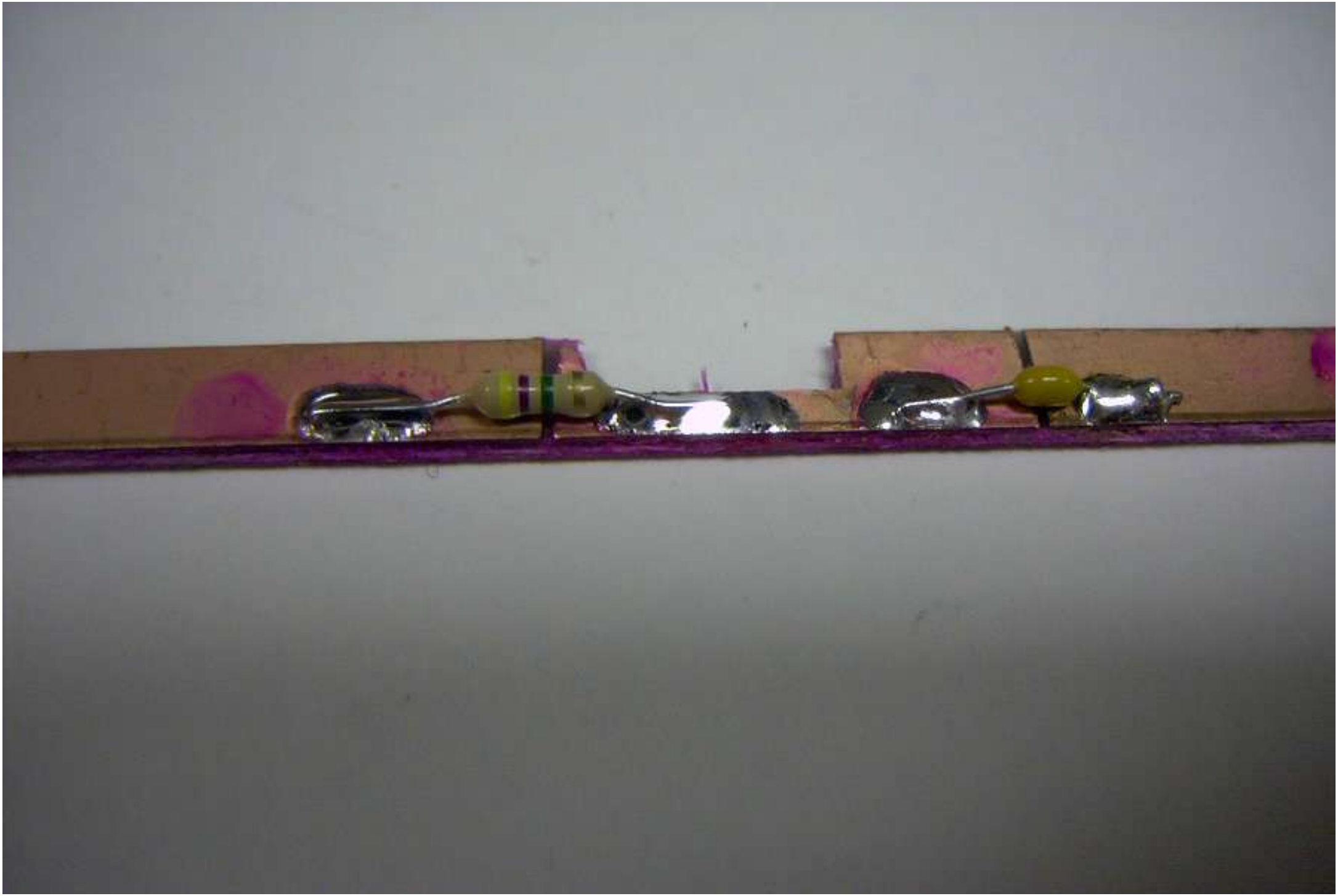


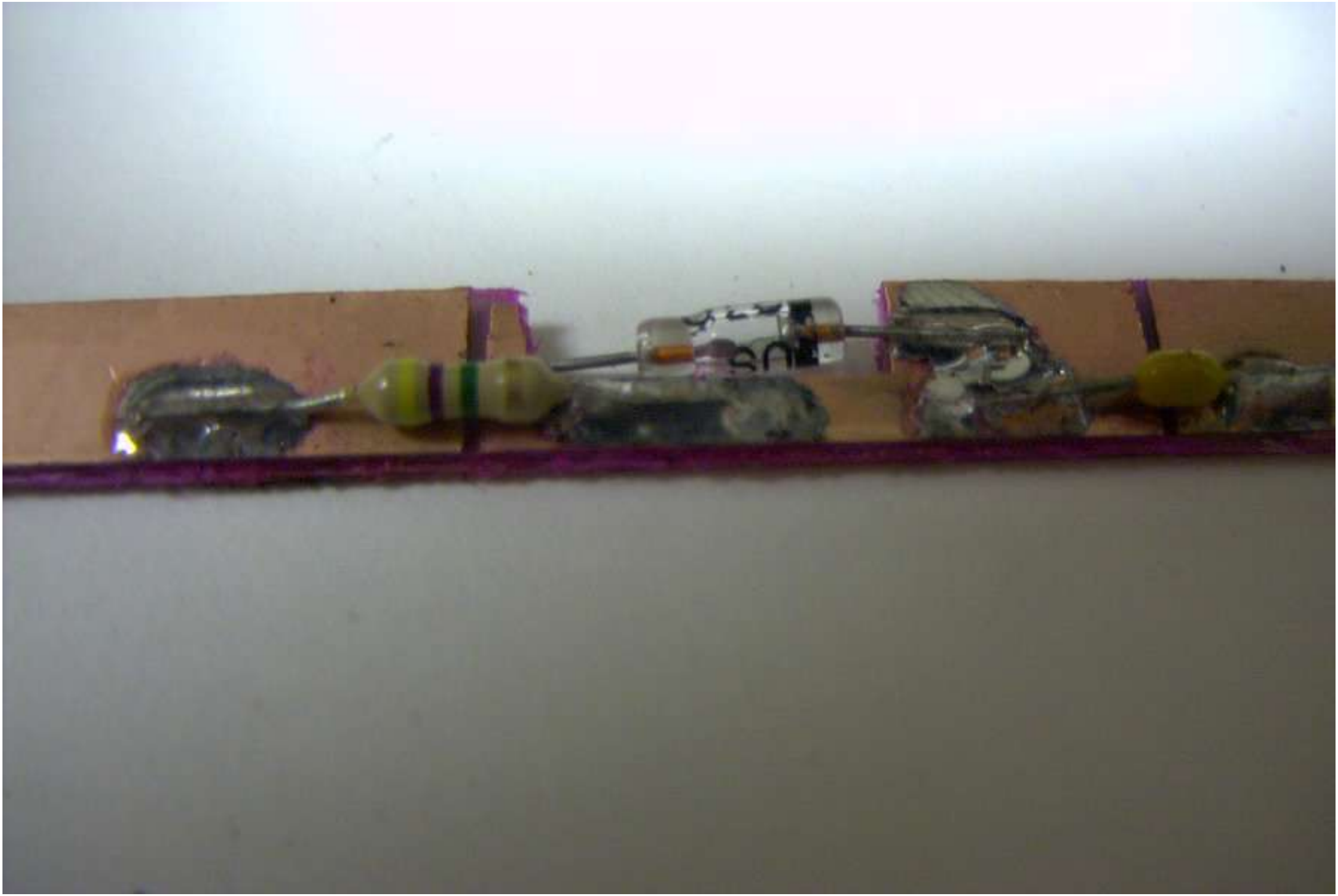


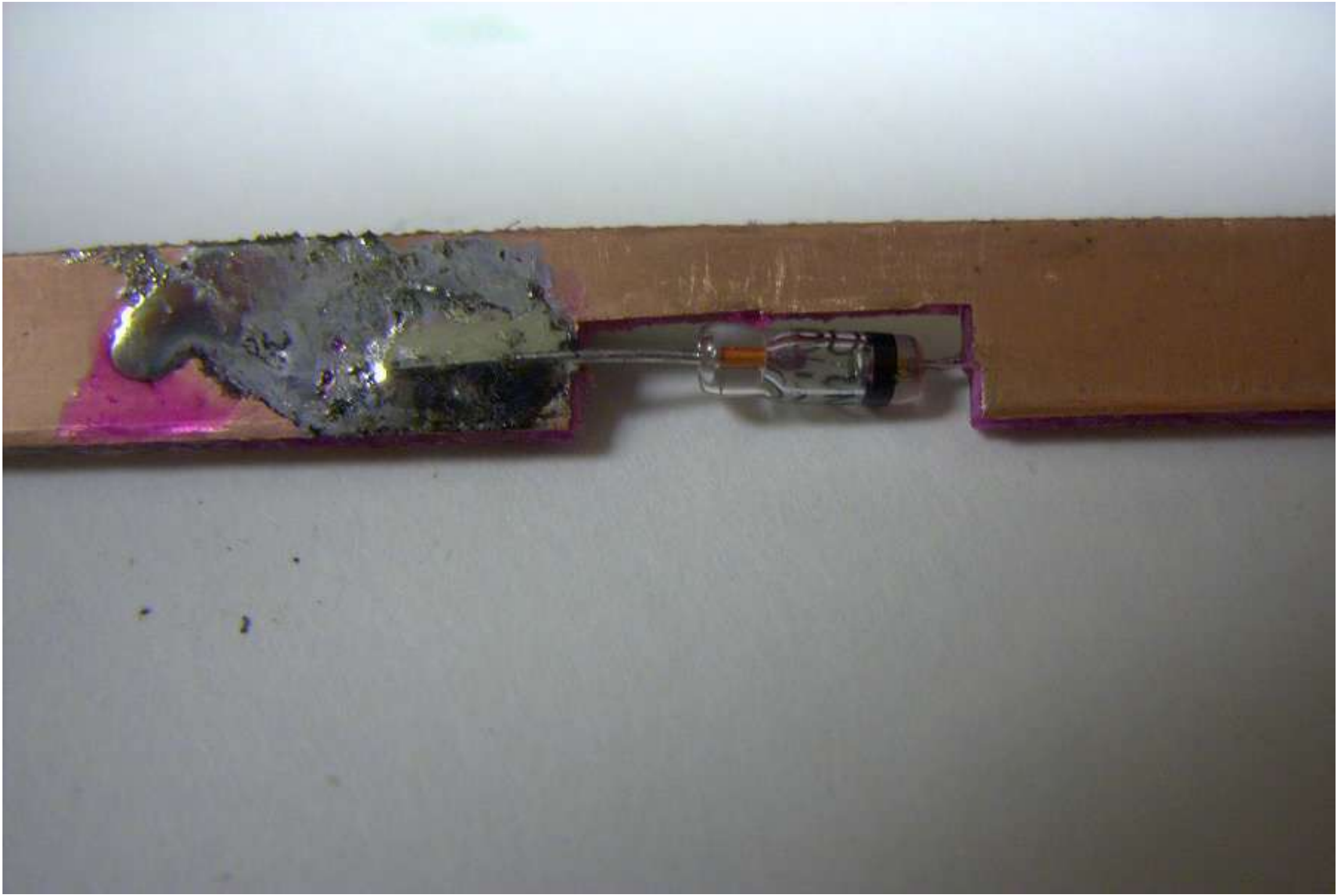

270





















How to Build Your Own Oscilloscope Probes



lere is the complete bill of materials:

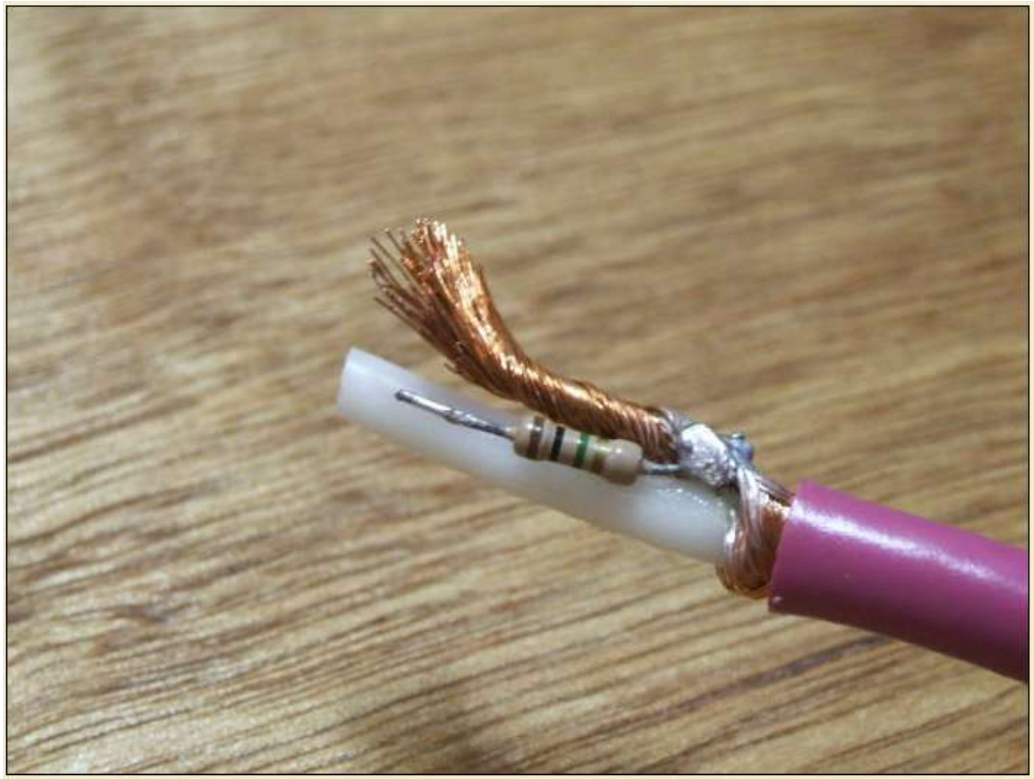
- The pen
- A 2-meter piece of coaxial test cable with a BNC connector on one end
- Epoxy adhesive
- One alligator clip
- Copper-plated nail — 0.75" (20mm) long, packed as "weather-stripping nail".
- 1 MΩ and 5 MΩ resistors

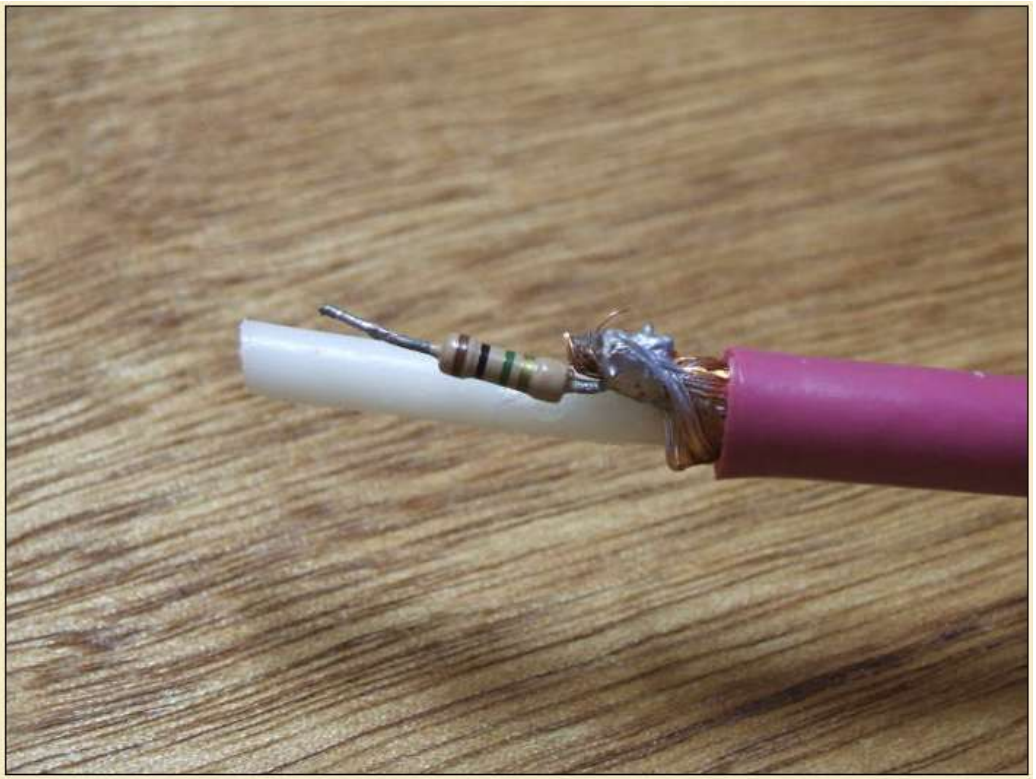

Alligator Clips
Pins











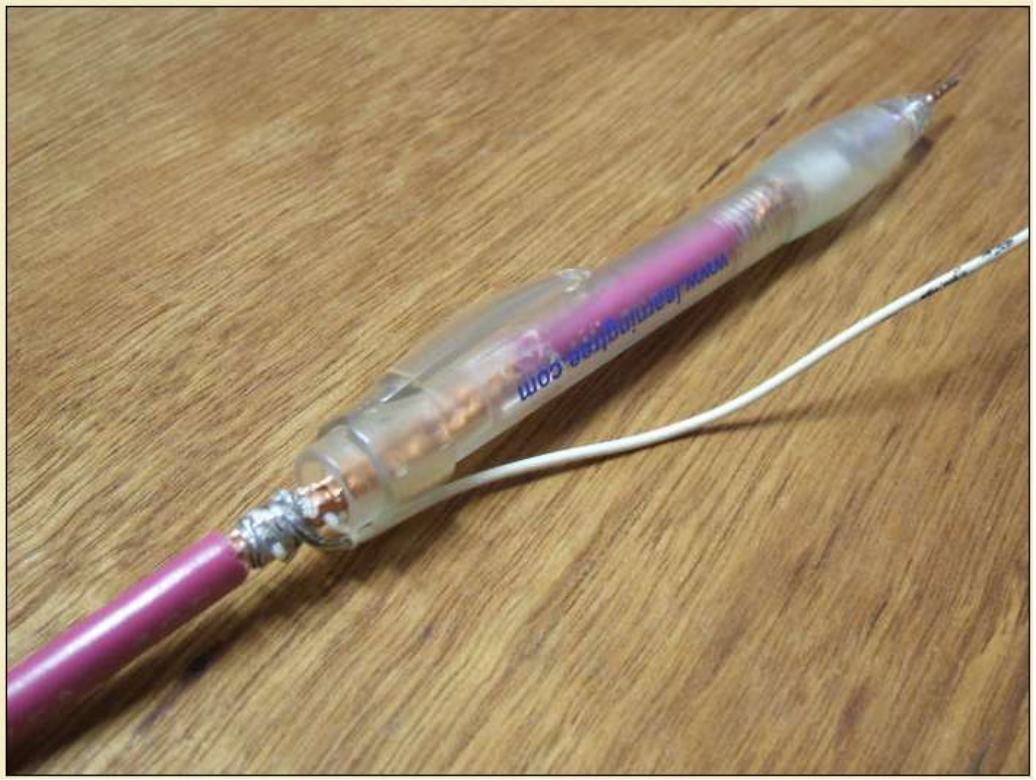




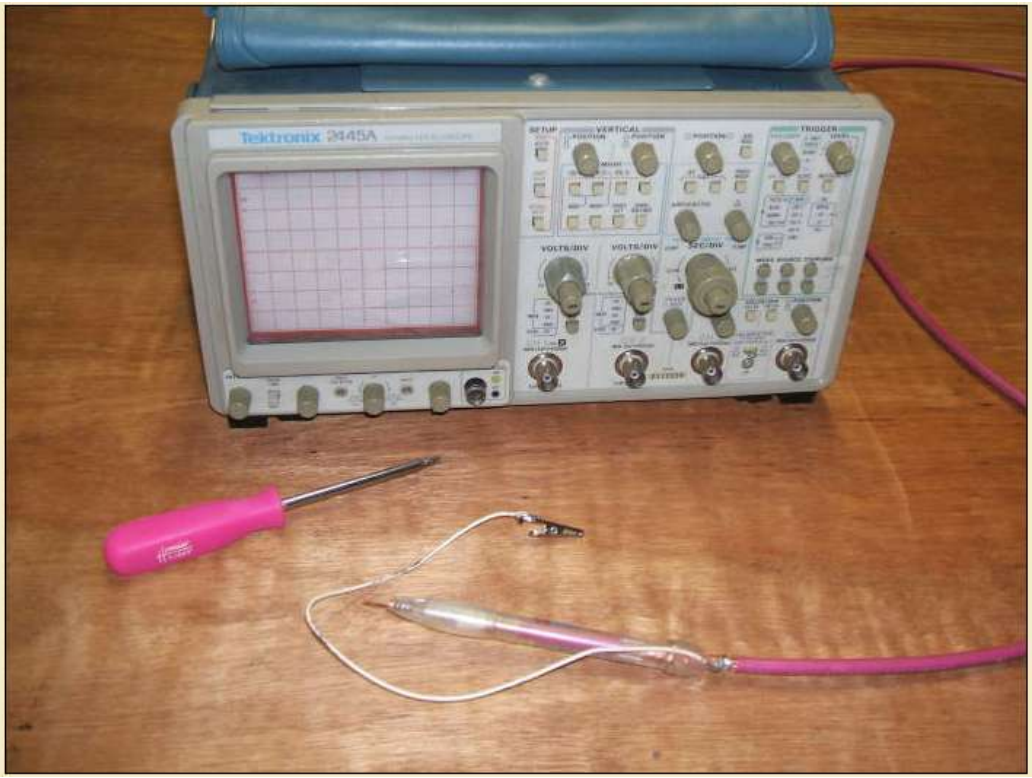


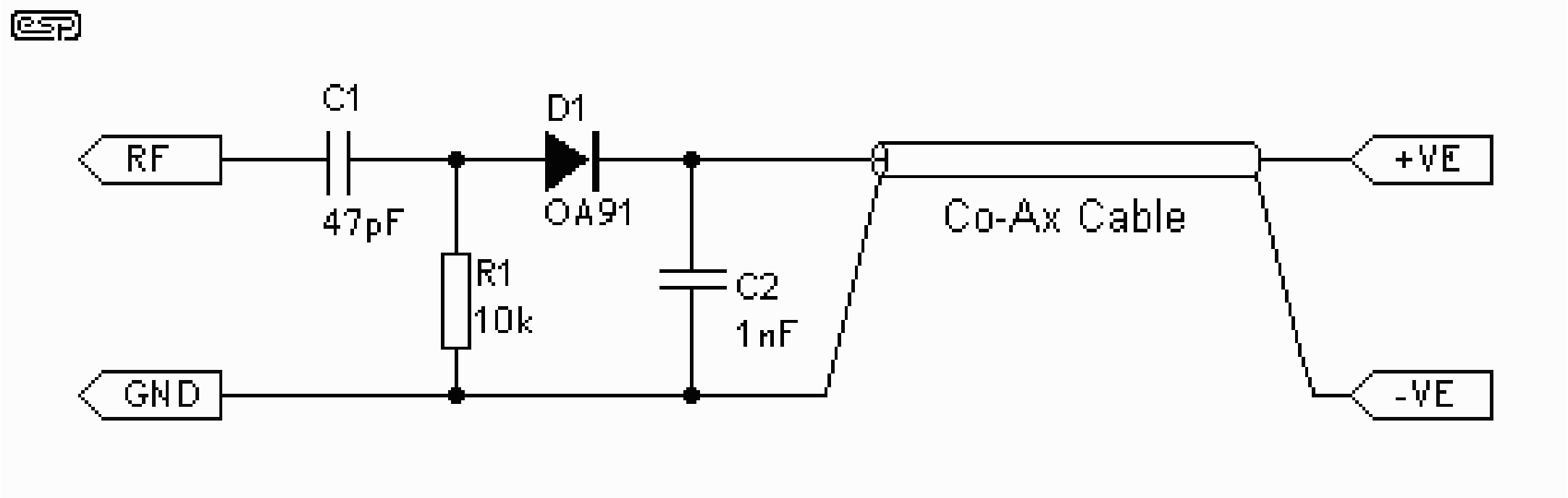




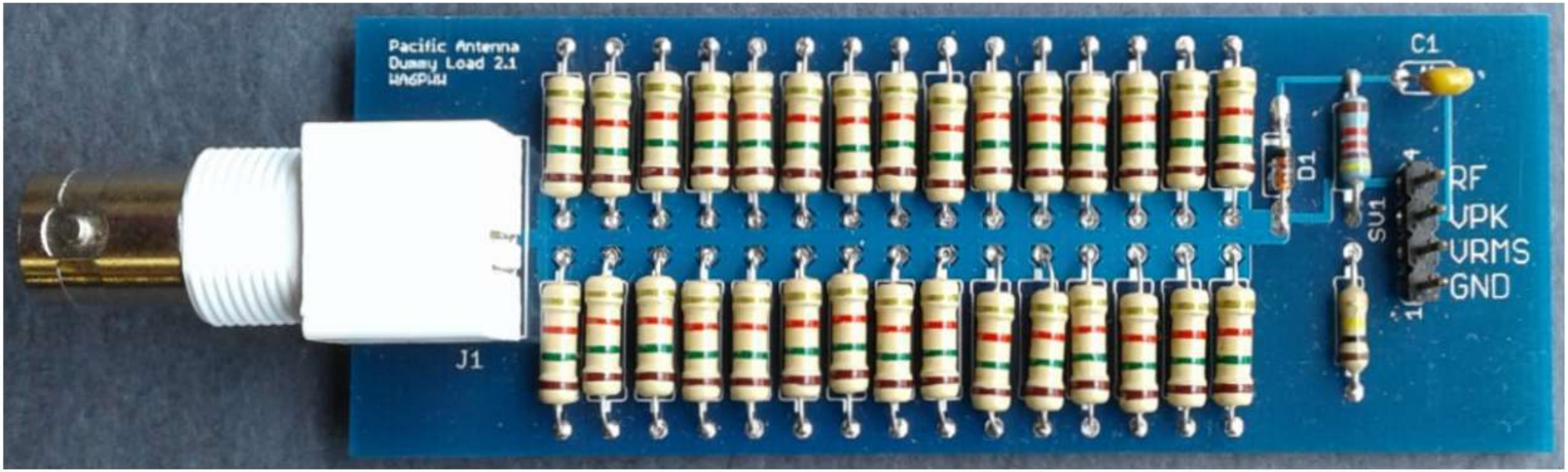





Tektronix 2445A
SETUP
VERTICAL
TRIGGER
VOLTS/DIV
VOLTS/DIV


C1
47pF
D1
OA91
RF
GND
R1
10k
C2
1nF
Co-Ax Cable
+VE
-VE

Pacific Antenna 15 Watt Dummy Load Kit

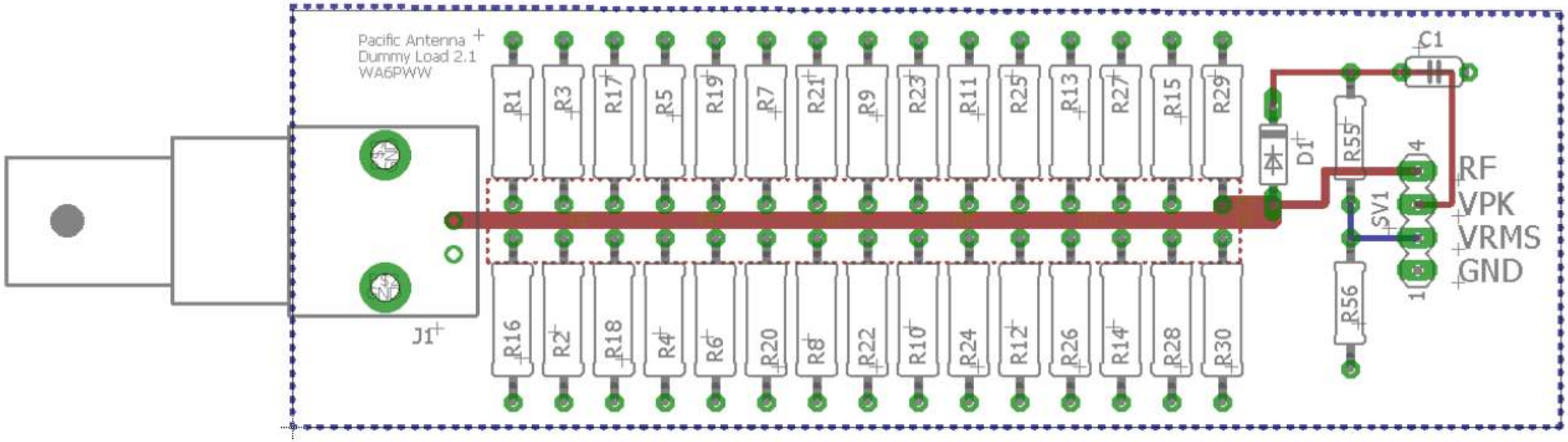


Inspection and Inventory

First, check the kit to be sure all parts are included. Should anything be missing, please contact us for a replacement.

30 – R1-R30, 1.5 K 1/2 watt resistors: Brown-Green-Red-Gold
1 – R55: 41.2K 1/4W, 1% resistor: Yellow-Brown-Red-Red--Brown
1 – R56: 100K 1/4W, 5% resistor: Brown-Black-Yellow-Gold
1 – D1: 1N4148 diode
1 – C1: 0.01uF monolythic capacitor, yellow, (marked 103)
1 – J1: BNC board mount connector
1 – SV1: 4 pin header
1 – Circuit board

Board Layout



Assembly

Install R1- R30
These are the 1/2W. 1.5K ohm resistors and they go in the marked locations shown on the circuit board.

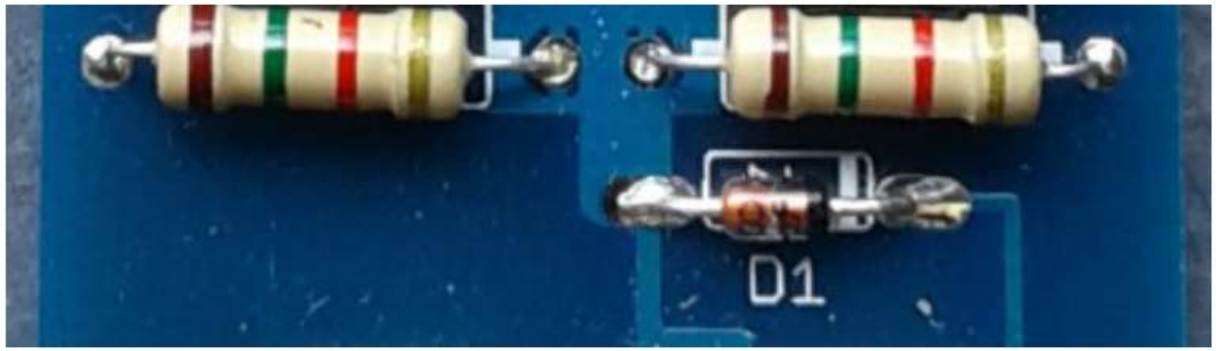
You may find it helpful to do one row of the resistors at a time to make soldering the leads easier.

First, pre-bend the leads near the resistor bodies and then insert them into the board.





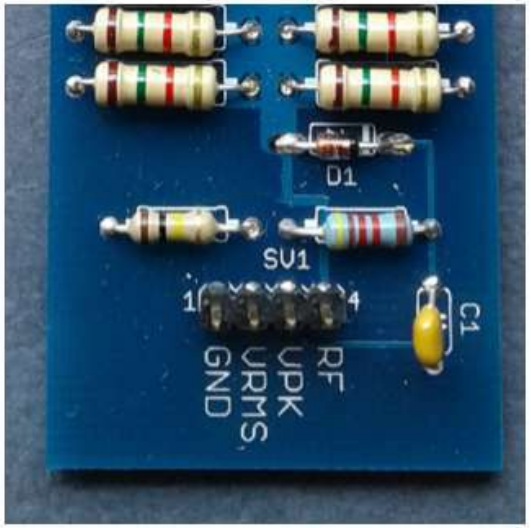
Install, solder and trim the leads of D1. Be sure to match the band end to the diagram above and the outline on the circuit board.



Install R55 the 41.2K ohm (Yellow-Brown-Red-Red—Brown) resistor in the marked location on the board

Install R56, the 100K resistor (Brown-Black-Yellow-Gold) in the marked location on the board.

Install C1 the 0.01uF capacitor in the location marked on the board.

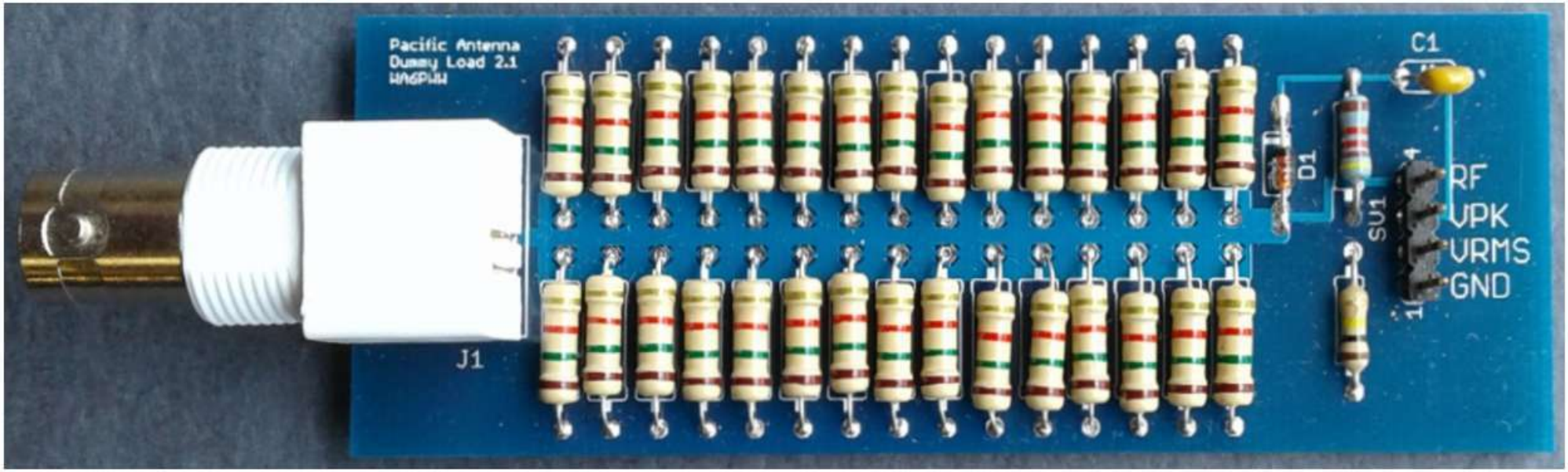


Now, solder the BNC connector, making sure to seat it fully into the board. Solder the two small wires and the two support pins.

The support pins may require longer time, increased temperature or a larger soldering iron to properly solder.



Congratulations, your dummy load kit is now complete!



Operation

The dummy load is easy to use. Simply connect your transmitter input to the BNC

To measure RF Power, connect your multimeter to pin 1 and Pin 2 or 3.

Pin 1 is ground and the DC output voltages appear on pins 2 and 3 of SV1.

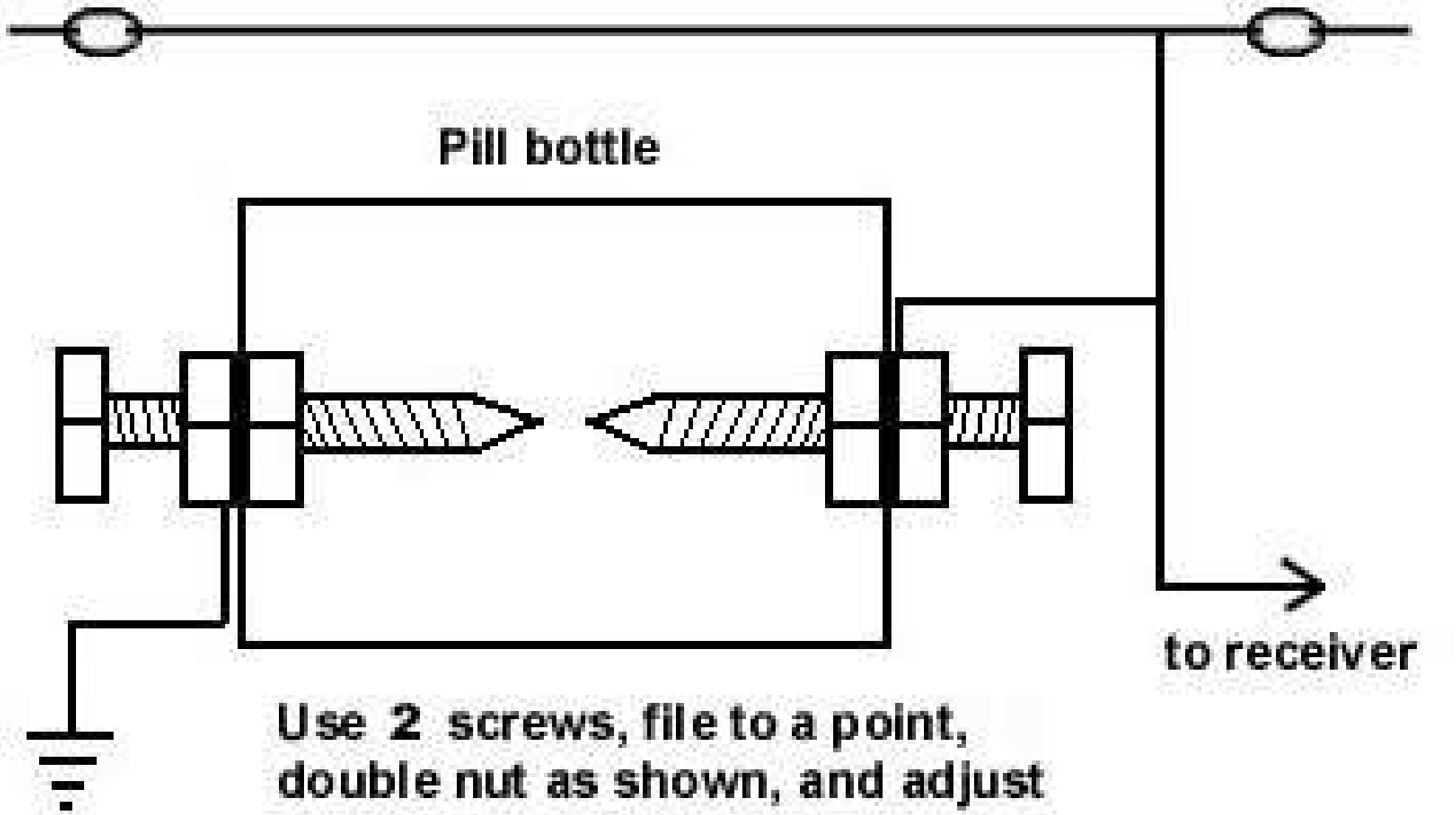
Pin 2 provides the RMS value of the RF voltage.

Pin 3 gives the Peak value of the RF voltage.

Pin 4 is direct RF voltage across the resistors.

RF power is calculated from this relationship: Power = (Vrms^2)/50

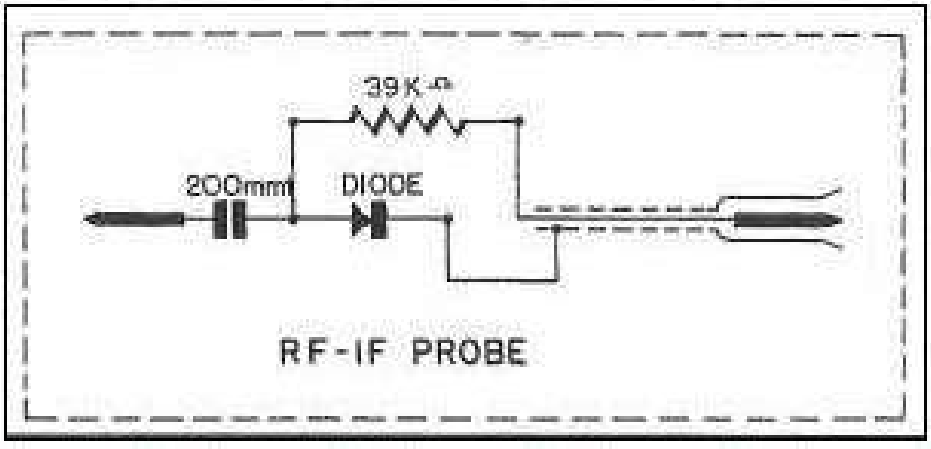
Note: The power input should be limited to 15W to avoid damaging the resistors and sense circuit components.


Pill bottle
to receiver
Use 2 screws, file to a point,
double nut as shown, and adjust
gap to about 1/4"


R.F. BANDS
R.F. BANDS
Signal Generator & Tracer
A.F. ATTENUATOR



Accurate Instrument model 153 and its RF probe schematic
courtesy of John Lescaud.



....Top Quality, Low Prices, Dependable Service

LAFAYETTE COMBINATION SIGNAL GENERATOR AND SIGNAL TRACER

NOT A KIT — FACTORY WIRED AND TESTED

SIGNAL GENERATOR

- Covers From 250 KC to 120 MC in 5 Bands
- High Stability Electron Coupled Oscillator
- Attenuator For Both RF and Audio Circuits

SIGNAL TRACER

- Hi-gain Cascode Pre-amplifier
- Front Panel Output For VTVM, Scope or Phones
- Low Distortion Triode Output Stage
- Separate R.F. and Audio Signal Probes



Two test instruments in one! The Signal Generator will serve as a full service instrument and the Signal Tracer will follow any signal whether generated by a broadcasting station or injected by the Signal Generator section. When used in combination, with no dependence on outside signals, the unit provides ideal service, for unlike any standard signal tracer, it first injects its own signal then traces that controllable signal to locate the source by standard signal tracing technique. Designed for use with AM, FM, TV and audio circuitry. Features 5 frequency ranges and an attenuator switch to control both the R.F. signal (either modulated or unmodulated) and the 400 cycle audio tone. Front panel output jacks which can be used for oscilliioscope, VTVM or earphone connections. Housed in a beautiful crackle finish steel cabinet with a deep etched aluminum panel. Dimensions: 7½x9½x5¾". Complete with 2 probes. Shpg. wt., 9 lbs.

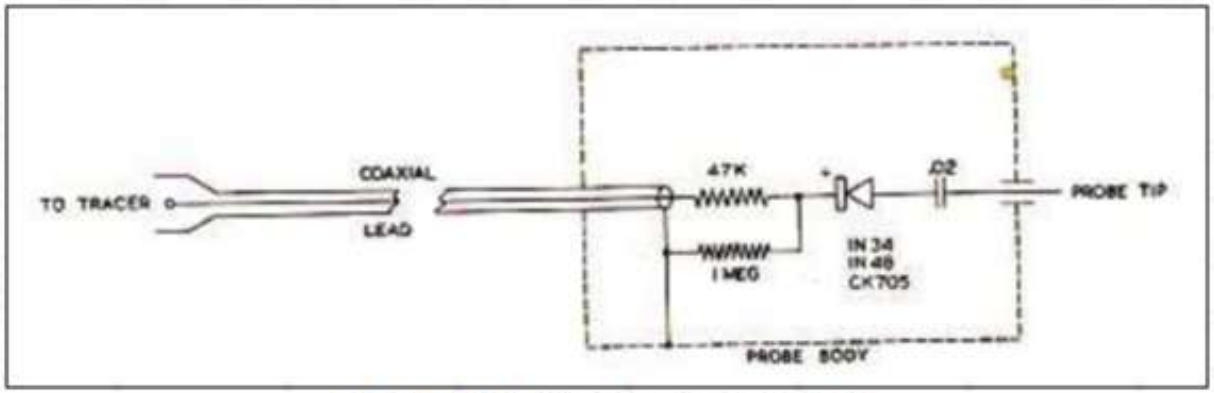
99 R 0102 ..... Net 24.95

SPECIFICATIONS

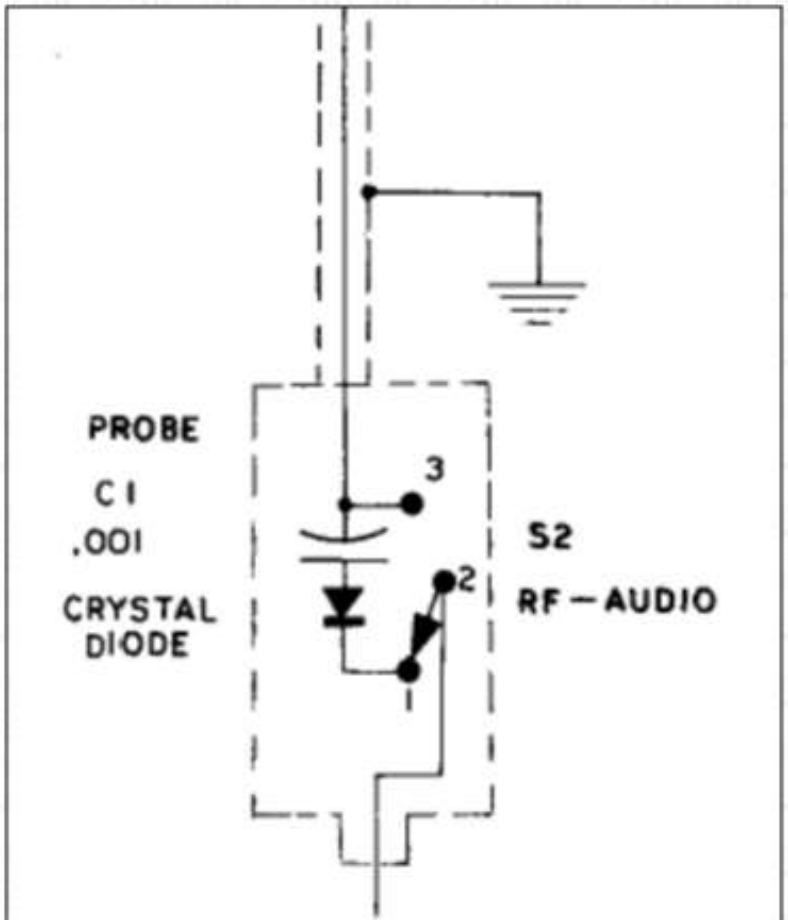
RANGE: Band A: 250KC to 850KC; B: 850KC-3000KC; C: 3.0MC to 11MC; D: 11MC to 45MC; E: 35MC to 120MC; 400cps audio signal; modulation slide switch, RF-AF attenuator and power switch; Signal output jack; AF input jack. 2 Preamp. output jacks. 4½" alnico 5 speaker. Tubes: 5687, 6350, 6AG5 plus sel. rectifier.

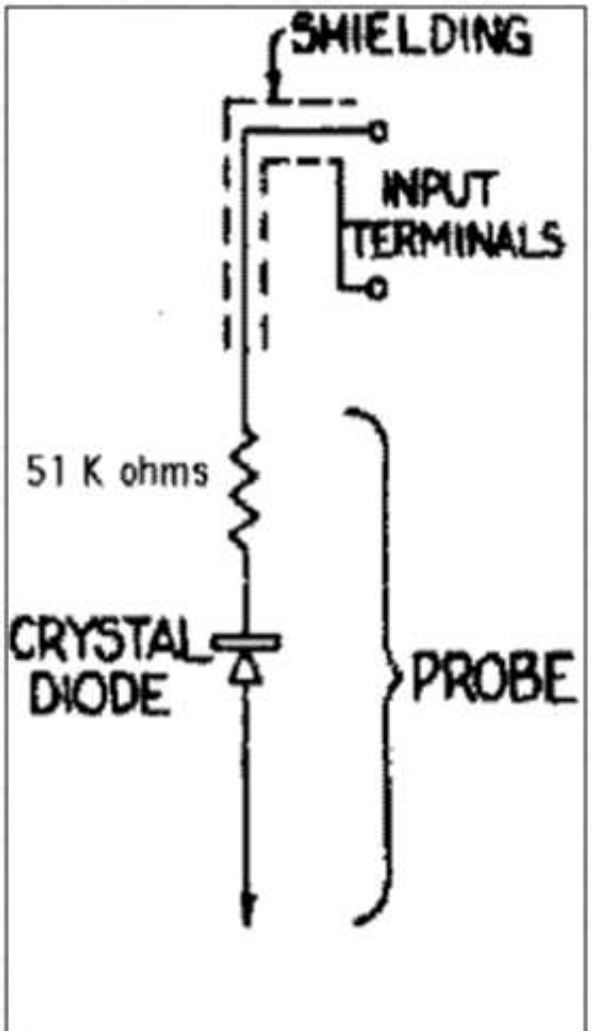
ONLY 24.95

Made in U.S.A.

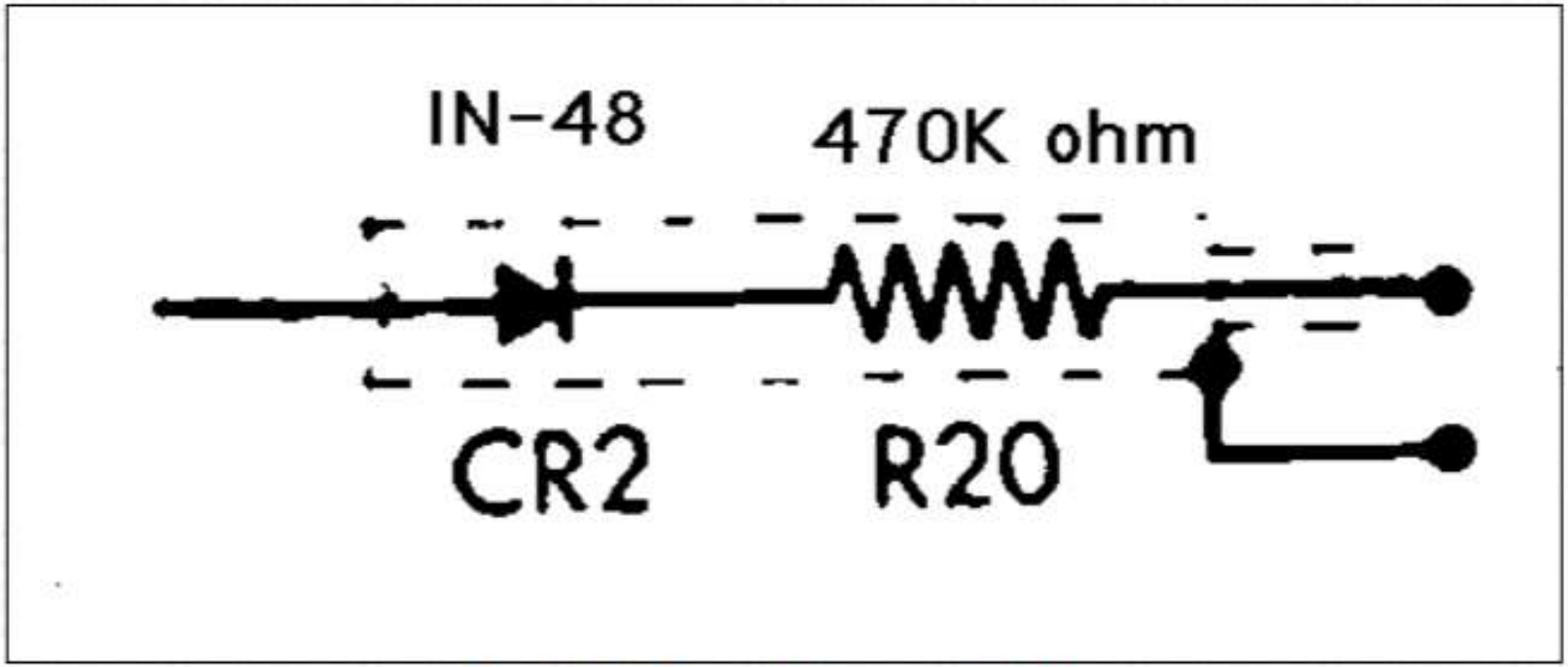


Heath T-3 signal tracer probe

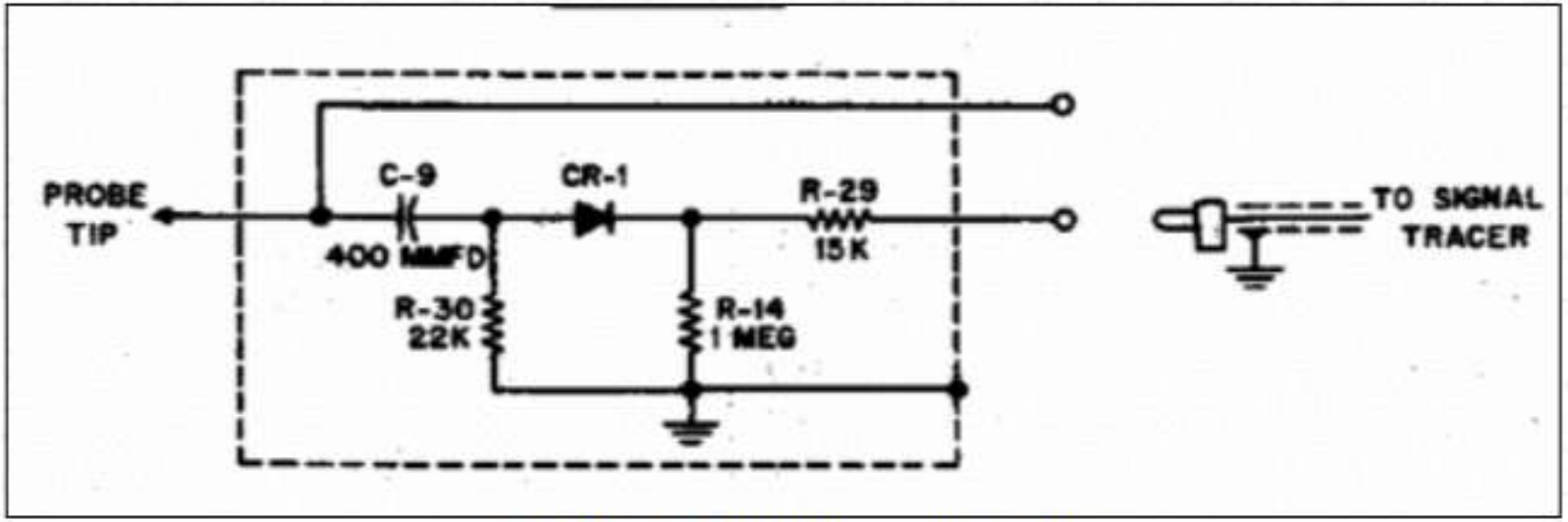




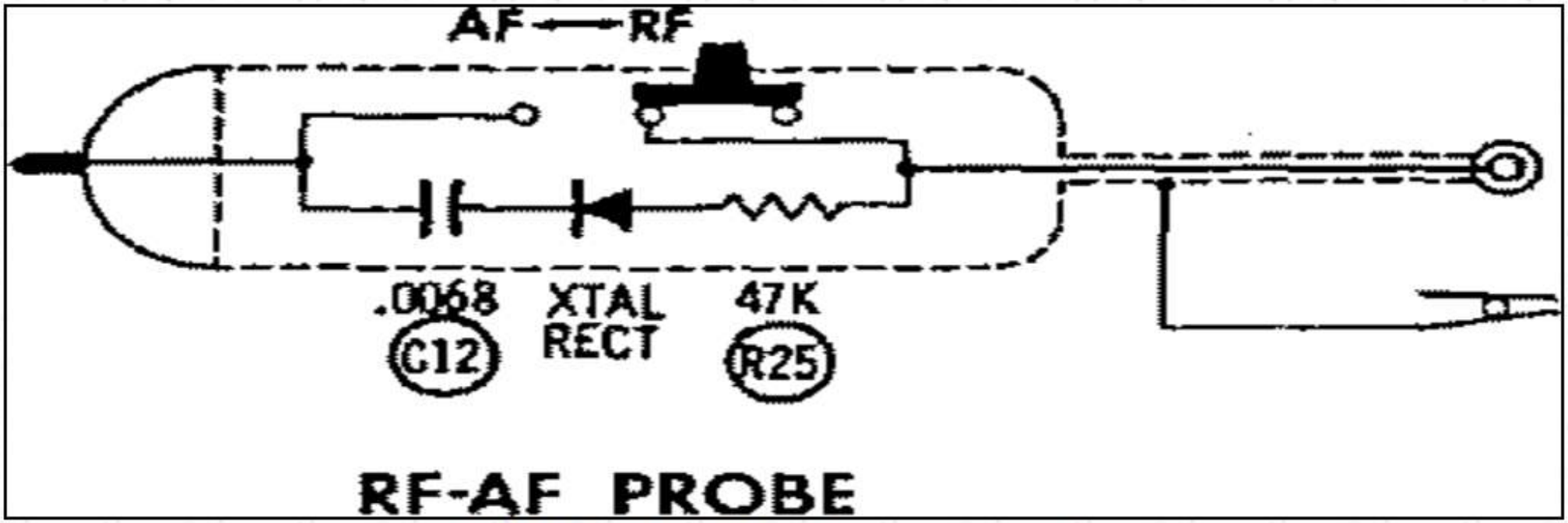
Heath T-4 or IT-12 signal tracer probe (left) - - - - Eico 145 signal tracer probe (right)



Eico 147a signal tracer probe



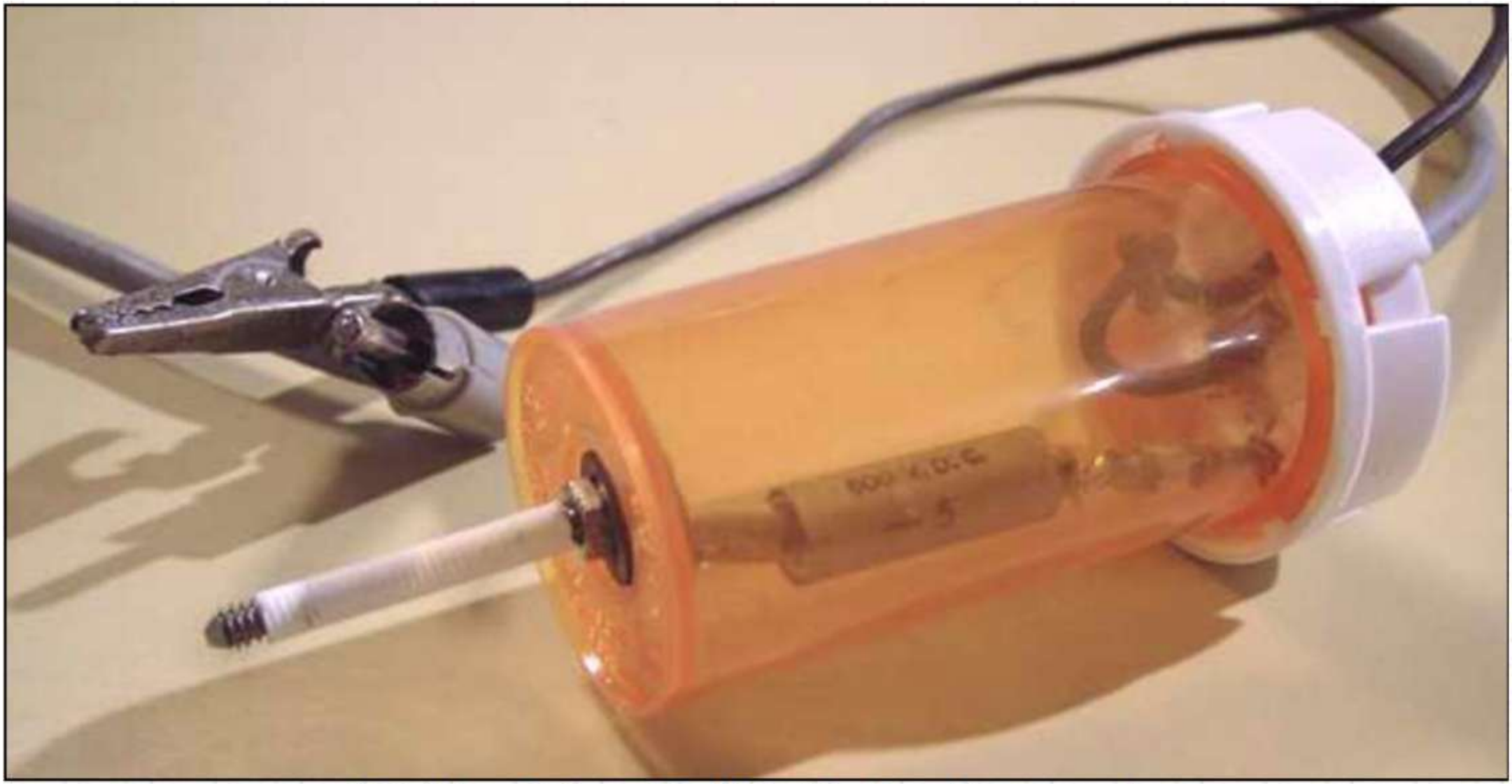
Knight-kit signal tracer probe



PACO Z-80 signal tracer probe



Pill bottle signal tracer probe



KIS (Keep It Simple) pill-bottle signal tracer probe

As you can see in figures 3 and 4, there is not much to this $120V_{AC}$ to $12V_{DC}$ adaptor.

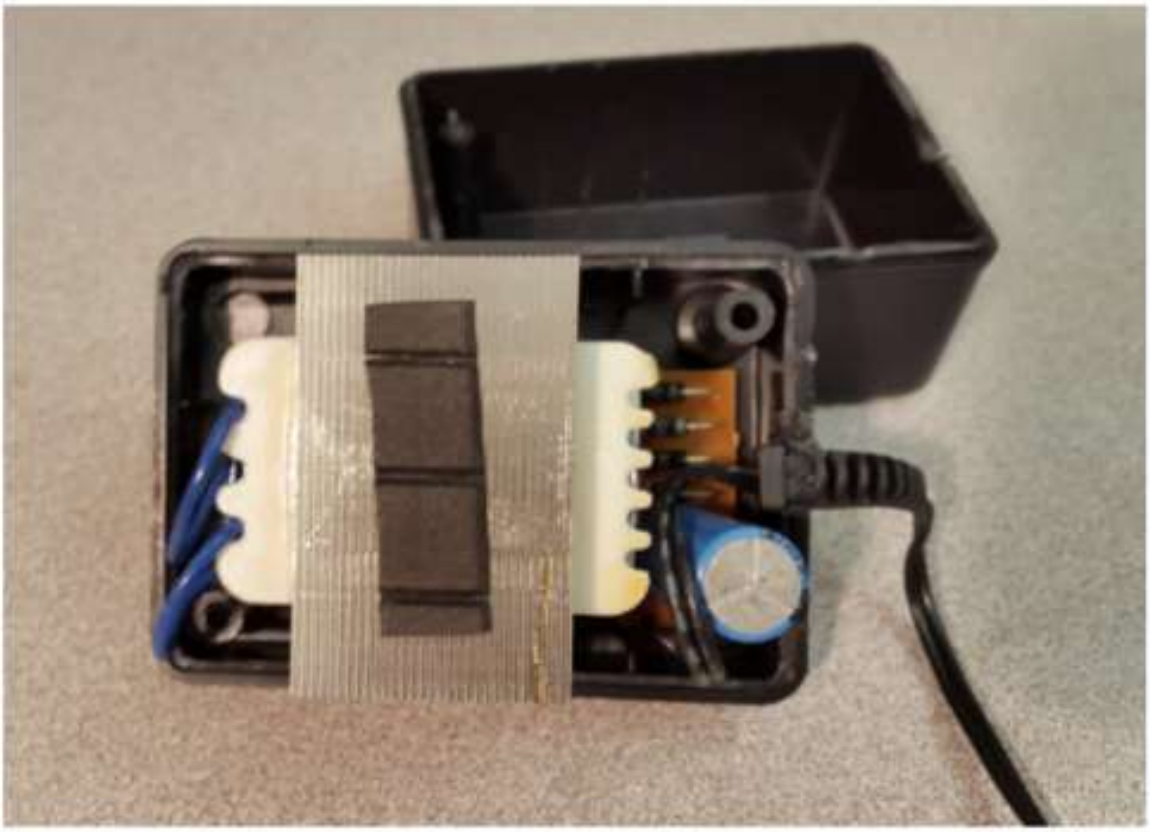


Figure 3. Top View of the Inside of the AC Adaptor



Figure 4. AC Adaptor Components Spread Out

The Bridge Rectifier

The next stage in the wall adapter is the bridge rectifier. This device takes the AC output of the transformer and converts it into a DC voltage. It does this using an arrangement of diodes that force the current to pass through the load in one direction only. Figure 8 shows the diodes in the adaptor along with a schematic representation of how the diodes are connected together.

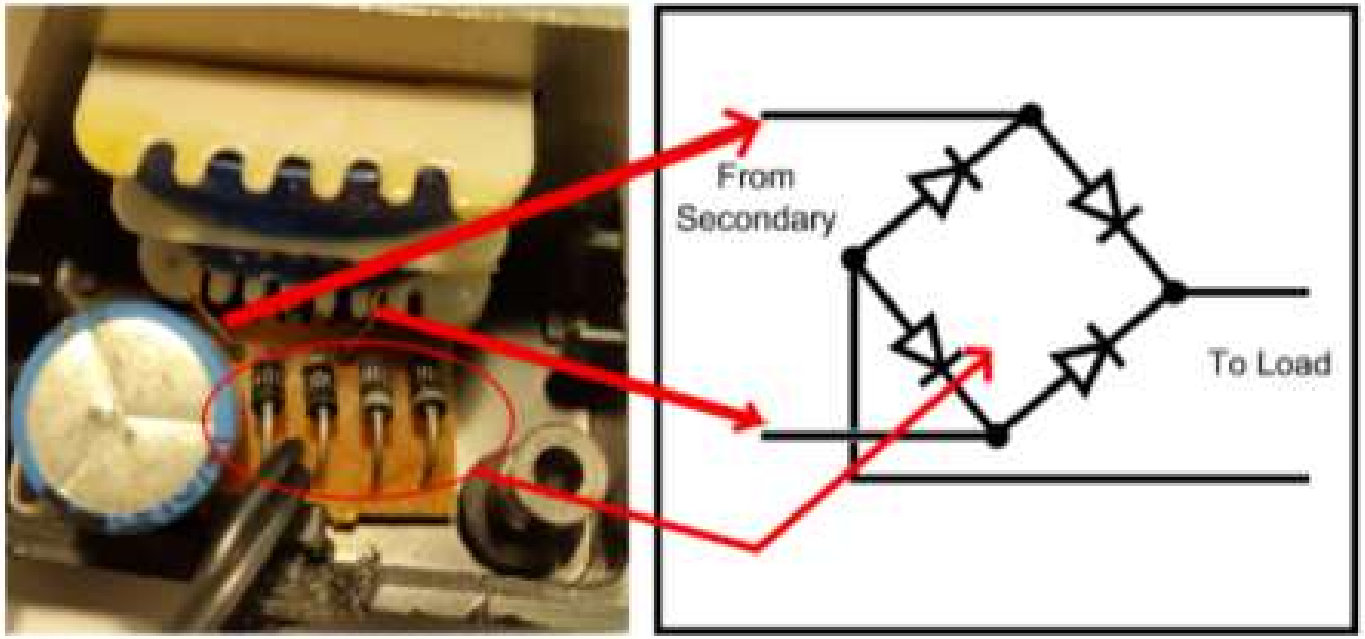


Figure 8. Full Bridge Rectifier Circuit and Schematic

The bridge rectifier in this wall adapter is made of four individual diodes (part number 1N4001), but sometimes the rectifier is a basic integrated circuit with the four diodes manufactured all in one device like in figure 9.

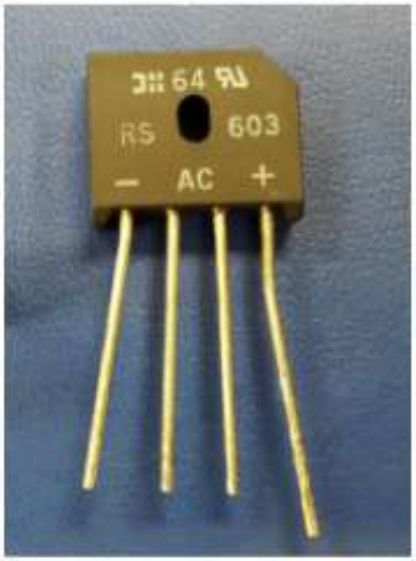


Figure 9. Bridge Rectifier in an IC

The output of the rectifier is only DC in the sense that current to the load is forced in one direction. The voltage is still varying a large amount as can be seen in figure 10. Effectively what the rectifier did was to take the negative portion of the voltage and flip it around to make it positive as shown in the figure below. The voltage still swings between 0V and the peak. Further processing must be done on the voltage to minimize the voltage swing and that is what the next stage does.

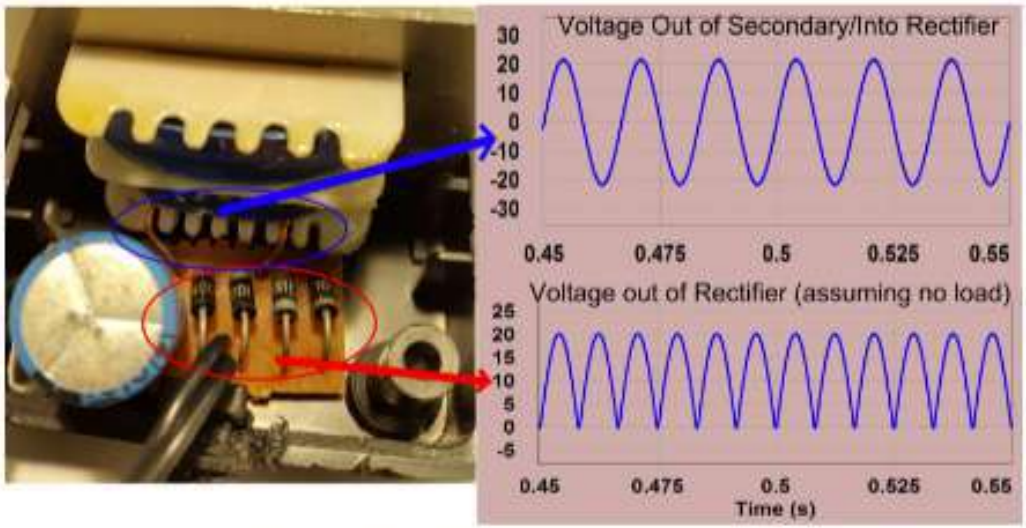


Figure 10. Rectifier Circuit Showing Input and Output Voltages.png

The Capacitor

The next problem to solve is how to take that varying voltage and smooth it out so that the load receives a more or less constant voltage. The main component in this fight against this ripple is the capacitor. The capacitor is the tall blue cylindrical component in figure 11 below:

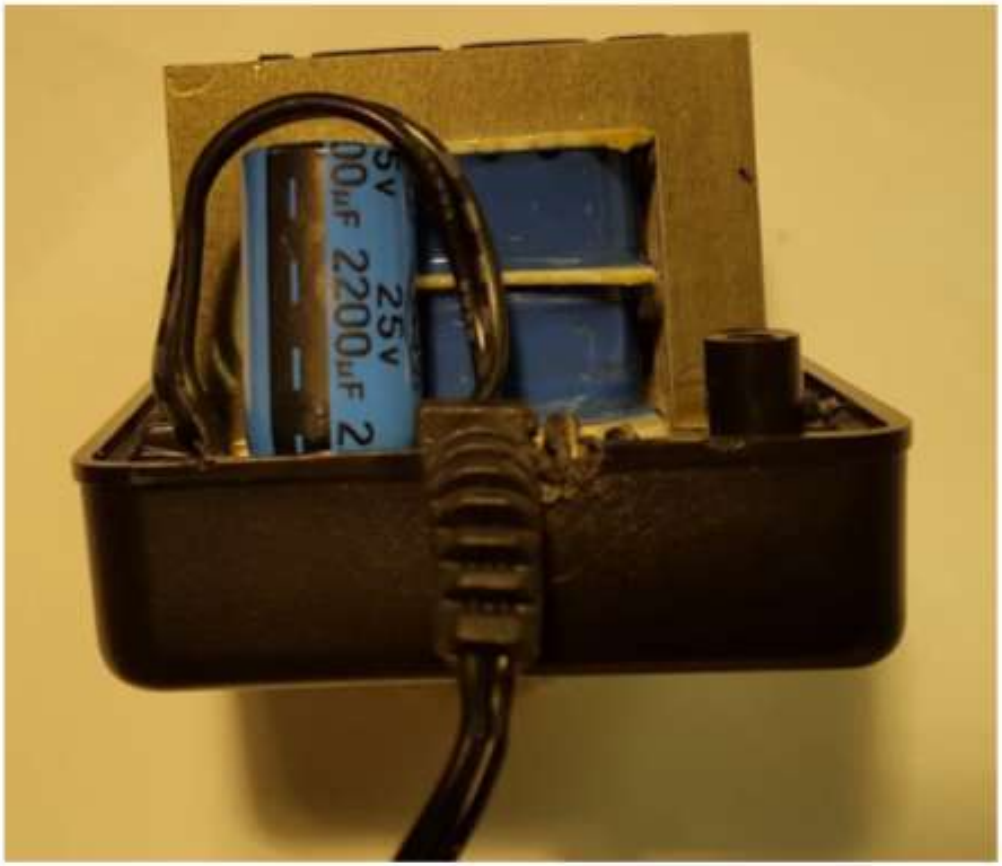


Figure 11. Capacitor in AC Adaptor

The capacitor in this wall adapter is a 2200 uF electrolytic capacitor. Electrolytic capacitors are typically used because it is possible to have a relatively high capacitance (100s or even 1000s of uF) and reasonable voltage tolerance (10's of volts) at an affordable price. For example, a quick search on an electronic component supplier's website shows me that a 2200 uF capacitor that can tolerate up to 50V is under $3 if it is an electrolytic capacitor and more than $250 if it is a film capacitor. The primary downside of electrolytic capacitors is that they have a much shorter life expectancy than film capacitors. In fact electrolytic capacitors are likely to be the component that fails first in any electronic system. Generally manufacturers

Transformer

Figure 5 shows the same adaptor seen from the side. The blue wires on the right are the inputs from the two-prong wall connection and they connect directly to the primary of the transformer. The output from the secondary can be seen at the lower left of the transformer as two small copper wires. The purpose of the transformer is to step the AC voltage down from the $120V_{RMS}$ from the wall outlet to a voltage that is closer to the required DC voltage.

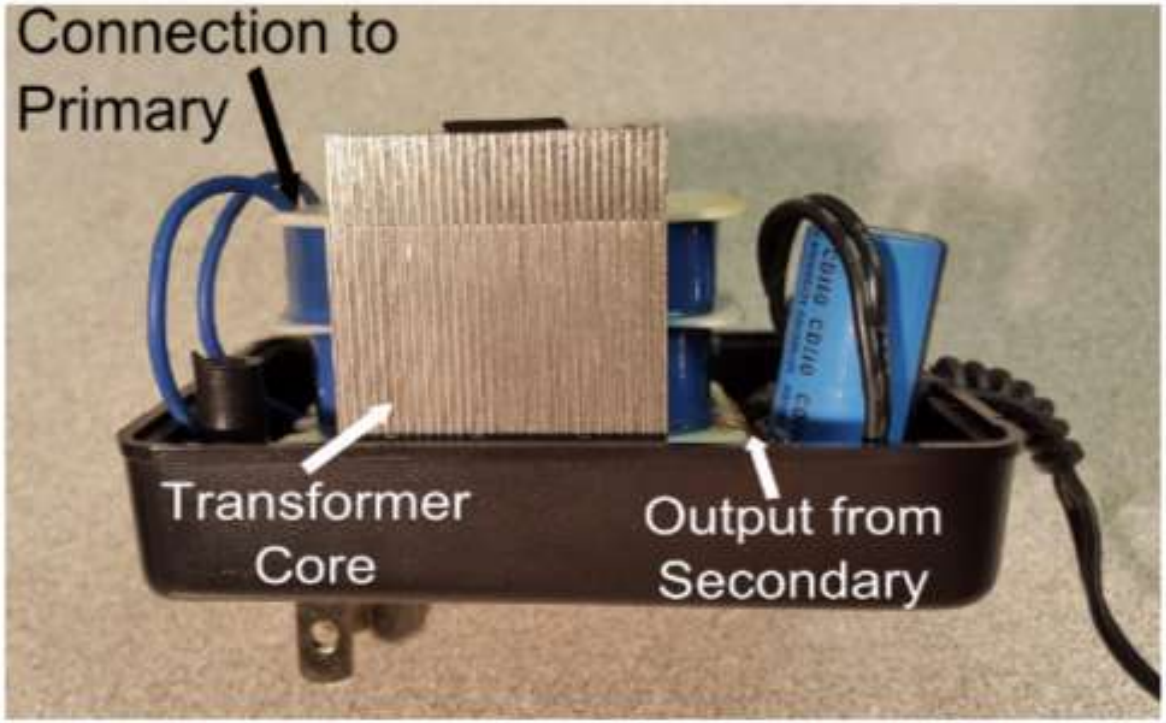


Figure 5. Side View of AC Adaptor with Transformer Labeled

If you ignore all of the non-ideal properties of transformers, they are very simple devices. The general idea is that there are two (usually large) coils of wire that are electrically isolated, but magnetically coupled together. The input side of the transformer is called the primary and the output side is called the secondary. Alternating current passes through the primary coil which creates an alternating magnetic flux in the transformer core. This alternating magnetic flux in turn induces a voltage in the coils of the secondary. The ratio of the number of loops in the primary coil to the number of loops in the secondary coil is equal to the ratio of the input AC voltage to the output AC voltage. In equation form this relationship is:

Full Circuit Recap

The preceding sections of this article show that the transformer, the rectifier and the capacitor are all that are required for a basic AC-DC converter. This final picture and schematic shows the end to end voltage processing done by the converter as it converts AC voltage into DC voltage.

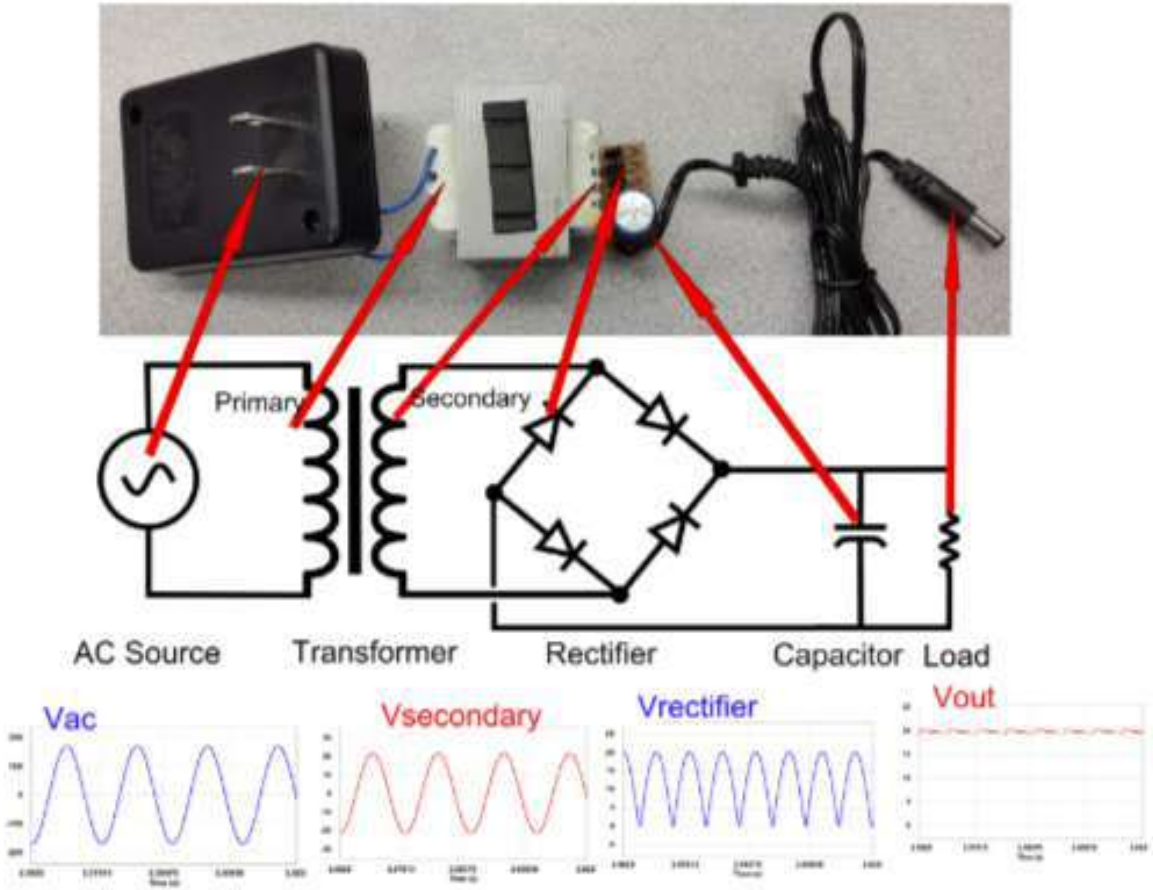
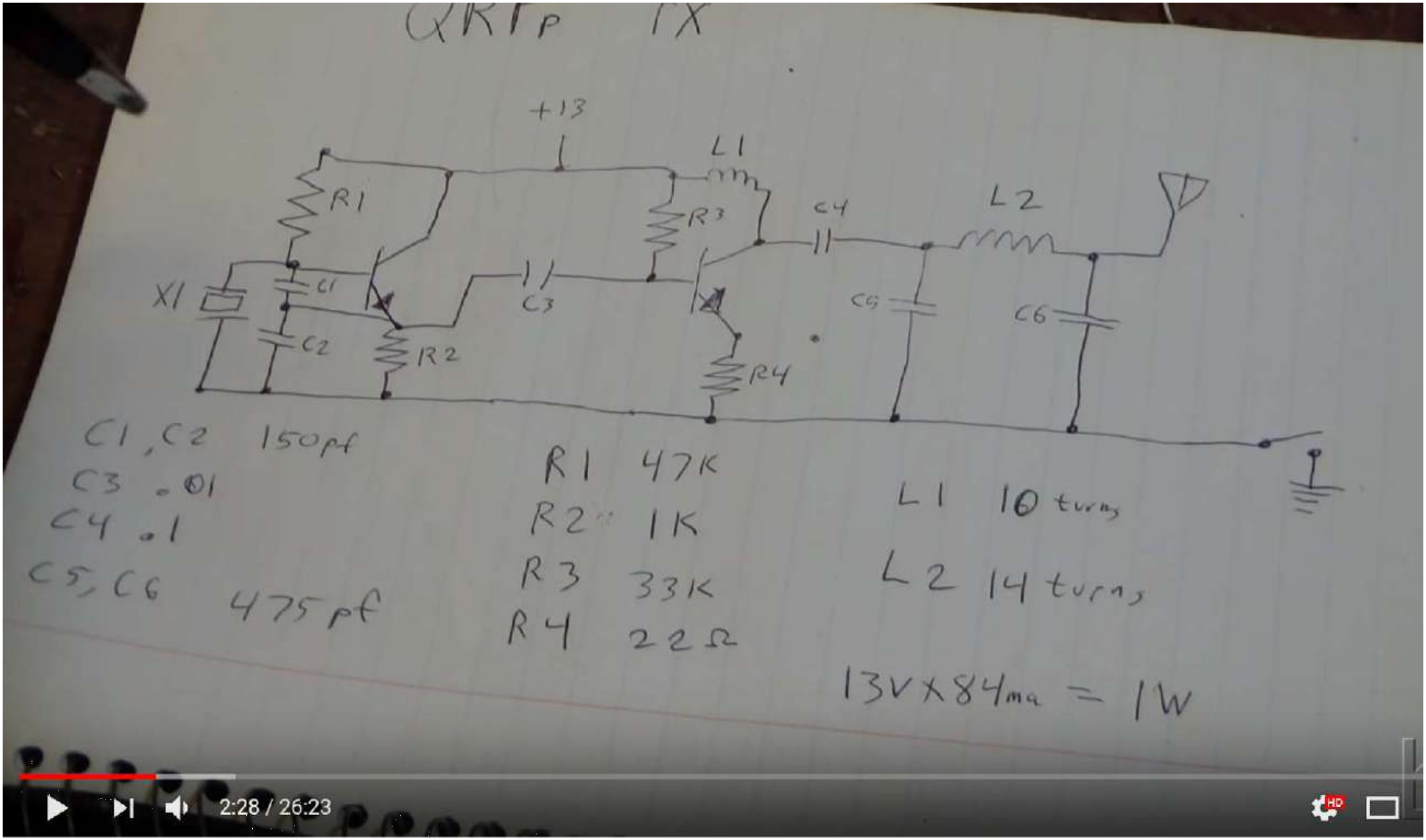
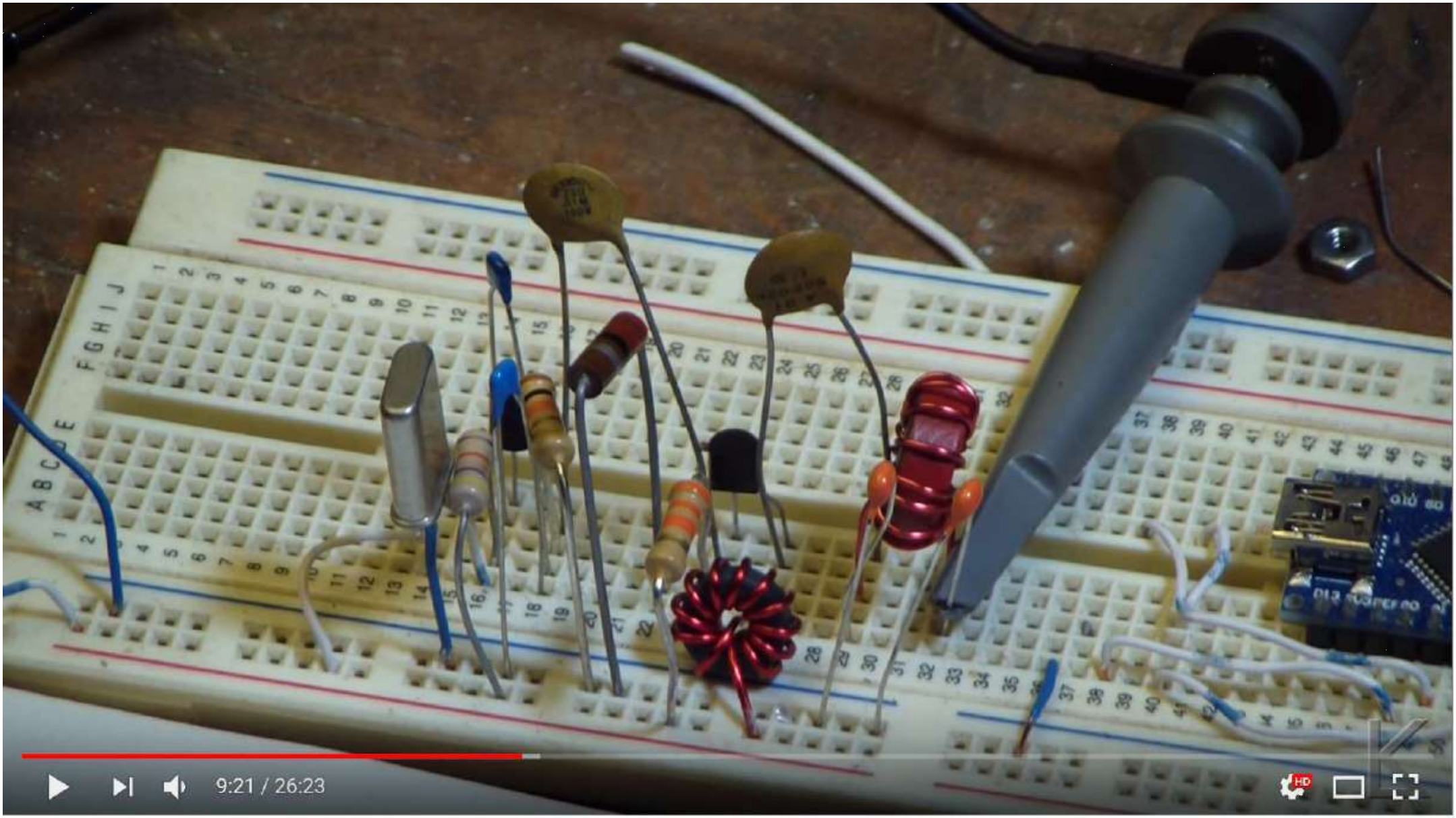


Figure 14. AC Adaptor, Schematic and Voltages

From this picture it looks like we get a reasonably steady DC output voltage given a $120V_{RMS}$ AC input voltage (note that the output is unregulated, so with no load, the DC voltage is actually higher than the rated 12V). For this 20 watt AC-DC converter, as long as the voltage ripple is meeting your specifications, there is not much more that you need to worry about. However, as mentioned earlier, there can be problems at higher powers due to the large in-rush current to the capacitor as it is recharged. These problems will be analyzed in part 2 of the rectifier investigation.

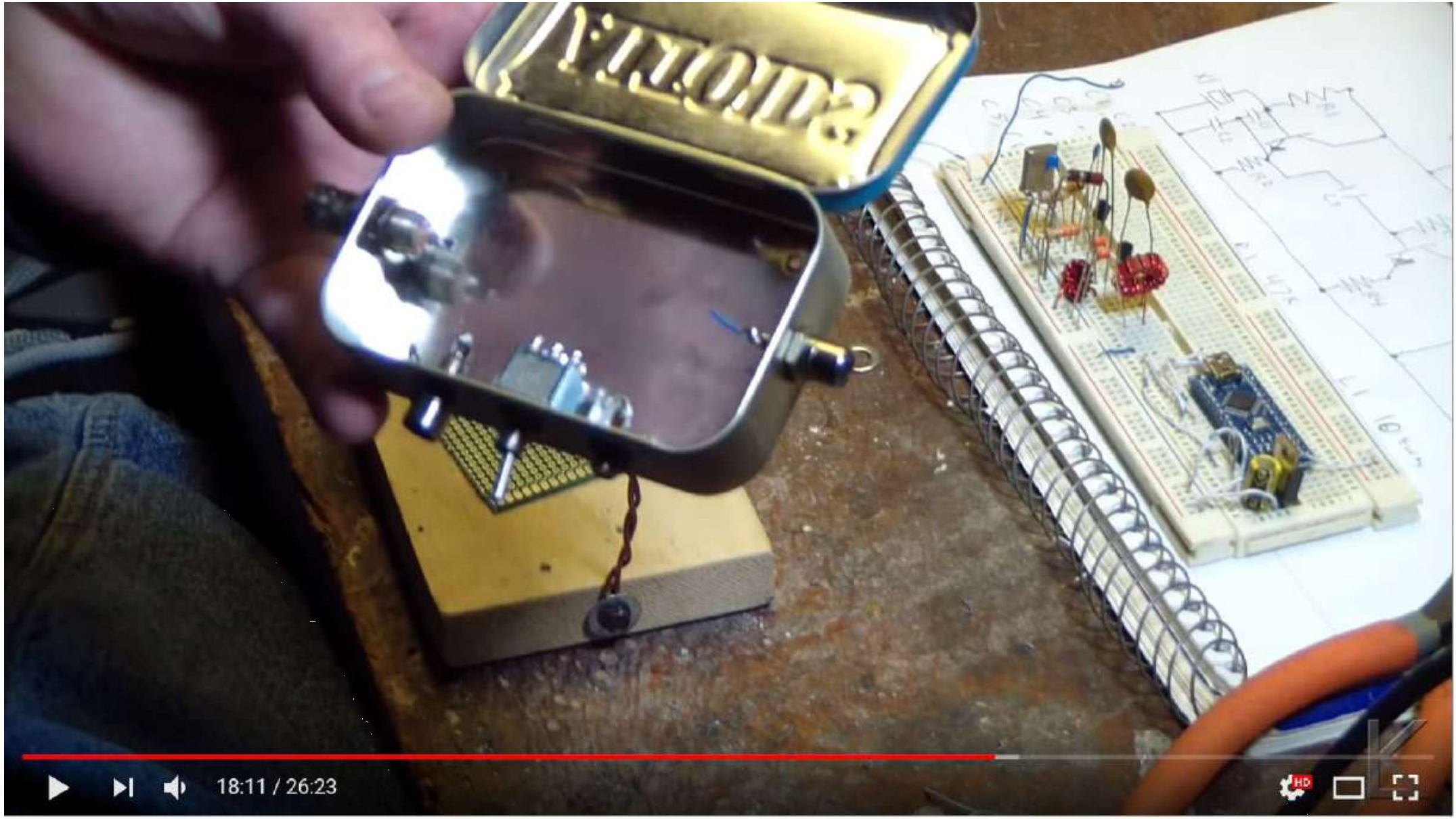


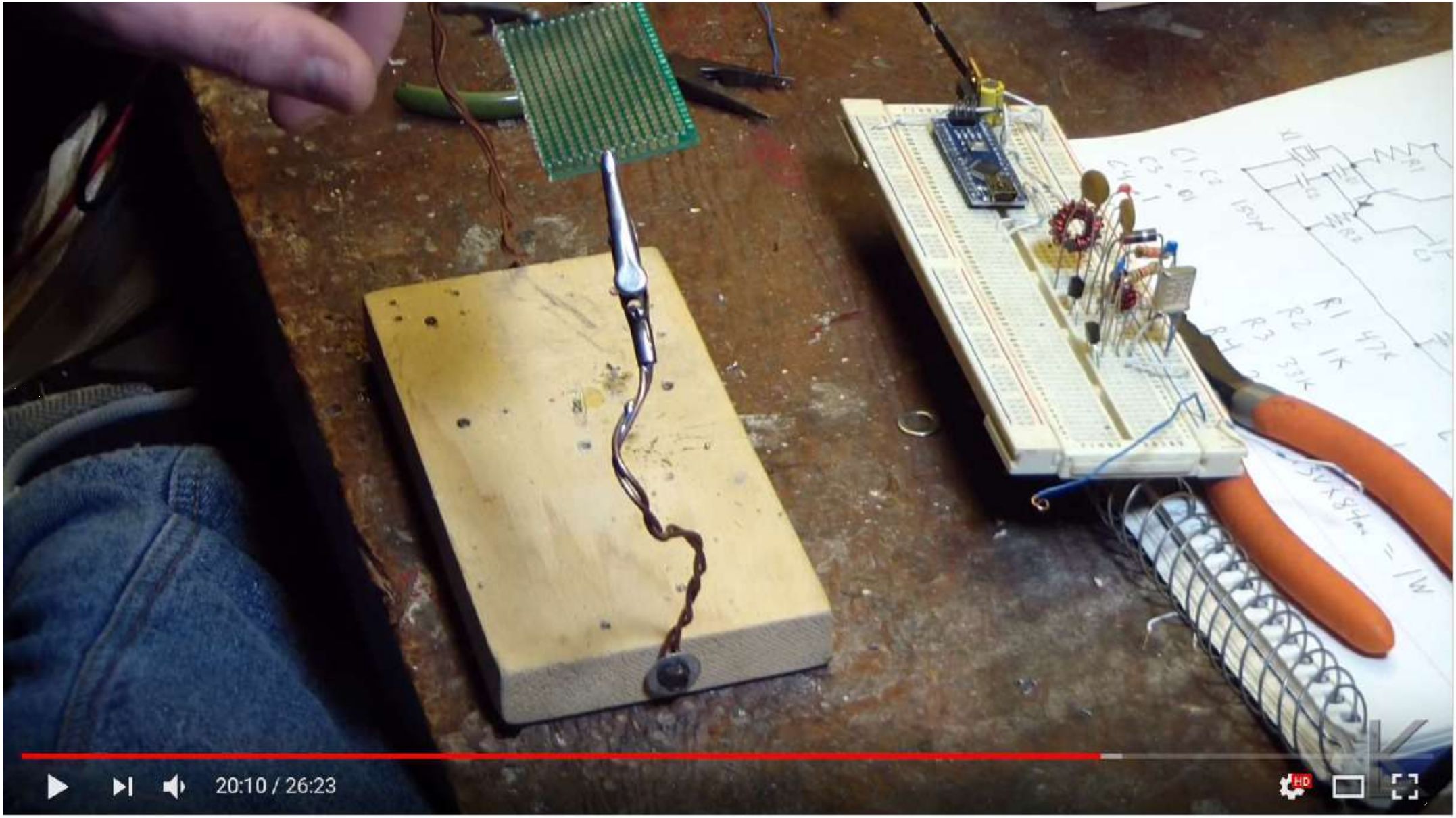
Ham Radio - Build your own QRPp CW transmitter

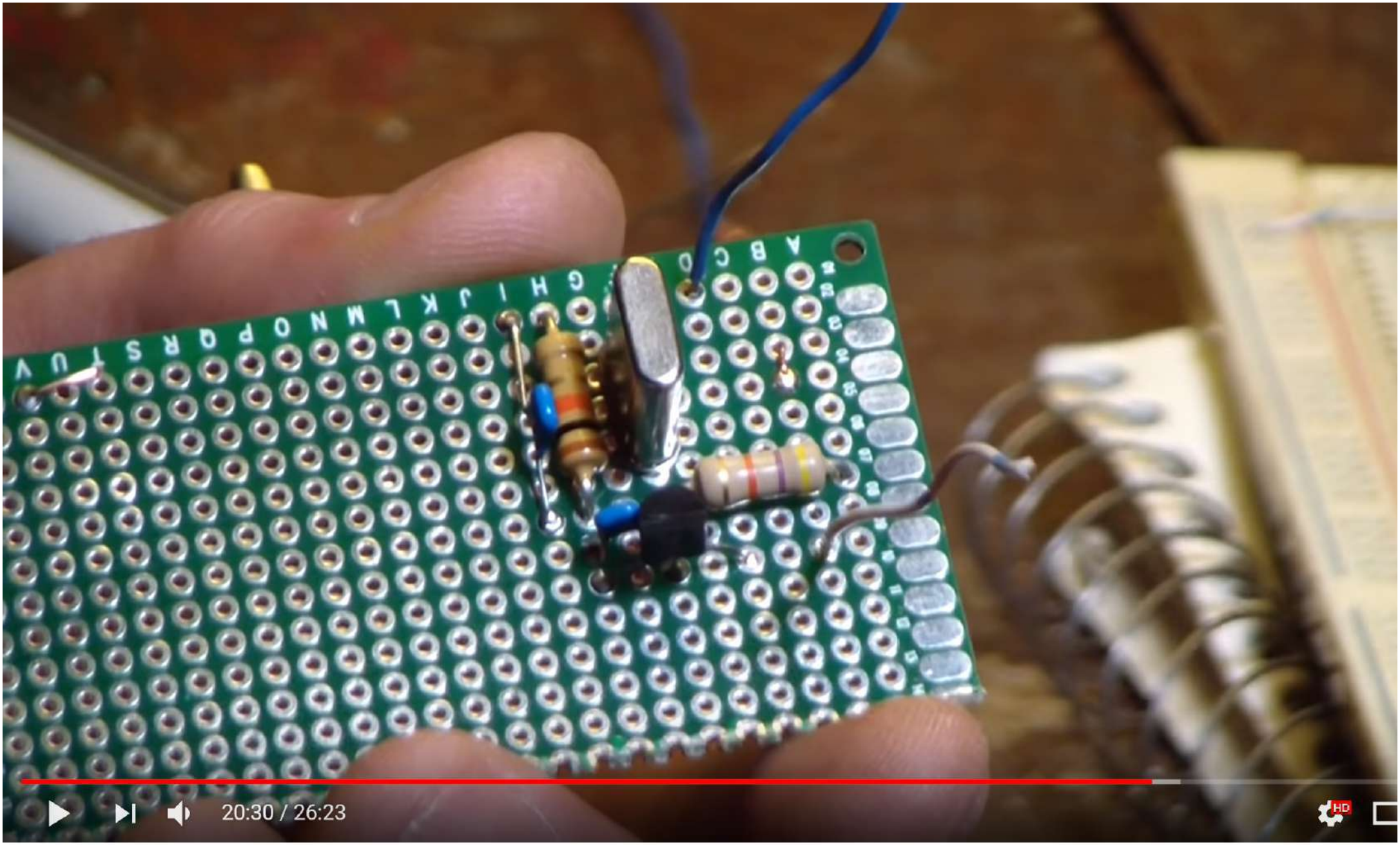

9:21 / 26:23

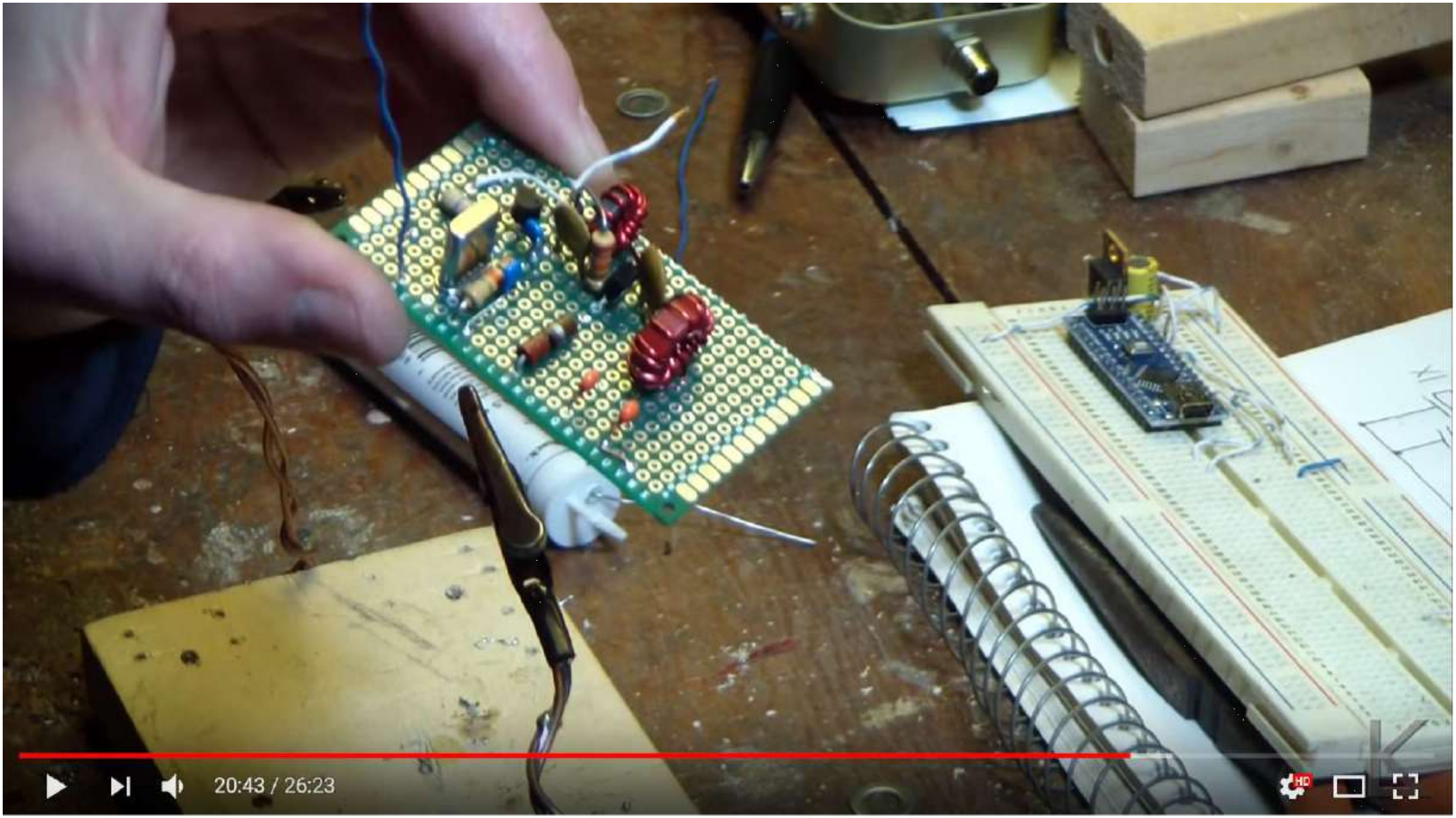

QRPp TX
+13
L1
R3
C3
R2
R1 47K
R2 1K
R3 33K
R4 22Ω
1W
14:20 / 26:23

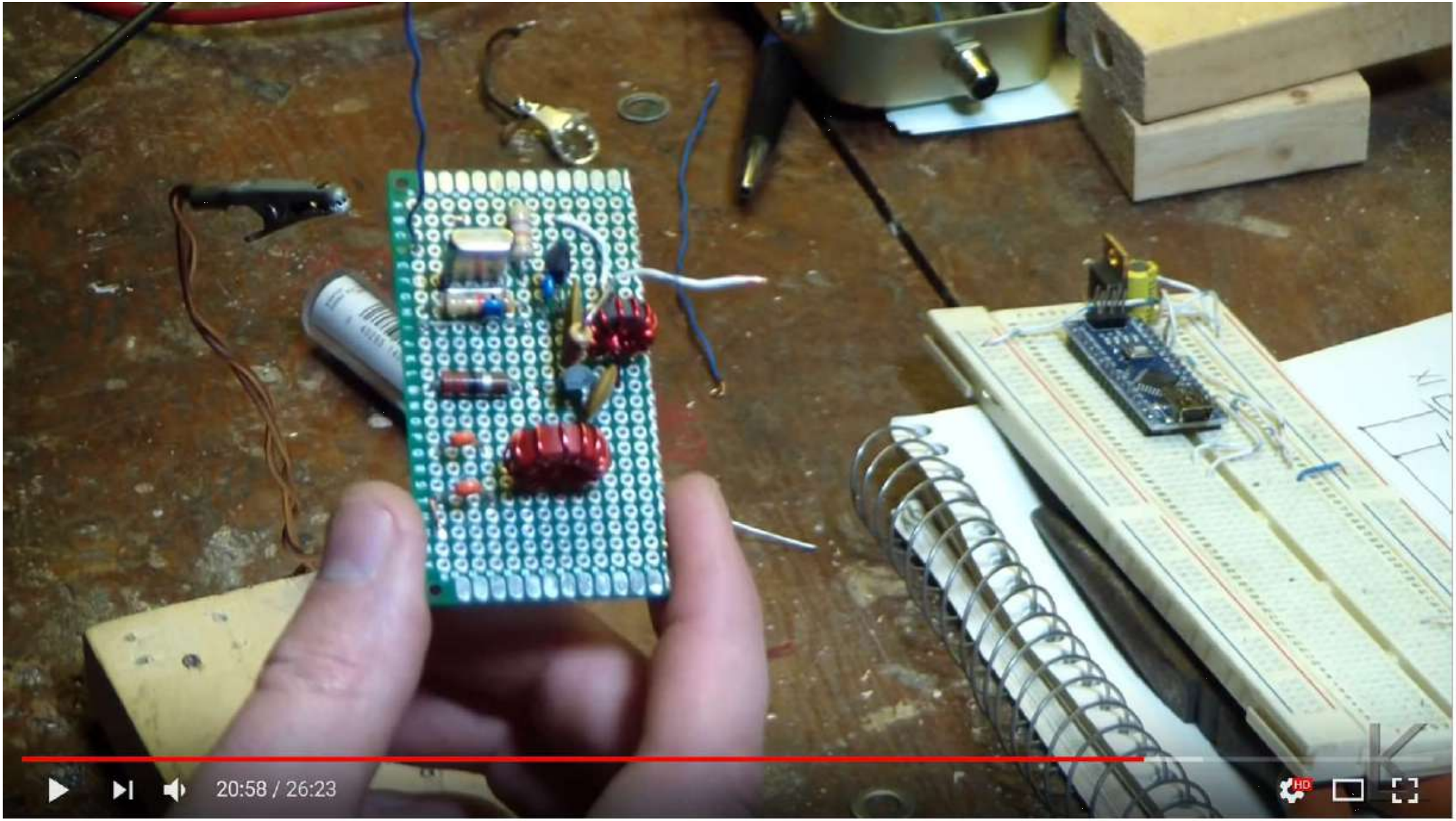


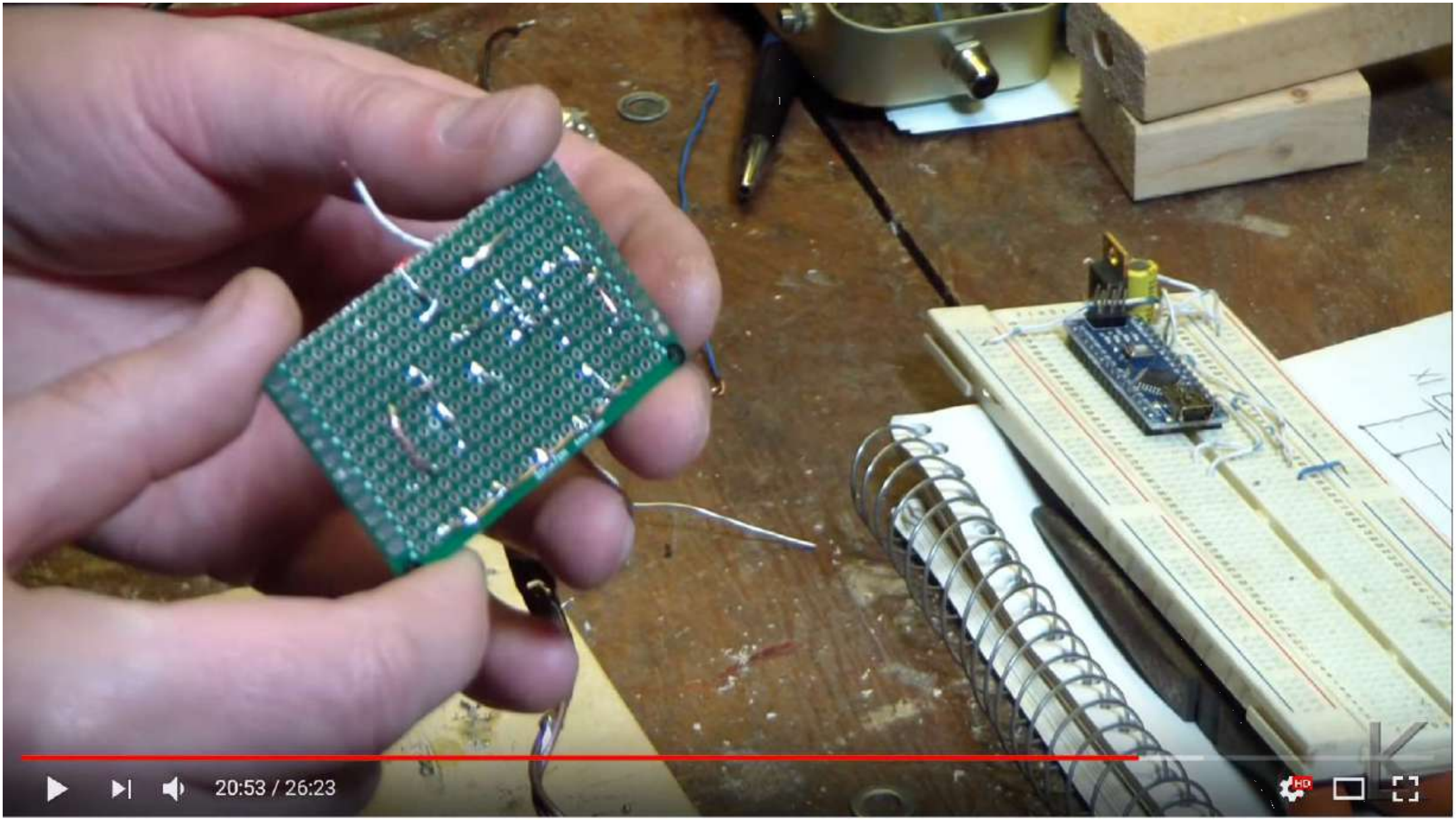

18:11 / 26:23

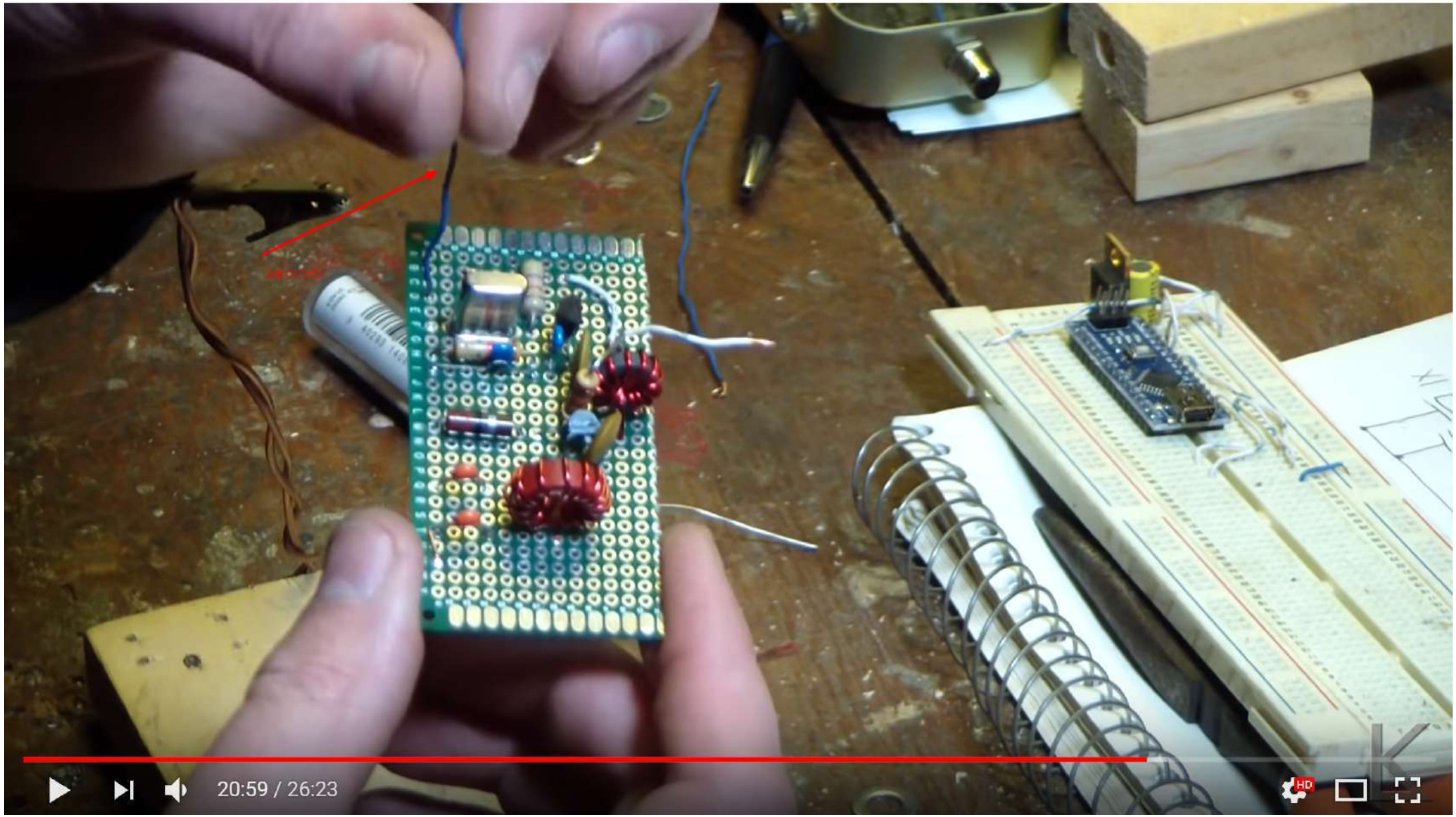

20:10 / 26:23

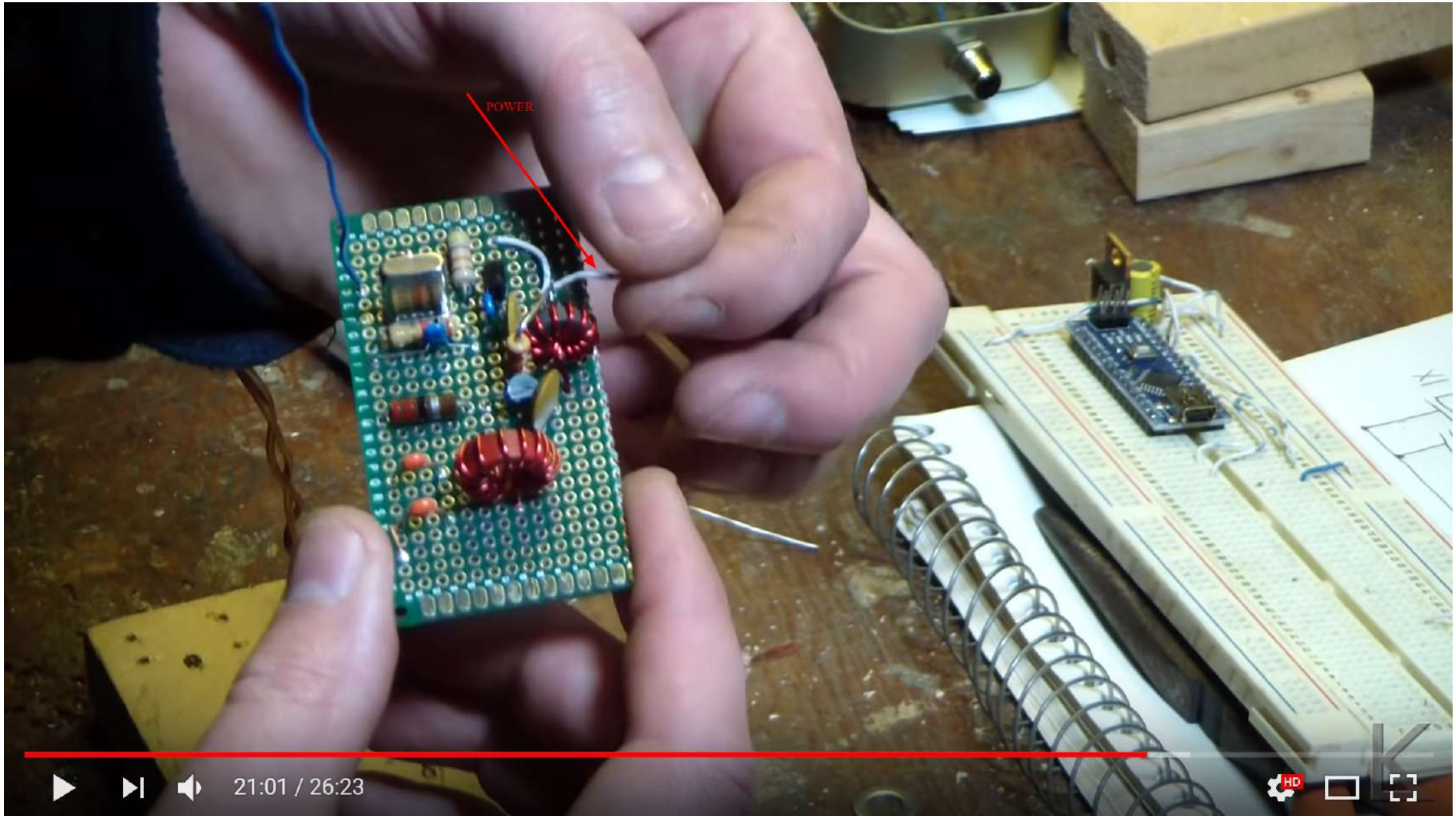

20:30 / 26:23


20:43 / 26:23


20:58 / 26:23


20:53 / 26:23

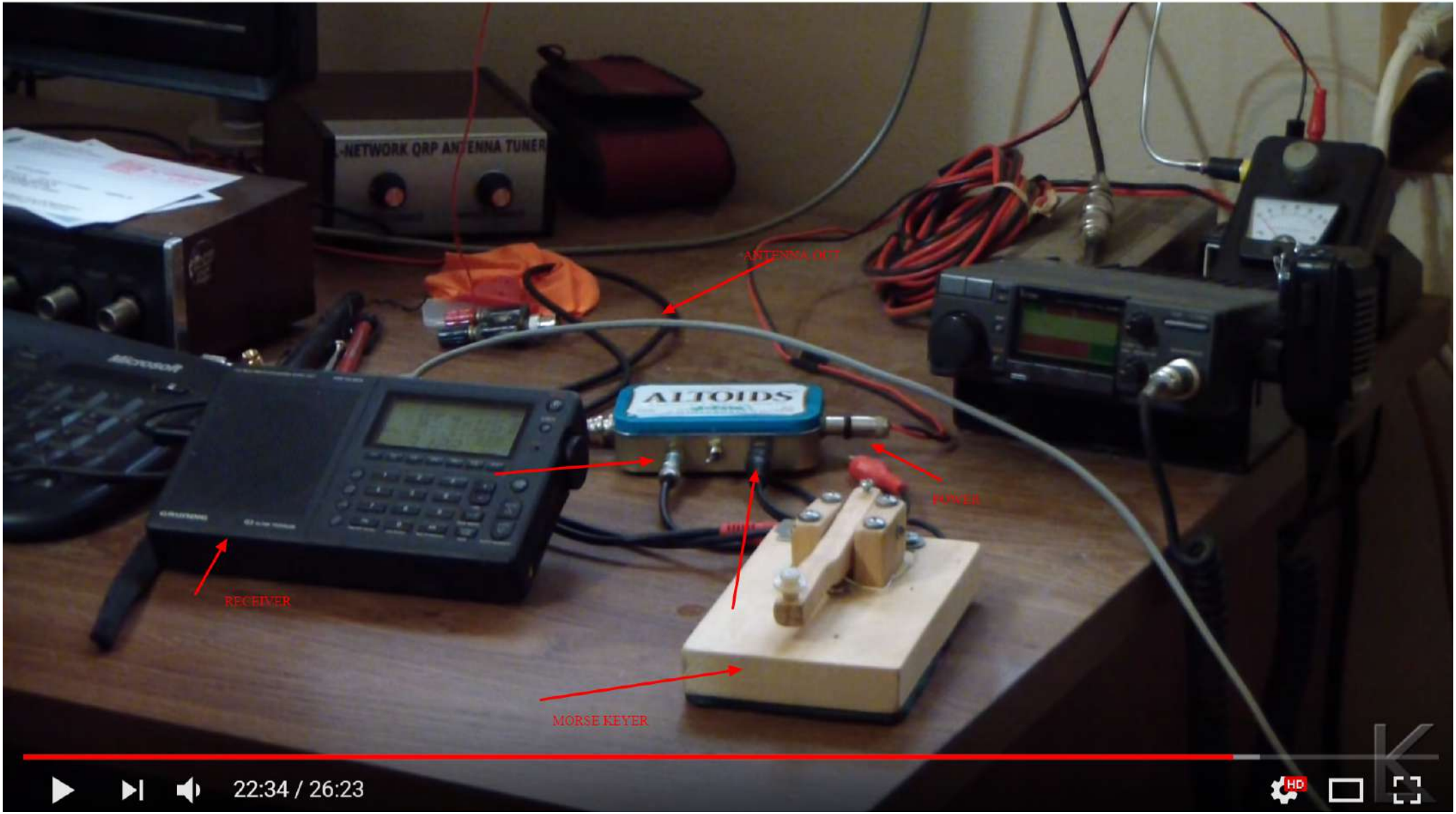

20:59 / 26:23


POWER
21:01 / 26:23

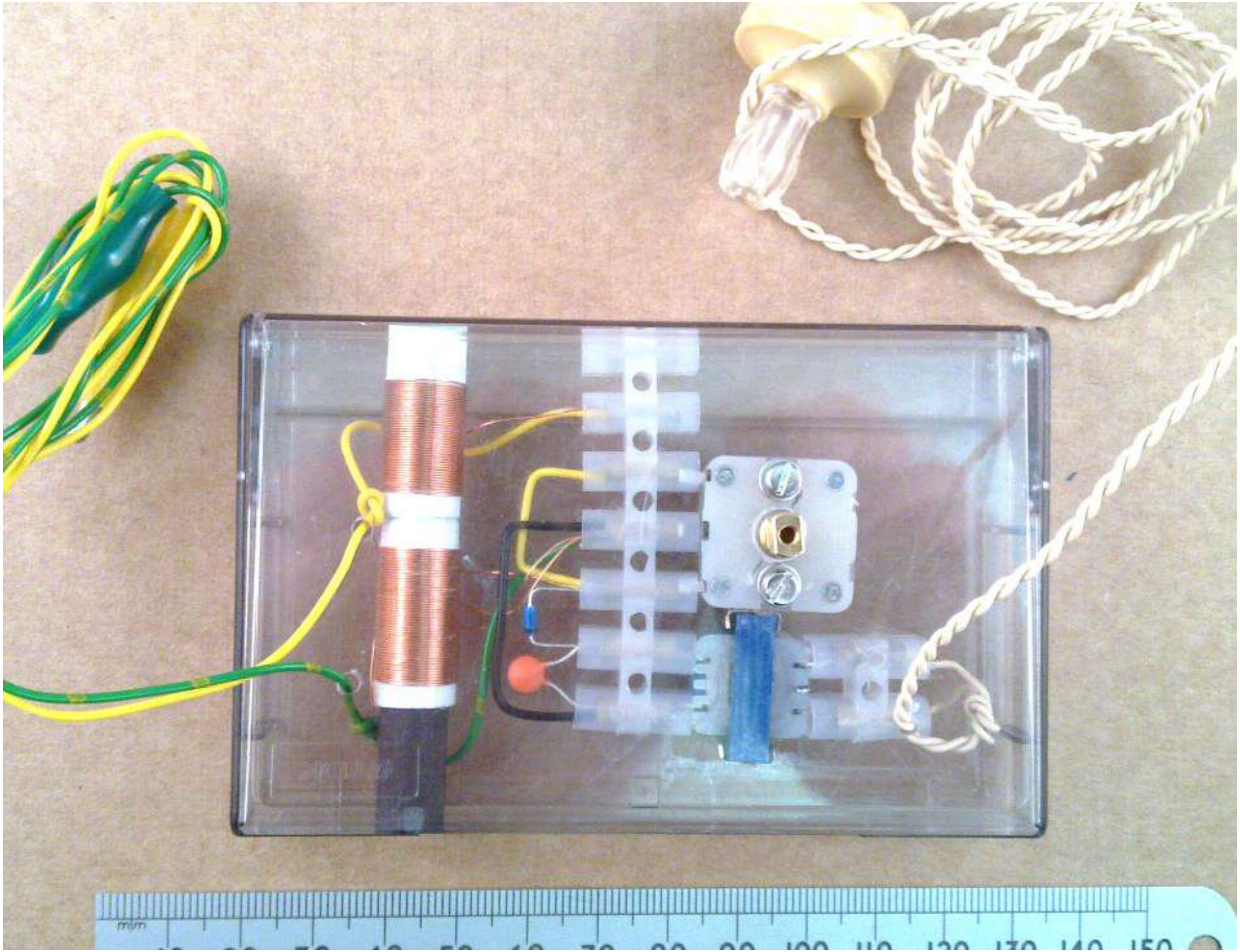

VIDEO
ANTENNA LEAD
21:35 / 26:23

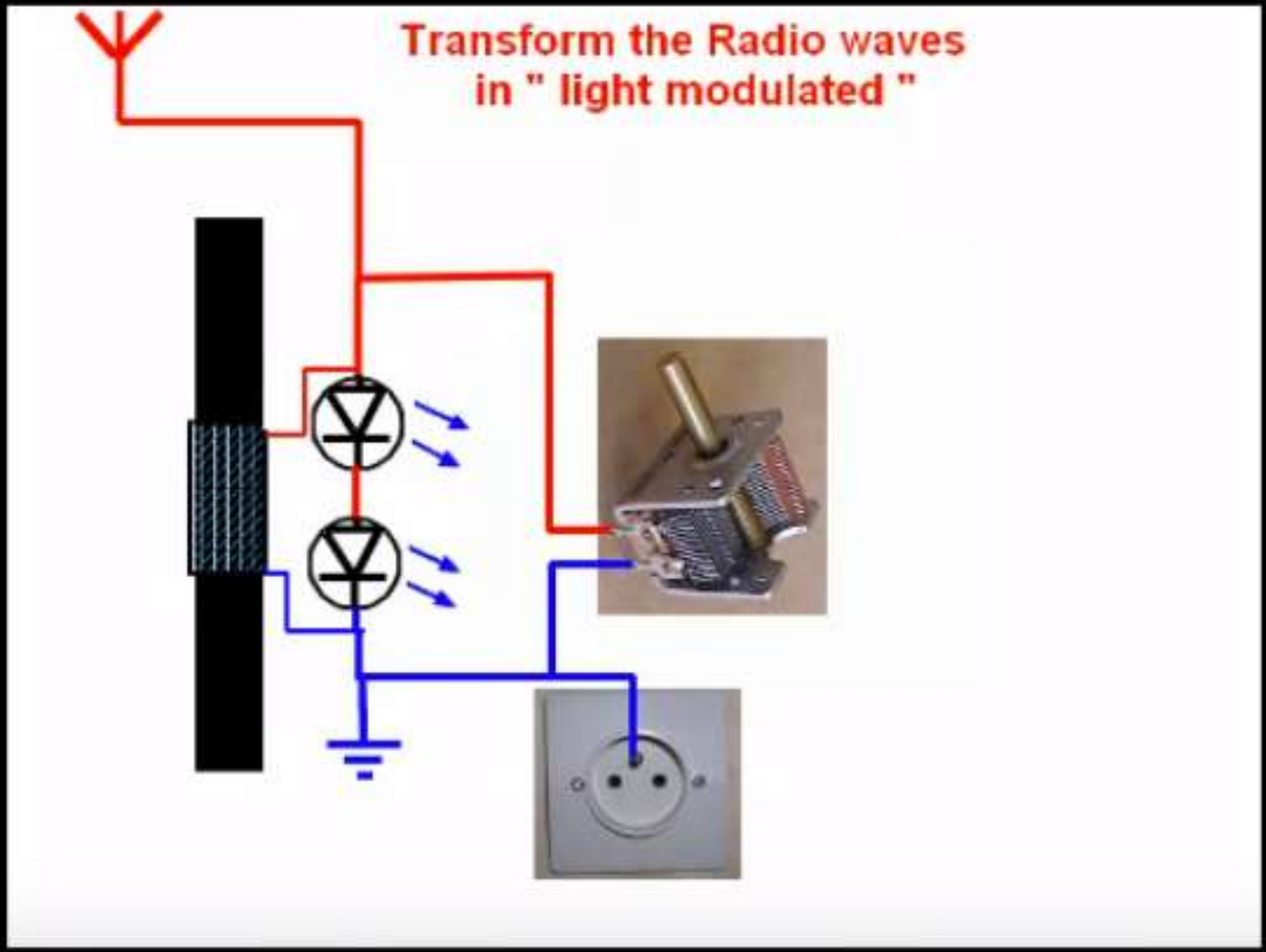

21:39 / 26:23


OUTPUT ANTENNA
POWER
RECEIVE ANTENNA
KEYJACK
21:34 / 26:23
HD


ANTENNA OUT
ALTOIDS
POWER
RECEIVER
MORSE KEYER
22:34 / 26:23

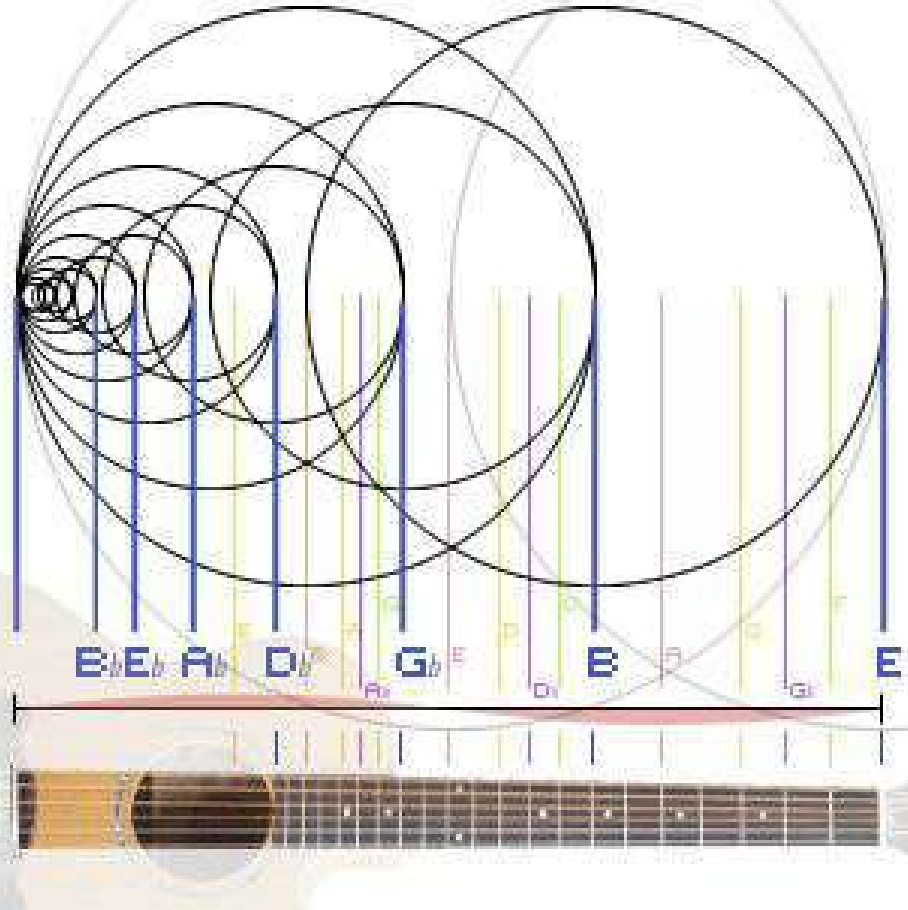

OSCILLATOR 7.1225 MEGAHERTZ
TUNED TO 7.1225 MEGAHERTZ
ALTOIDS
146.910
Microsoft
23:59 / 26:23
HD




Transform the Radio waves
in " light modulated "

THE CHROMATIC (TWELVE TONE) MUSICAL SCALE - THE CIRCLE OF FIFTHS

G♭ B E A D G C F B♭ E♭ A♭ D♭ G♭ B

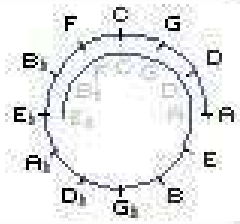


IF YOU PLUCK A TENSIONED STRING HALFWAY BETWEEN THE END POINTS OF ANY GIVEN TONE, YOU WILL GET THAT SAME TONE, ONE OCTAVE HIGHER.

SHOWN TO THE LEFT:

- BASE TONE
- 1/2 (+1 OCTAVE)
- 1/4 (+2 OCTAVES)
- 1/8 (+3 OCTAVES)
- X2 (-1 OCTAVE)

THE CONDENSED FRETBOARD IS CREATED BY THE BASE TONES, PLUS OCTAVING (HALFING OR DOUBLING THE LENGTHS)



SOME INTERESTING GEOMETRIC THINGS TO NOTE:

IT DOESN'T MATTER WHAT NOTE OF THE CIRCLE OF FIFTHS YOU START ON... FOR THIS EXAMPLE I CHOSE TO MAKE THE BASE TONE 'E' FOR COMPARISON WITH GUITAR

THE OCTAVE ABOVE IS 'E' WHICH IS EXACTLY 1/2 THE LENGTH OF THE TONIC.
THE FIFTH ABOVE IS 'B' WHICH IS EXACTLY 2/3 THE LENGTH OF THE TONIC.
THE FOURTH ABOVE IS 'A' WHICH IS EXACTLY 3/4 THE LENGTH OF THE TONIC.
THE THIRD ABOVE IS 'A FLAT' WHICH IS EXACTLY 4/5 THE LENGTH OF THE TONIC.

THESE TONES ARE THE MOST CONSONANT (MOST HARMONIC) WITH THE TONIC 'E' AND ARE ALSO THE PLACES ON THE GUITAR WHERE PLAYING 'HARMONICS' WORKS BEST.

THE TONES / DISTANCES IN THE CHROMATIC SCALE FALL ON INTERSECTION POINTS OF THE EXPANDING VESICA PISCES CIRCLE FORMATIONS.

© JASON COOPER

1.RF radio frequency

2.Seven led photon lights

3.Sonic & Vibrations

4. Face Lift skin tighten

5. Skin rejuvenation



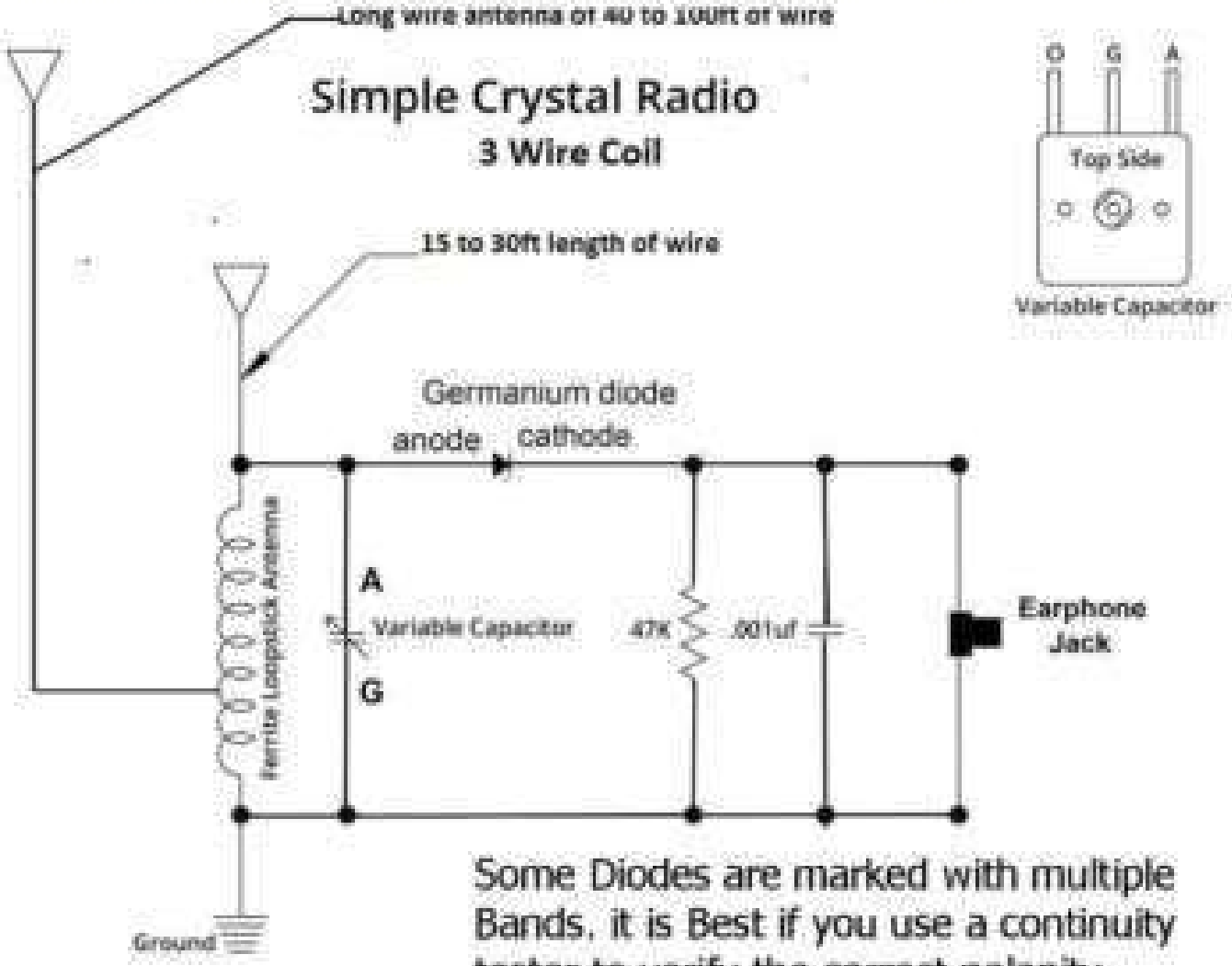
Purple Light (590nm-600nm)

Detoxification ,make the skin more healthy

Our GI Receiver



You should only use either a long or a short antenna, but not both.



Some Diodes are marked with multiple Bands, it is Best if you use a continuity tester to verify the correct polanity. Maximum volume will be acheived if the diode is Oriented correctly AS SHOWN IN THE DIAGRAM.

Parts List
1 - Ferrite Loopstick Antenna
1 - Variable Capacitor
1 - Germanium Diode
1 - .001uf Capacitor
1 - 47K Resistor
1 - 20 Million Ohm Ceramic Earphone
Antenna and Ground wire not include with parts

If you have a kit with a 3 wire coil
Many users have reported that cuting the connection between the diode and antenna, and moving the anode to the center tap of the coil improved performce significantly.
In addition sliding the coil over to one end of the core may help too.

For short antenna connect a 15 to 30ft length of wire. It is best to use a long wire antenna of 40 to 100ft. A good ground may be required if so run a wire for ground to the nearest ground source. If you are not using the long antenna connection do not cut off the center coil wire. Doing so will cause the coil not to work.

Germanium Diode





47K Ohm Resistor



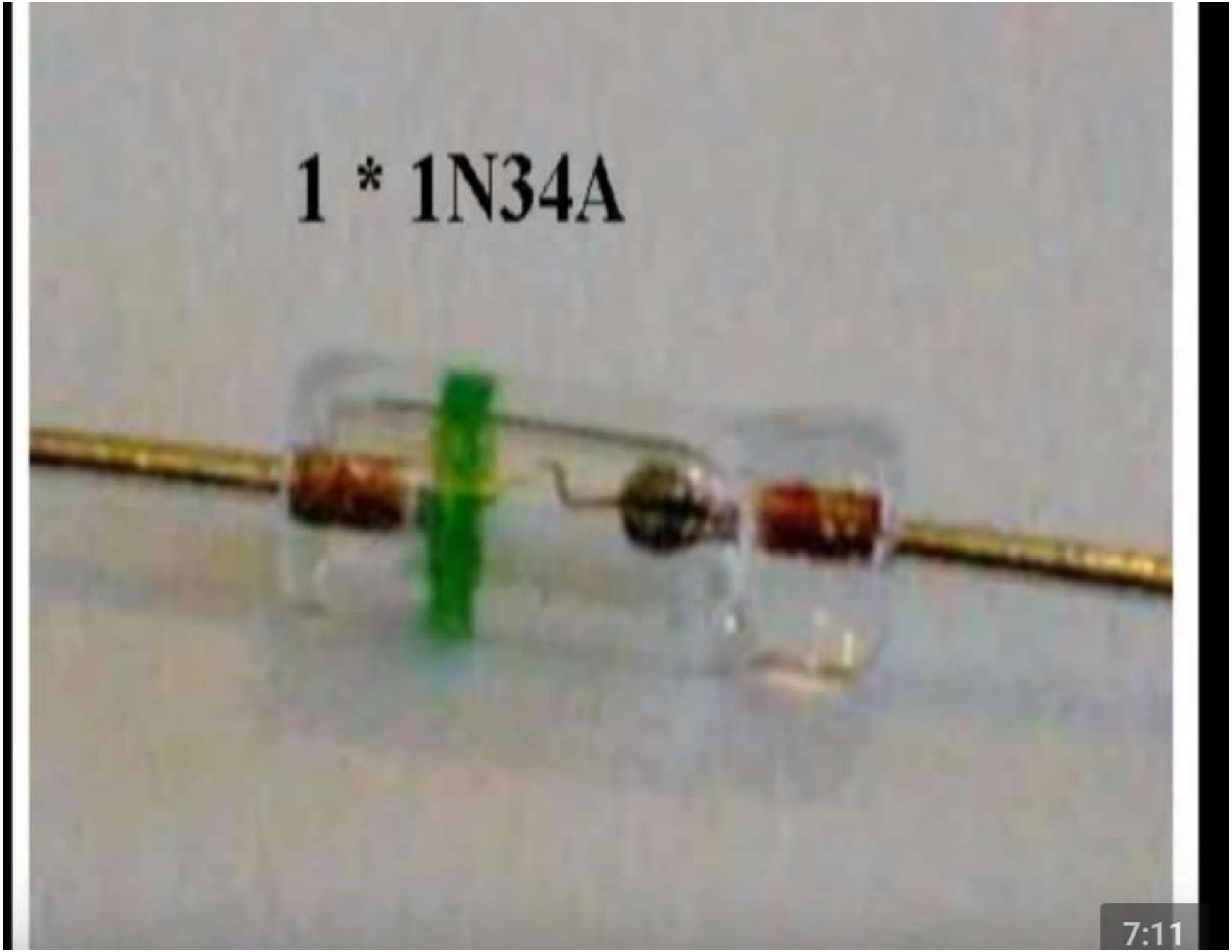


Making a Shortwave Radio (How to make a Shortwave Radio)



3 * 1N4148



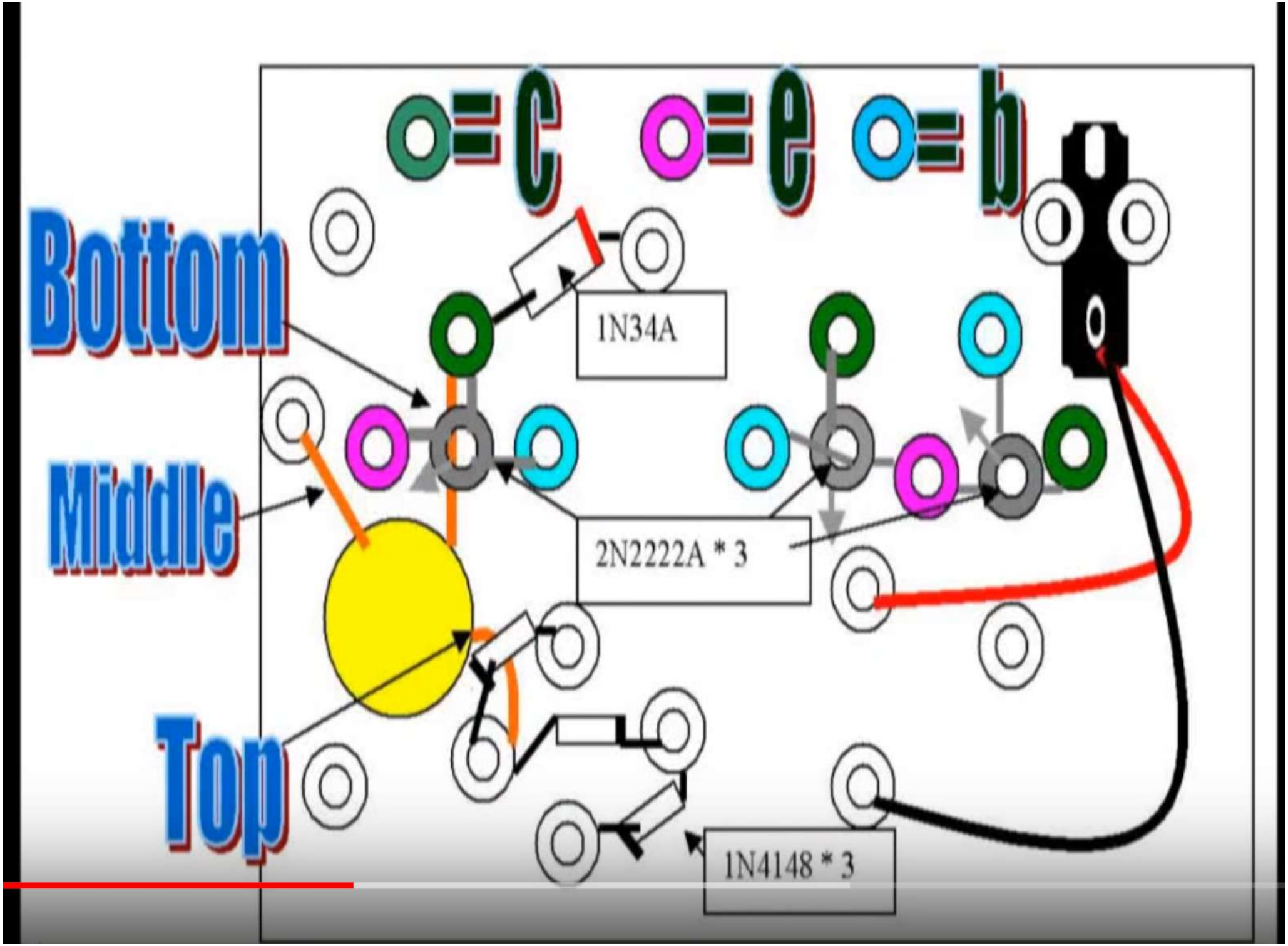

1 * 1N34A
7:11

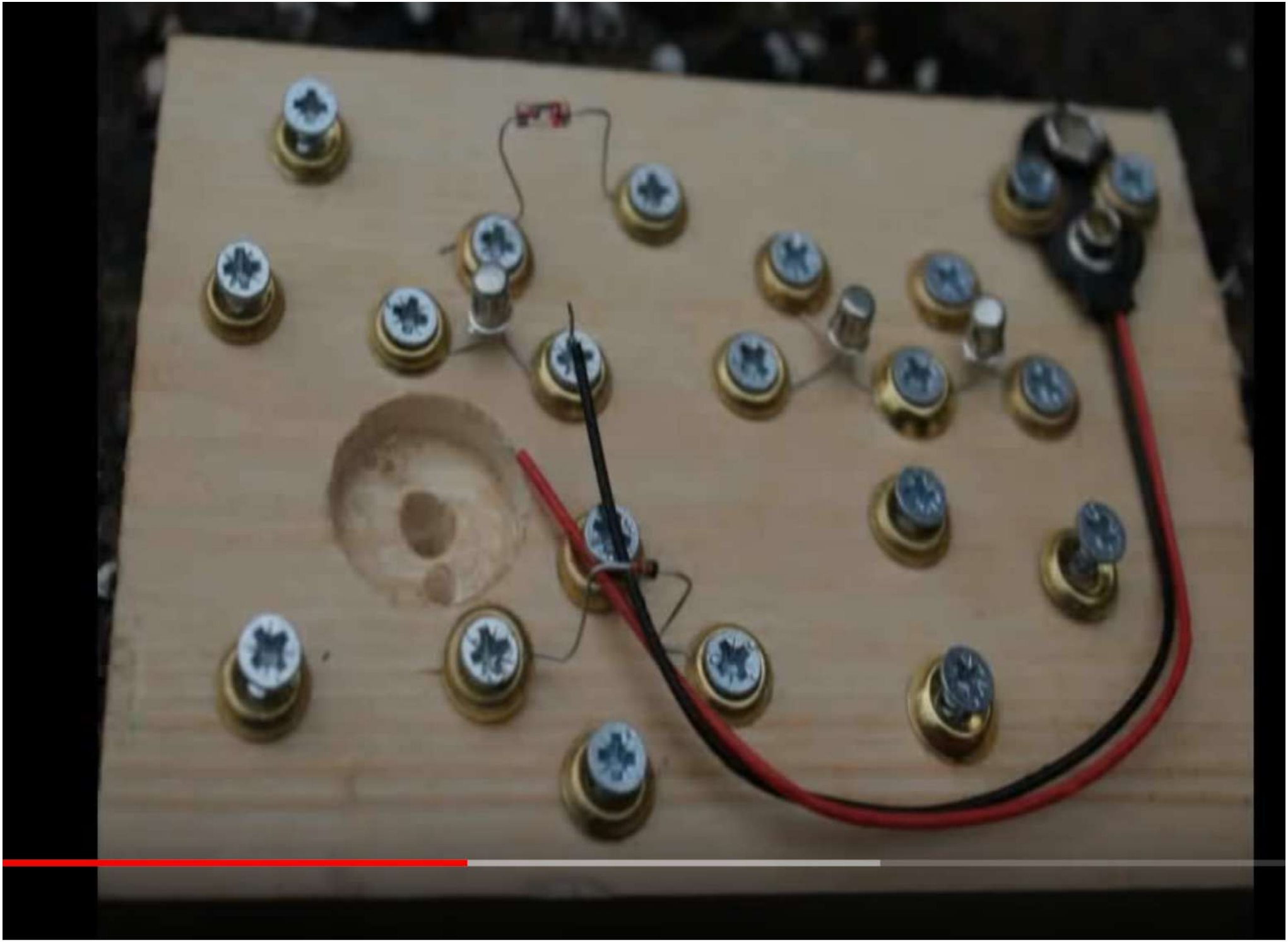
3 * 2N2222a

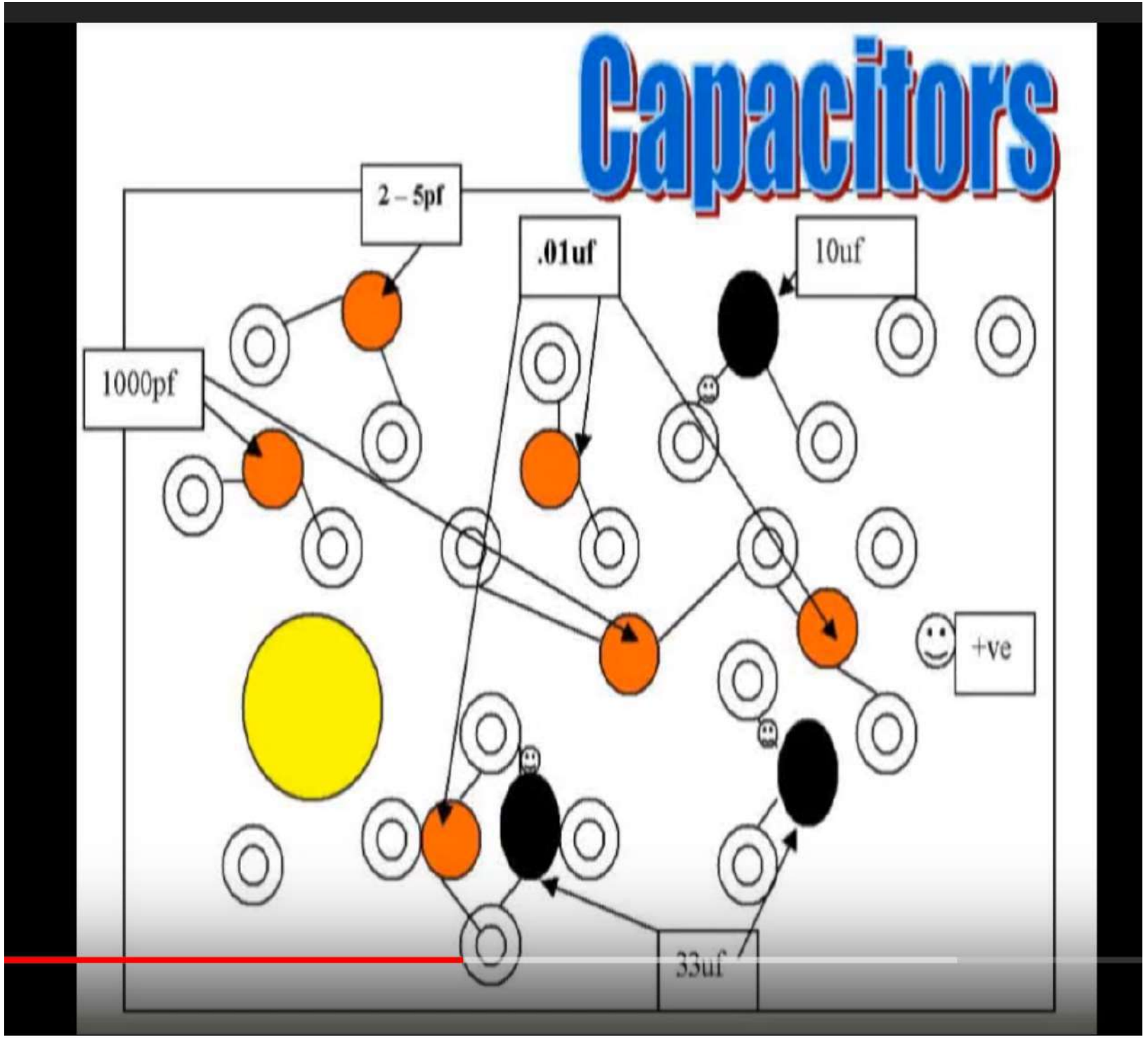


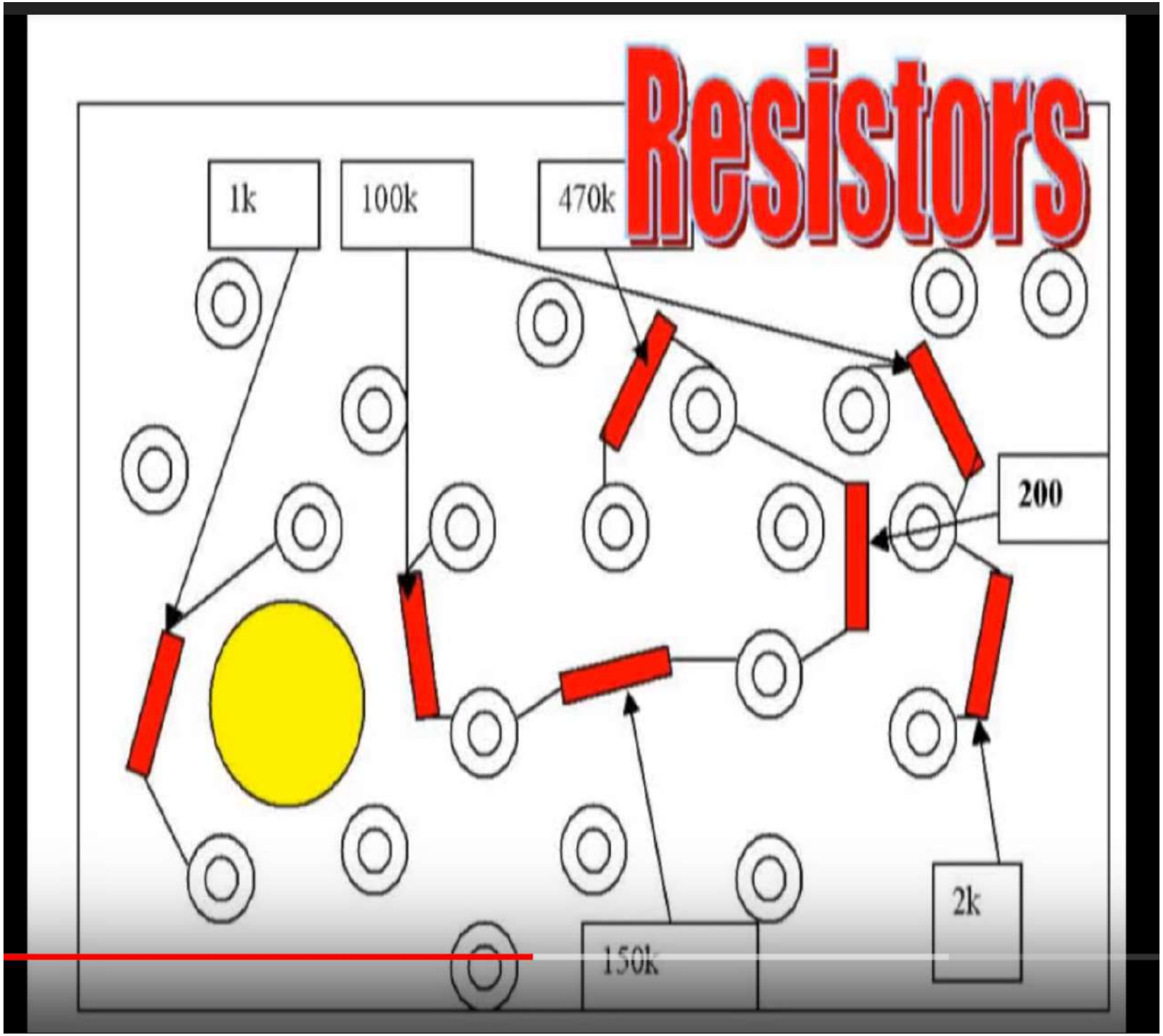
6:57

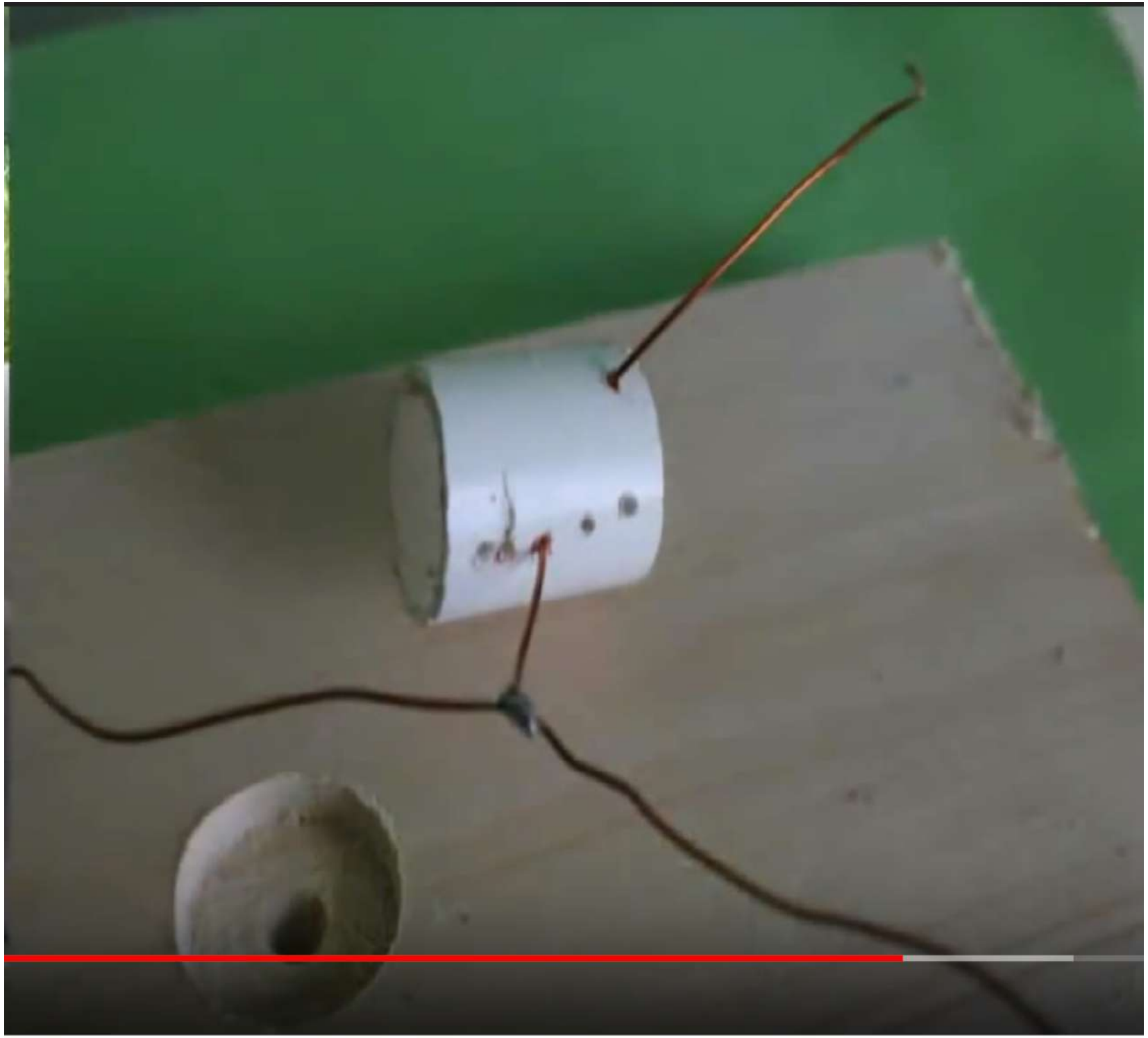

middle 2n2222a has
base bent
backwards

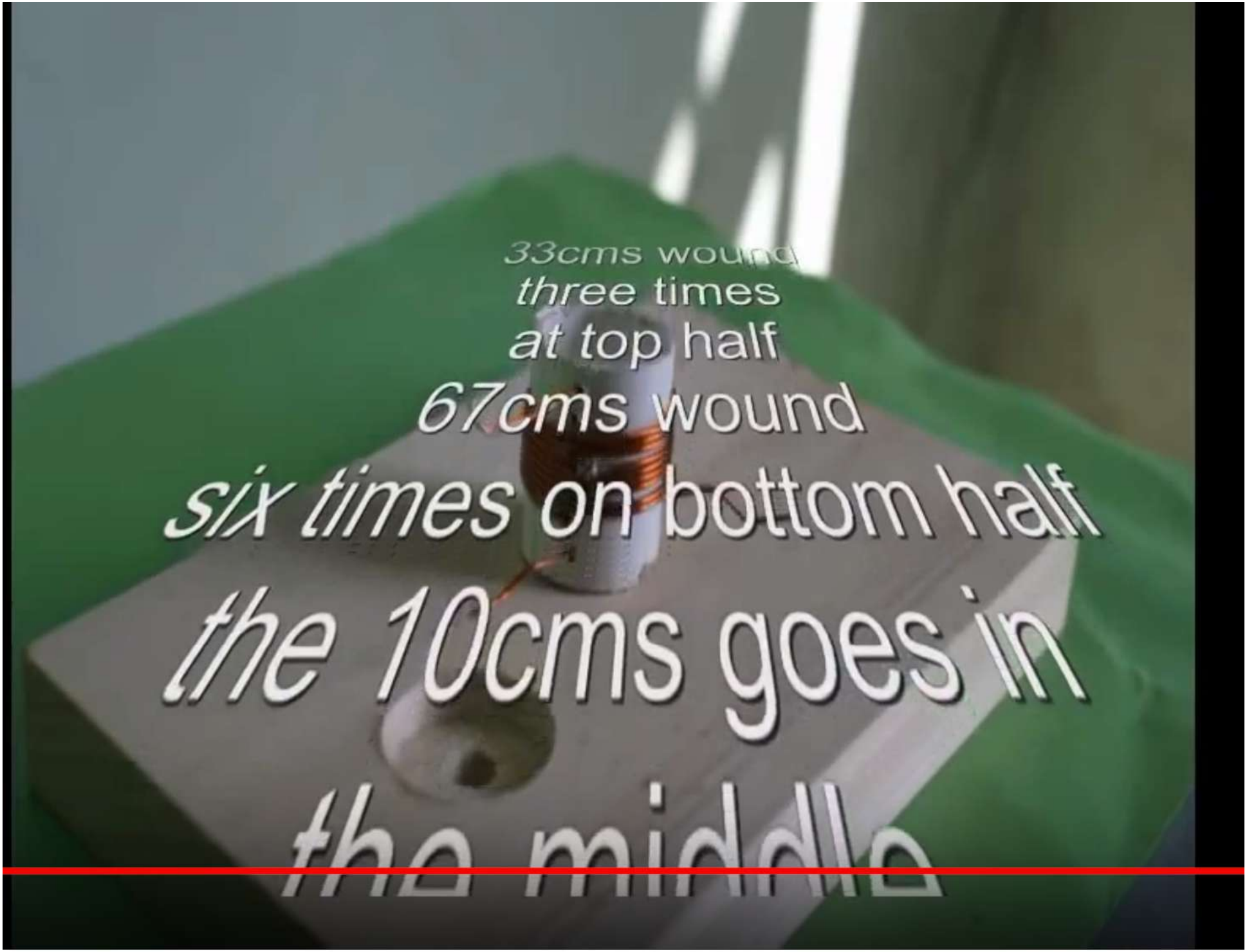

C
e
b
Bottom
Middle
Top
1N34A
2N2222A * 3
1N4148 * 3




Capacitors
2 – 5pf
.01uf
10uf
1000pf
+ve
33uf


Resistors
1k
100k
470k
200
2k
150k



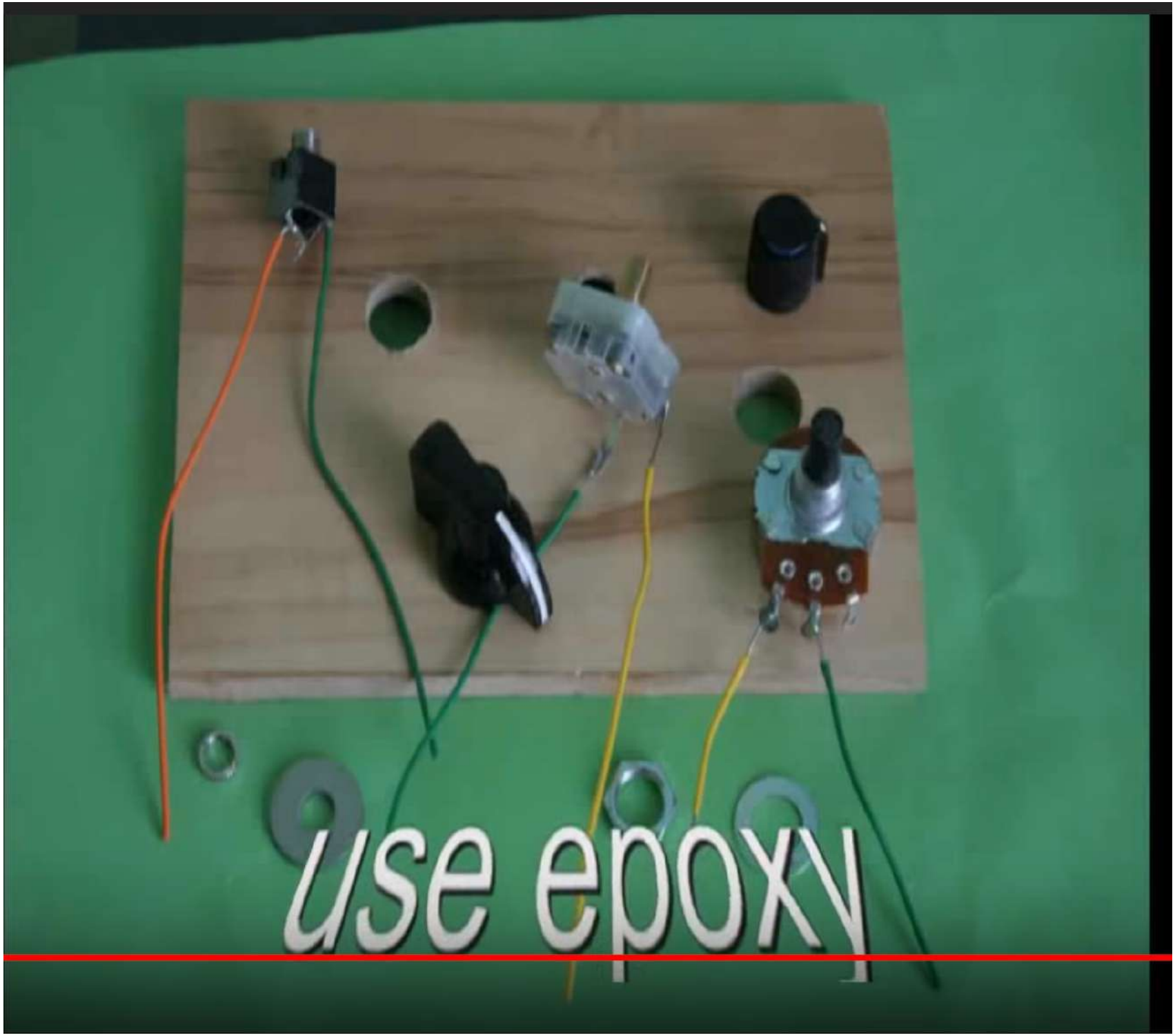

33cms wound
three times
at top half
67cms wound
six times on bottom half
the 10cms goes in
the middle

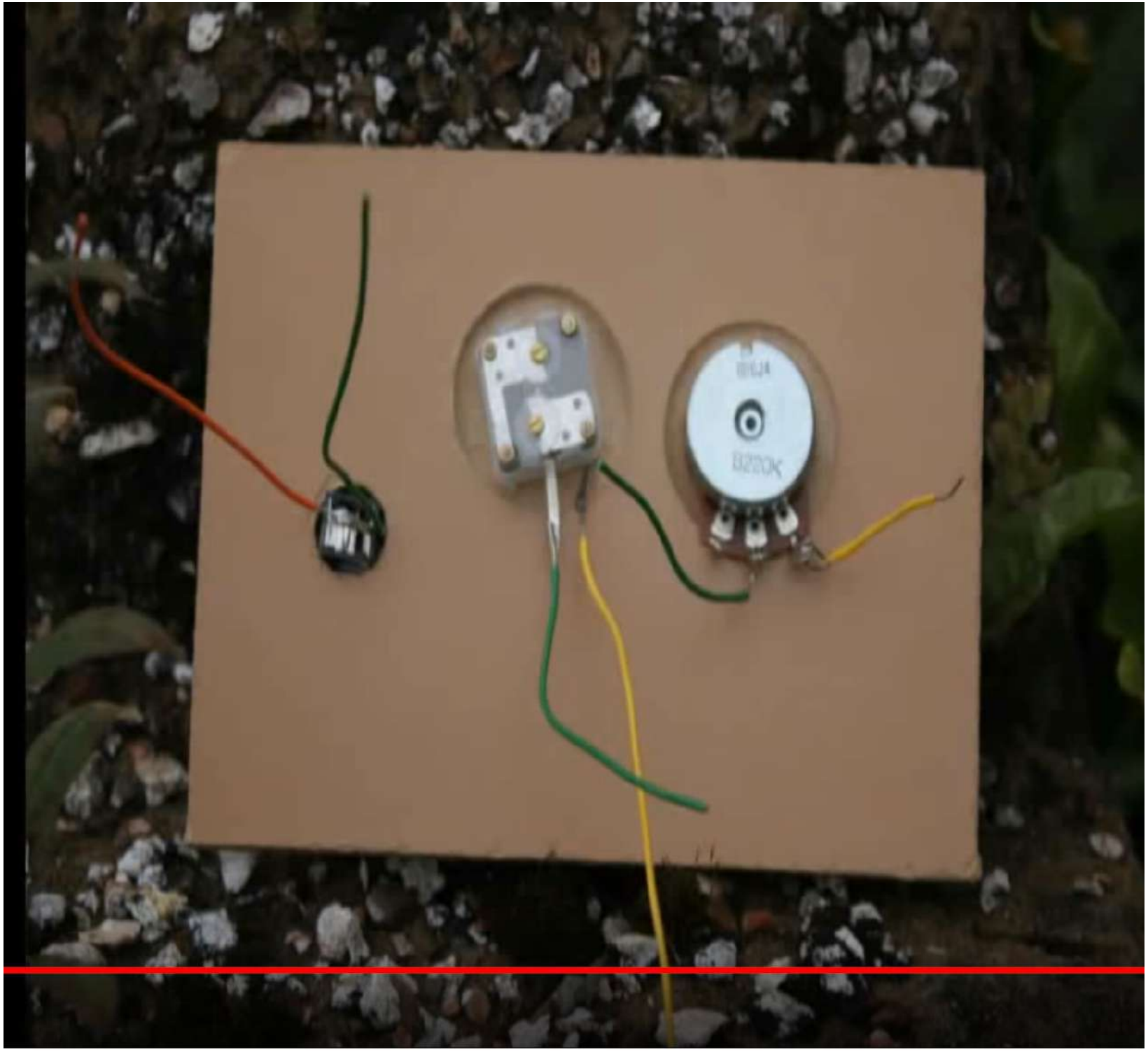



Rapidonline.com
minature tuning
capacitor 50V

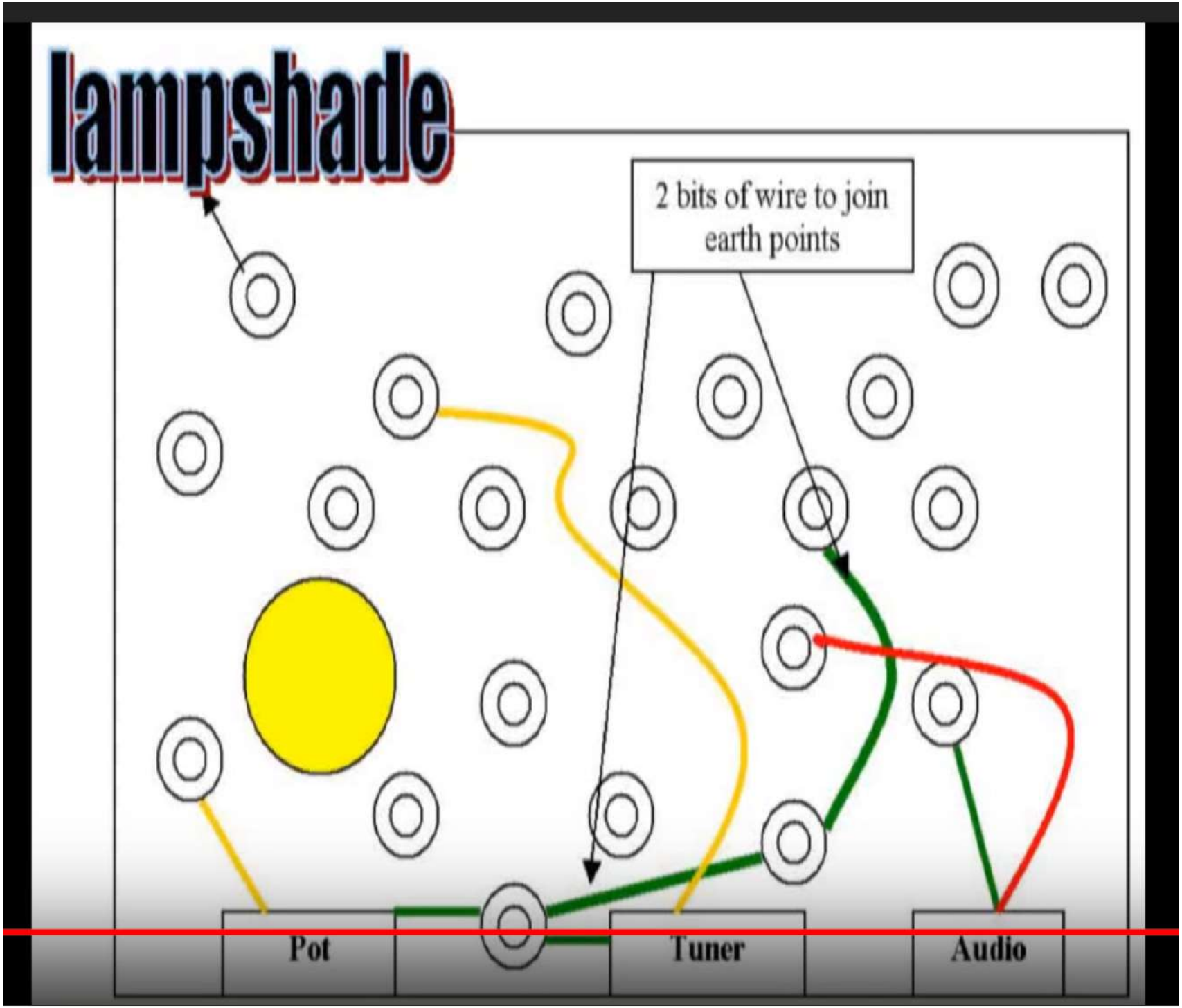

220k
potentiometer

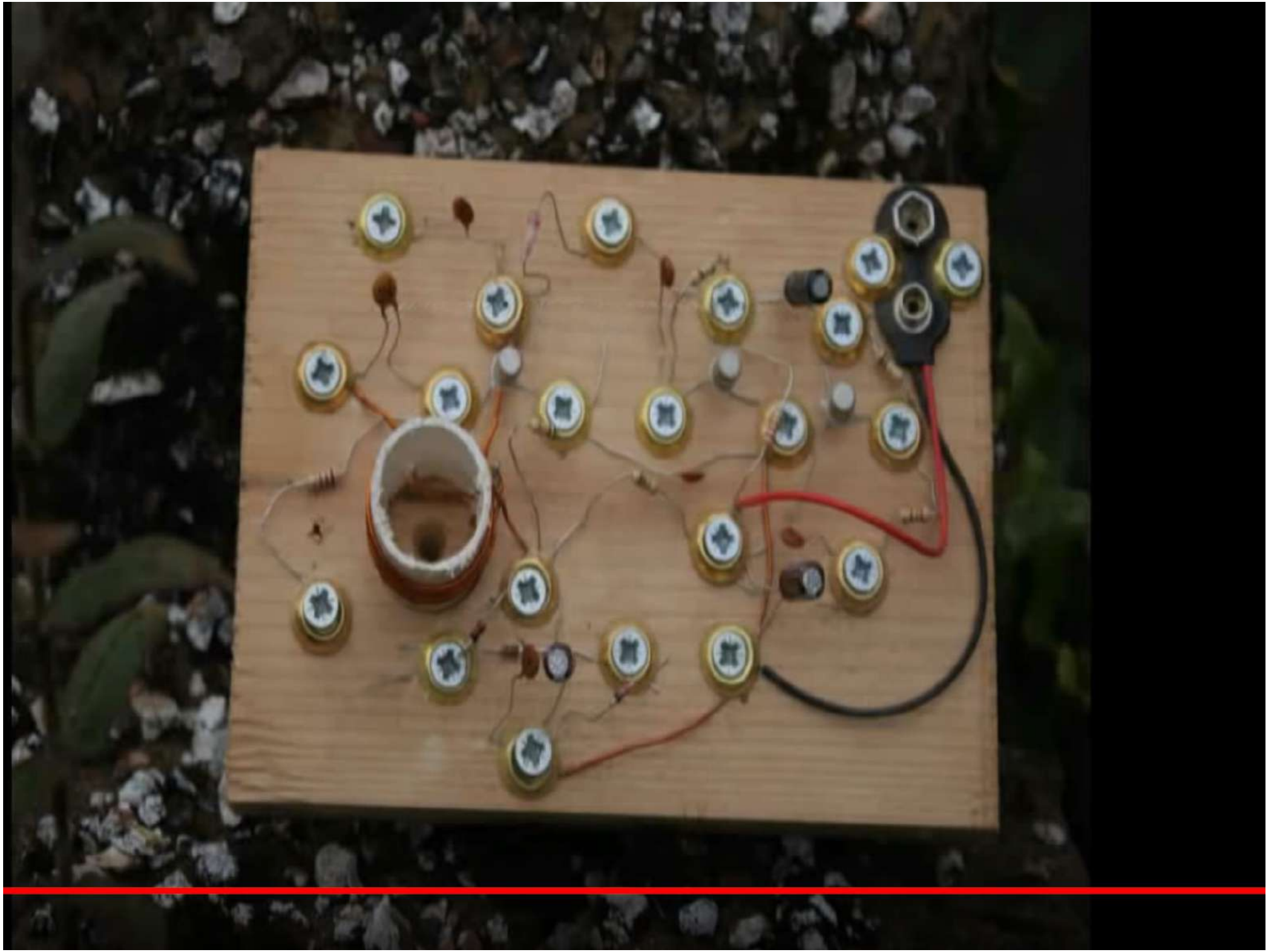

3.5mm audio
socket
/left/right channel
soldered together
to give mono

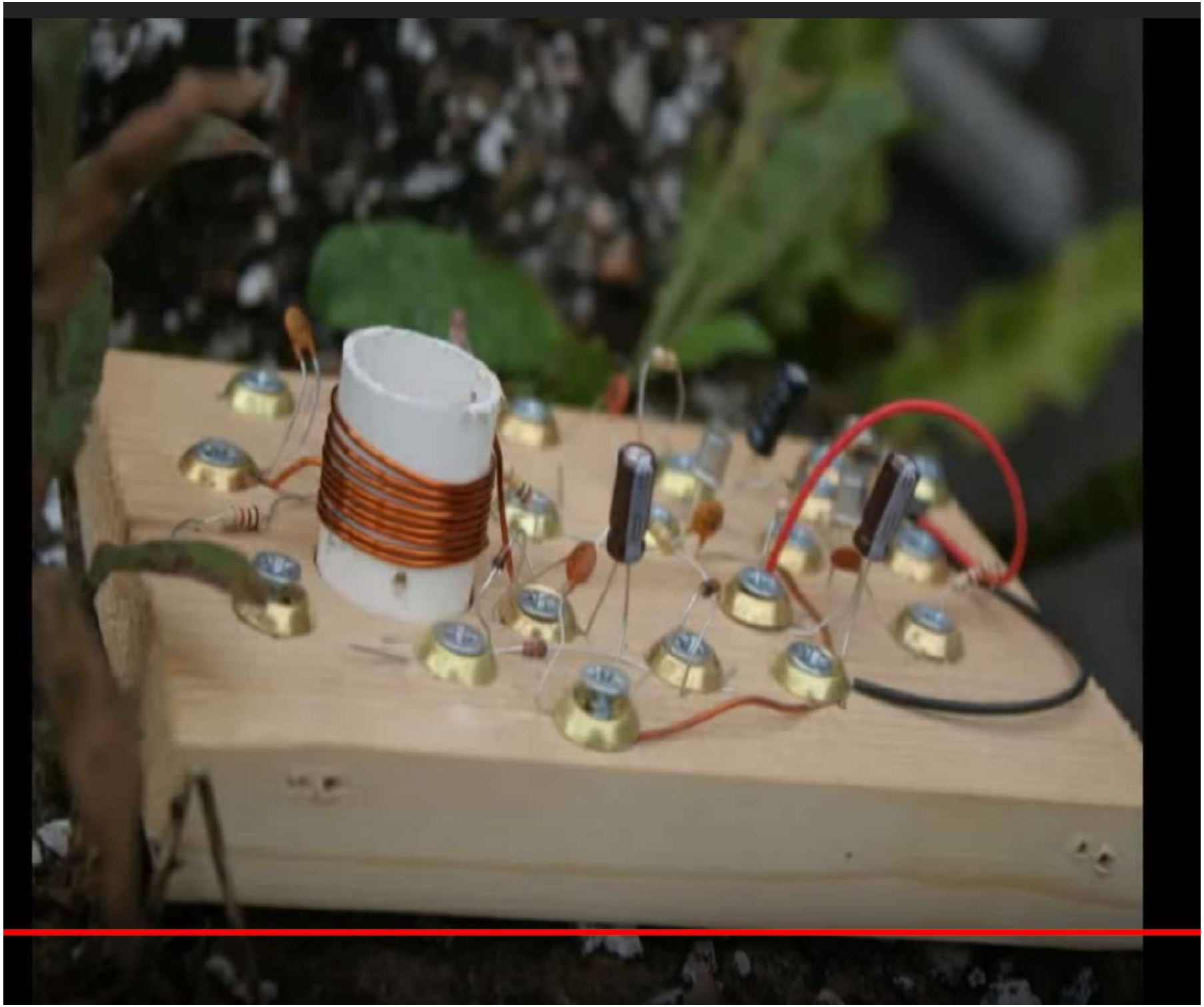

use epoxy

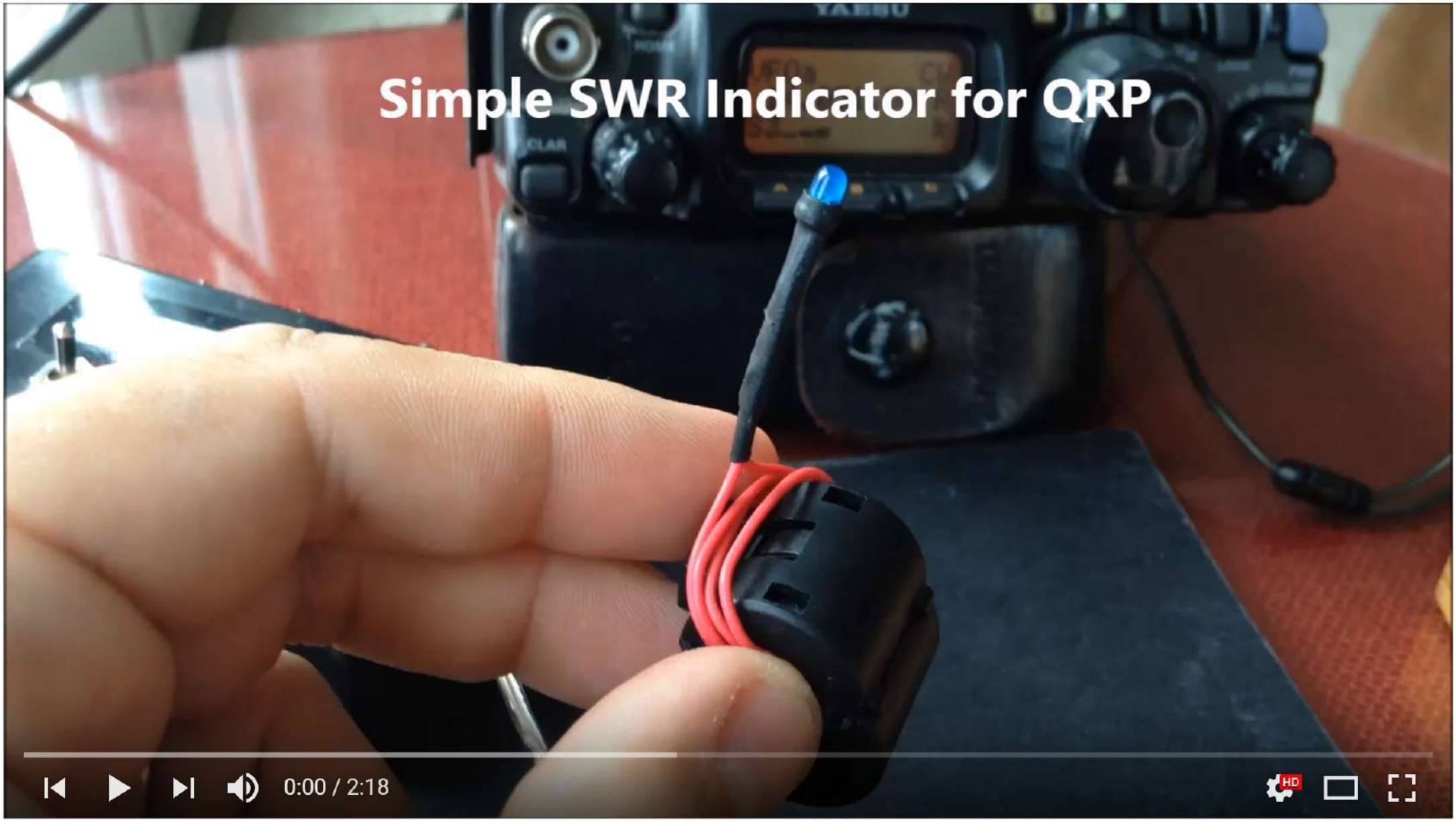





lampshade
2 bits of wire to join earth points
Pot
Tuner
Audio







Simple SWR Indicator for QRP

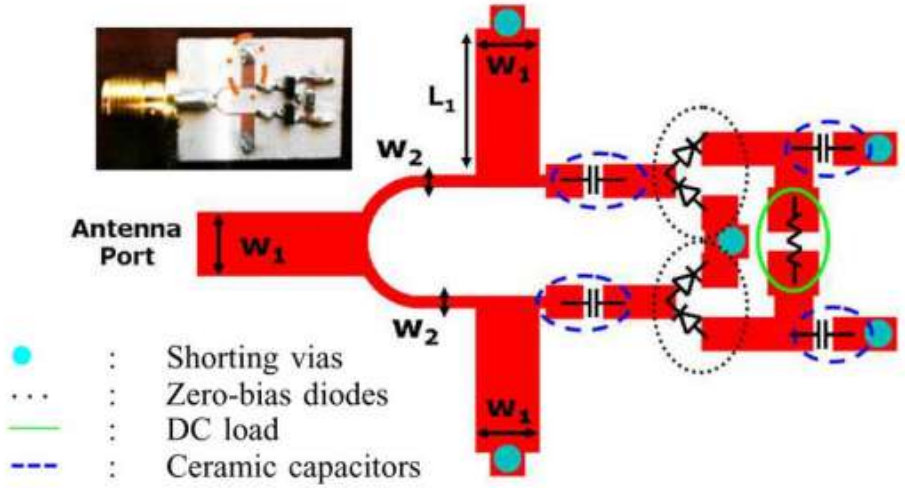
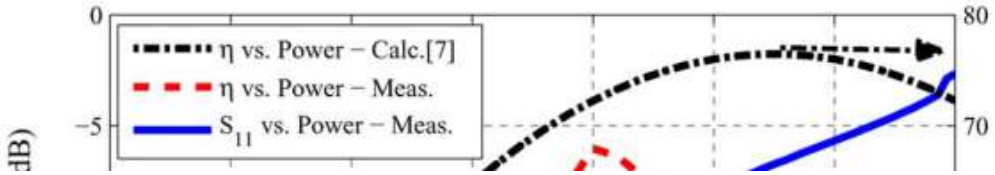


Fig. 3. Layout of the rectifier prototype, printed on RO3206. $w_1 = 72$ mil, $w_2 = 15$ mil, and $L_1 = 171$ mil. Fabricated sample is shown in top left, and the impedance matching stub is encircled.



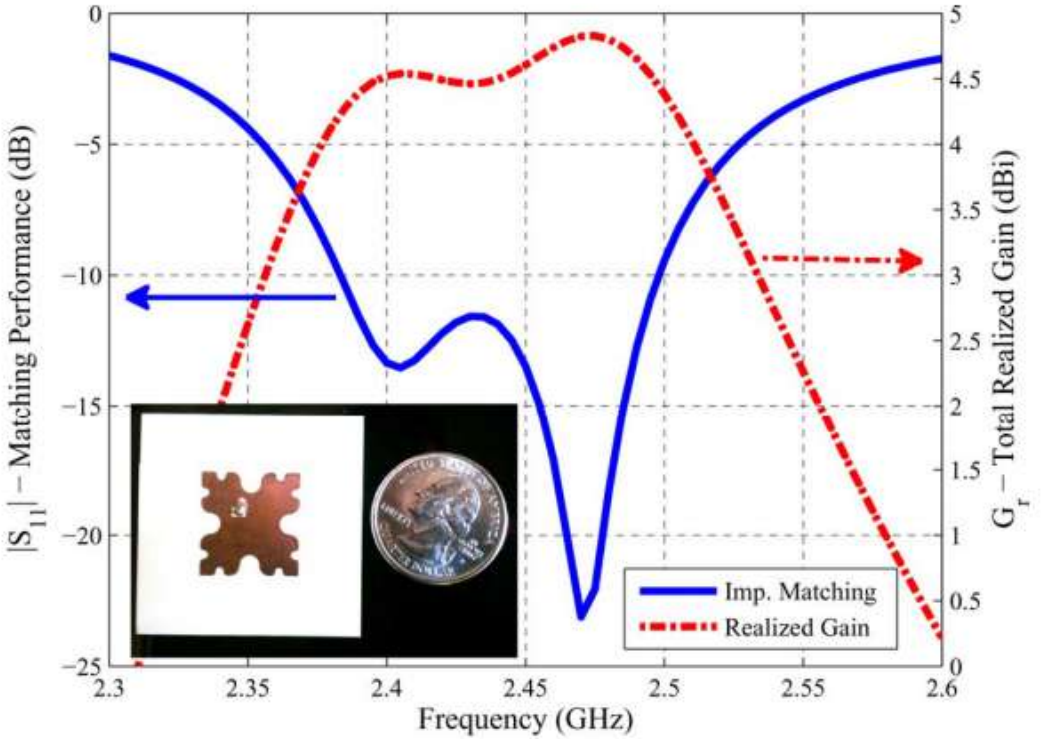
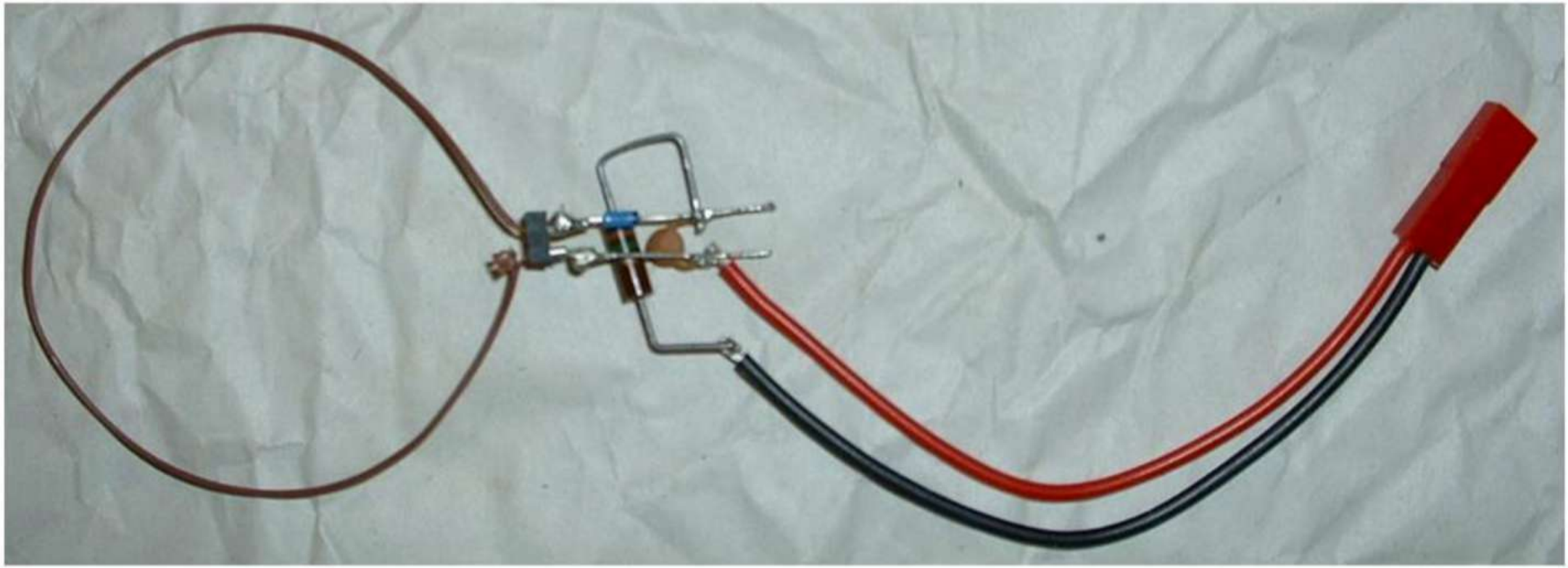
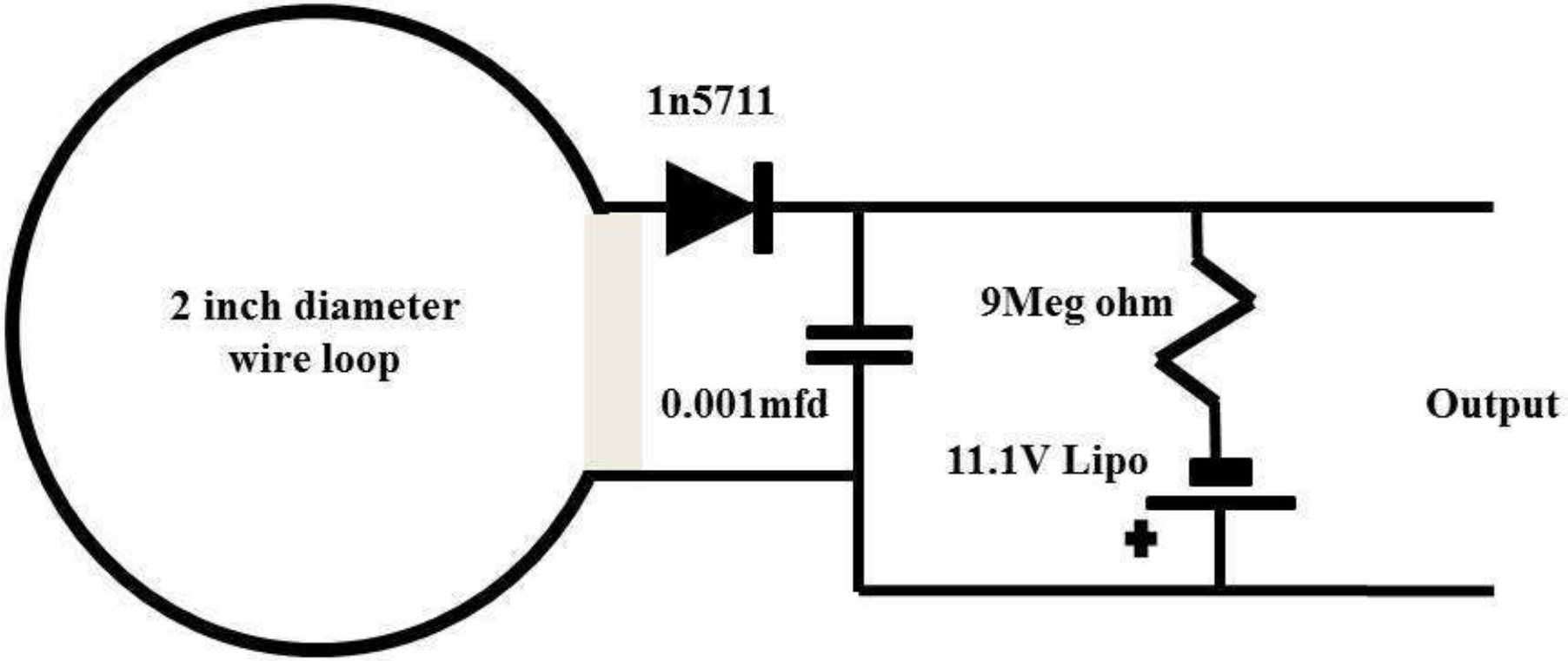


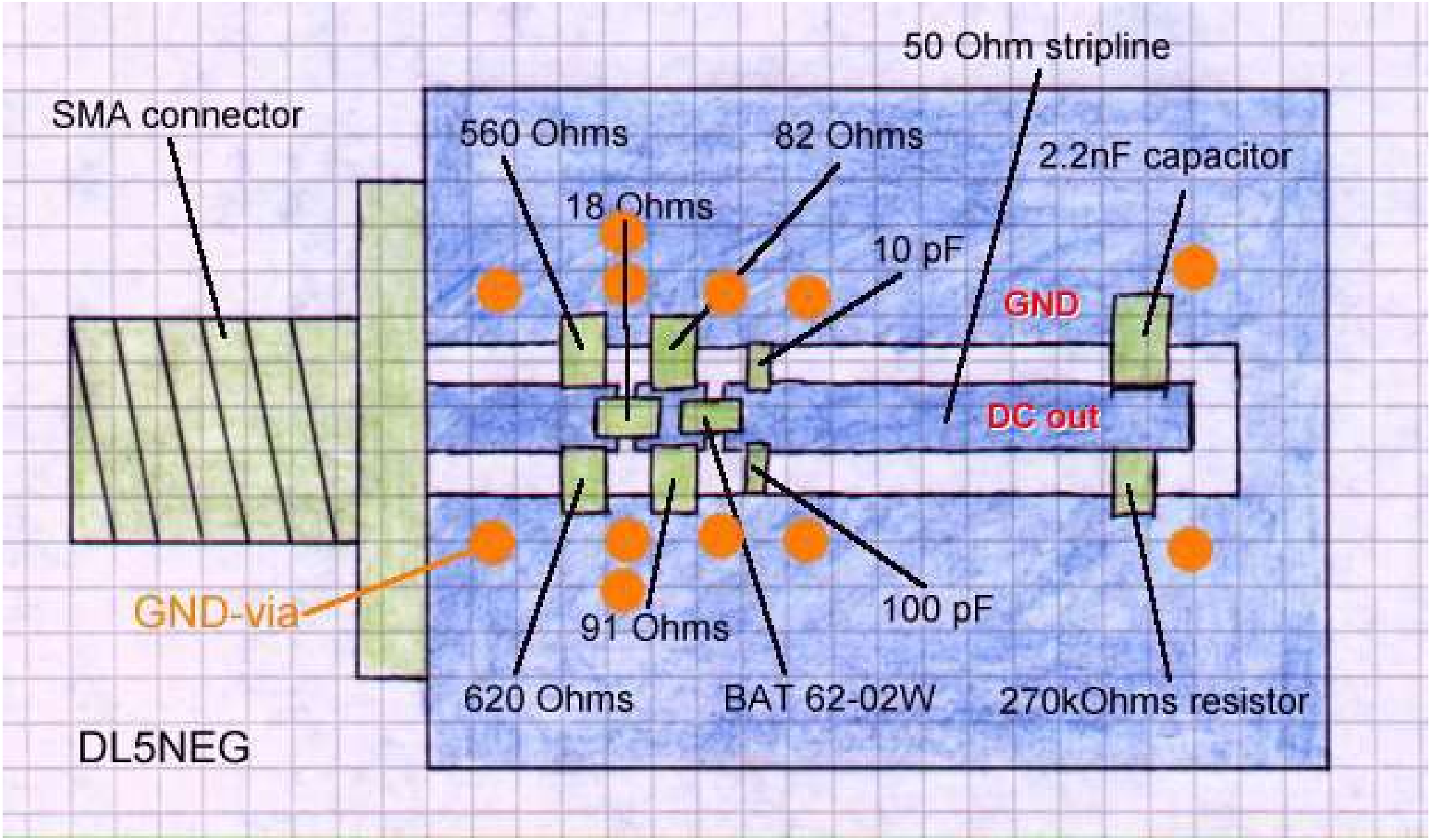
Fig. 5. Measured $|S_{11}|$ performance and total realized gain (at boresight) of the proposed antenna. Fabricated sample is shown in bottom left.





A more sensitive rf field strength meter (especially for 2.4Ghz)
by Flying-llama (extending dave1993's design)

WARNING: Output can range from about negative 0.15V (little or no signal detected) to positive volts (large signal detected)


50 Ohm stripline
SMA connector
560 Ohms
82 Ohms
2.2nF capacitor
18 Ohms
10 pF
GND
DC out
GND-via
91 Ohms
100 pF
620 Ohms
BAT 62-02W
270kOhms resistor
DL5NEG

AN RF AMMETER

James Brett G0TFP says that by looking back to the time when 'Aerial current' was used as the indicator for antenna system efficiency, instead of an s.w.r. meter, you could improve your station.

There was a time, before coaxial cable feeder was generally used in Radio Amateur stations, when output power and general antenna system efficiency were gauged by the amount of r.f. current flowing in the antenna circuitry.

In the early days of radio 'aerial current' was an important measurement to be observed. Just look at Second World War military equipment, the ammeter used for this purpose was often an hot wire type, with the antenna system current flowing through a short section of thin wire within the ammeter.

Mechanical Instrument

Such a mechanical instrument as the hot wire ammeter, shown in **Fig. 1** and hot wire thermocouple ammeters are not now generally available. The design presented here, is based on the technique of a current transformer, feeding a moving coil meter, calibrated to read root mean square (r.m.s.)* current, via a rectifier.

(The r.m.s. value of a sinewave is the mathematical derivation of the effective d.c. voltage that produces the same power in the load as a sinewave with a known peak voltage.* **Editor**)

The heat generated by the actual current flowing, caused the length of the wire to extend slightly. This slight extension was magnified via a pointer, and used on a scale, as an indication of the r.f. current passing into the feeder system and so to the antenna.

Consider what this current flow can show. In tuning up and loading antennas, it follows that the more current flowing into it the better. More current means a stronger magnetic field and hence potentially more signal radiated.

The r.f. ammeter can also be used for transmitter power output measurements. Working in to a matched dummy load or tuned and correctly matched antenna, which can be also considered as a pure resistance, measurement of the current will indicate the power.

For example with a 50Ω load and a with a measured current of 0.5A flowing, power (given by I^2R) is 12.5W. Interestingly a current of 1A flowing in a 50Ω load, represents a power 50W.

With the lower h.f. bands and antennas that were often random length, measurement of current in the antenna was the easiest solution to maximising output. Using the r.f. current ammeter this approach can be repeated and other experiments with long wire antennas made.

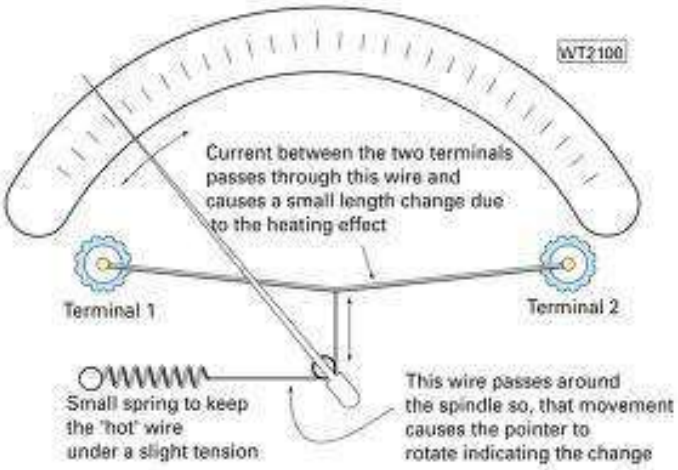


Fig. 1: A skeleton view of a hot wire current meter, an instrument that reads a.c. (r.m.s.) or d.c. current with the same scale. See text for more details.

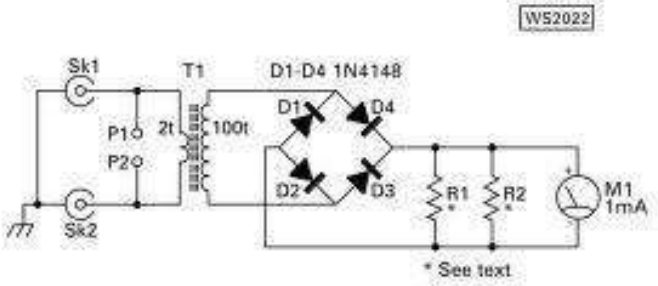


Fig. 2: The circuit diagram of G0TFP's r.f. current meter. See text for more detail.

Circuit Diagram

The circuit diagram of my current meter, is shown in **Fig. 2**. One big advantage of this approach is its tolerance to overload. The old hot wire instruments were very easily burnt out and even a moderate overload would alter the characteristic of the hot wire making it very inaccurate.

The design uses a current transformer with a ratio of 50:1. So, for a current of 1A flowing in the primary circuit, the secondary current will be 20mA. The secondary r.f. current is rectified by the diode bridge, D1-D4, and used to drive the shunted moving coil meter M1.

The peak value of a sinewave is 1.414 times ($\sqrt{2}$) its r.m.s. value (either current or voltage). But in a meter the value indicated in not the r.m.s. but the value of the mean voltage (or current). Like all moving coil meters, the displayed value of the rectified a.c. is the mean value of the a.c. voltage's peak level. And so, this must he taken

into when calibrating the meter.

Mean Value

The mean value of a sinewave is 0.636 times the peak level. Hence the meter will not indicate the r.m.s. value, but the lower, mean value. Let's assume we wish to measure a primary current of 1A r.m.s.. The 20mA r.m.s. in the secondary must be shunted to display the mean value of this value at full scale. We must bypass some of the secondary current with low value resistors, shown as R1 and R2 in the circuit diagram of Fig. 2.

The peak value of a 20mA current is 28.28mA so, the meter must be shunted to show a full scale reading with the mean of this current. To calculate the mean value of 28.28, multiply it by the mean conversion ratio of 0.636. So, 0.636Ÿ28.28 = 17.98mA or more practically 18mA full scale, corresponding to a primary current of 1A r.m.s..

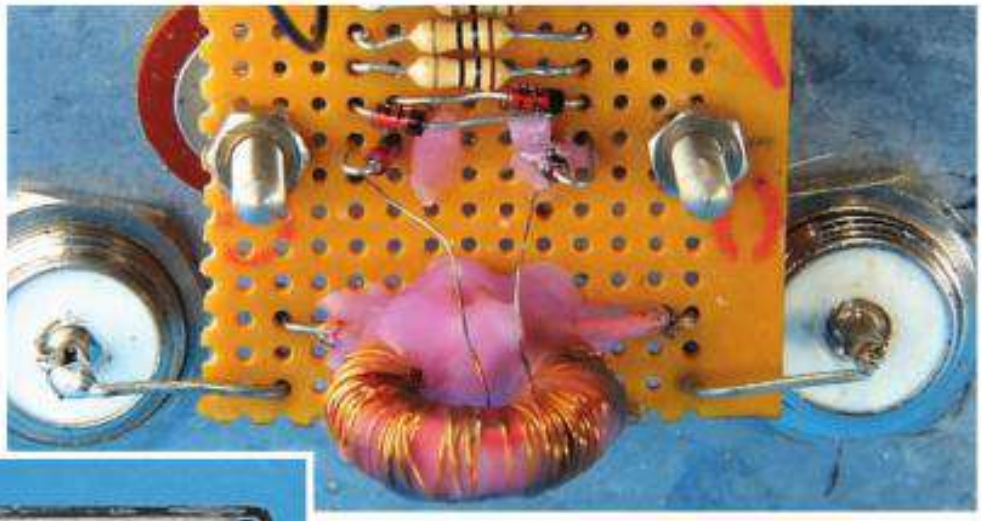
If you know the internal resistance of the milliammeter, then it's quite easy to calculate the actual value of the shunt. But I've found that the best way to make up the shunt is by trial and error using several low value resistors connected in parallel. In my prototype, this worked out as a shunting resistance made from one 15Ω and two 10Ω resistors in parallel, giving 3.75Ω in parallel with the 1mA meter.



● Fig. 4: A close up of the simple layout of the current sensing transformer, rectifiers, and loading resistors.

Construction Simple

Construction of the current meter is simple, as shown in the photographs. Just remember to keep leads short and layout as compact as practically possible, **Fig. 3**. The toroidal current transformer is wound as a single layer with 100 turns of 0.2mm (36s.w.g.) enamelled wire and two turns of 1 x 0.24 plastic covered hook up wire.



● Fig. 3: All components are mounted on a small piece of Perf-board mounted between the two coaxial sockets.

I find that a convenient way to wind 100 turns on the toroid is to take a little over two metres of the enamelled wire and thread one end on to a darning needle. Pass half the wire through the toroid, held in a bulldog clip, and restrain the wire.

Use the needle to feed the wire through the middle of the toroid, as you wind 50 turns evenly over the free half of the toroid. Next rotate the toroid, so that the wound half is held in the bulldog clip, then again using the needle, thread the remaining half length of wire through the toroid to wind a further 50 turns.

You should now have a single winding with 100 turns evenly wound on the toroid. A small dab of glue at each end will hold this winding in place. Then wind the primary two turns onto the toroid, leaving the ends free.

Circuit Board

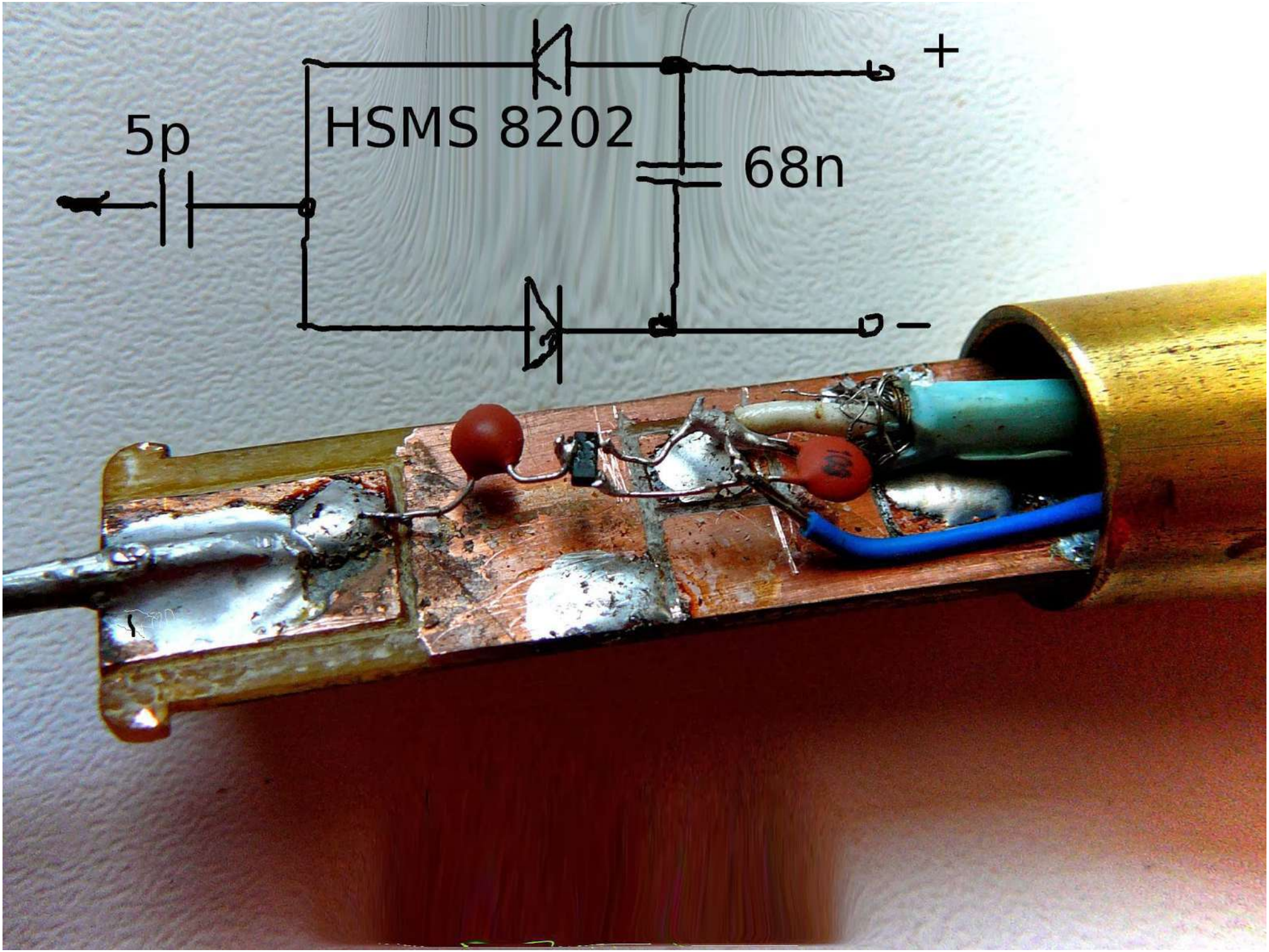
My circuit board is assembled and can be positioned so that direct connection to the terminals can be made, **Fig. 4**. This will also support the circuit board. Cut unwanted tracks and ensure that the terminal nuts are not making any unwanted short circuits. The toroid is supported by the primary winding and held in place by dropping melted candle wax on to the toroid and circuit board.

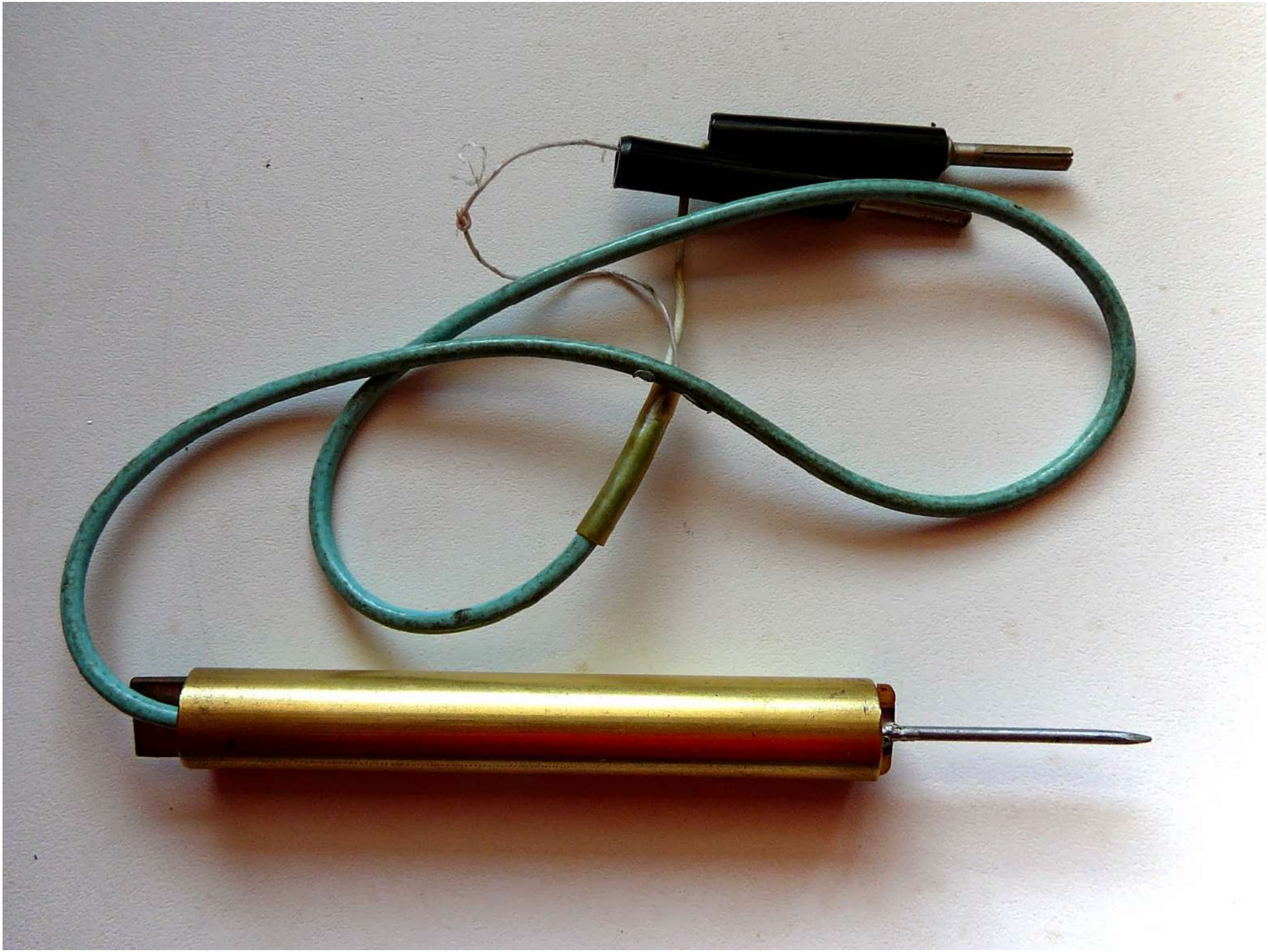
After checking that all is well the ammeter is ready to use. The prototype was checked using a transmitter and dummy load. Calculation of power from current measurements showed good correlation with the selected power levels from the transmitter.

Now you can begin testing out all your antenna systems, and you have a reading of the real power passing up into the antenna system. You never know - you might dispense with the s.w.r. meter all together! PW

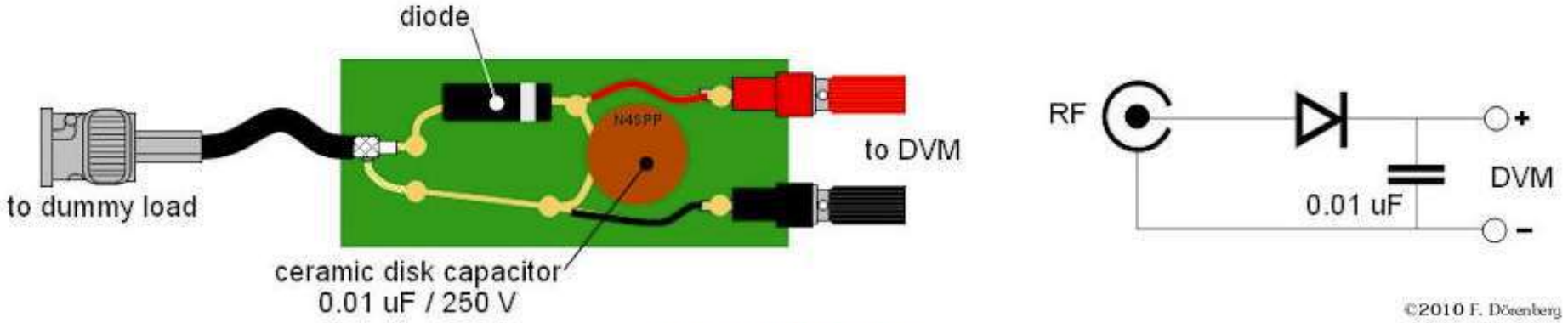
COMPONENT LIST

To make the r.f. ammeter, you will need the following items:
A 1mA moving coil meter, four diodes (typically IN4148 or IN914), one T68-2 toroid (Micrometals), several low value resistors for shunt (see text), two panel sockets, two terminals, a die cast box (depth to suit meter) and finally, a small piece of Veroboard or Perfboard.


5p
HSMS 8202
68n
+
–



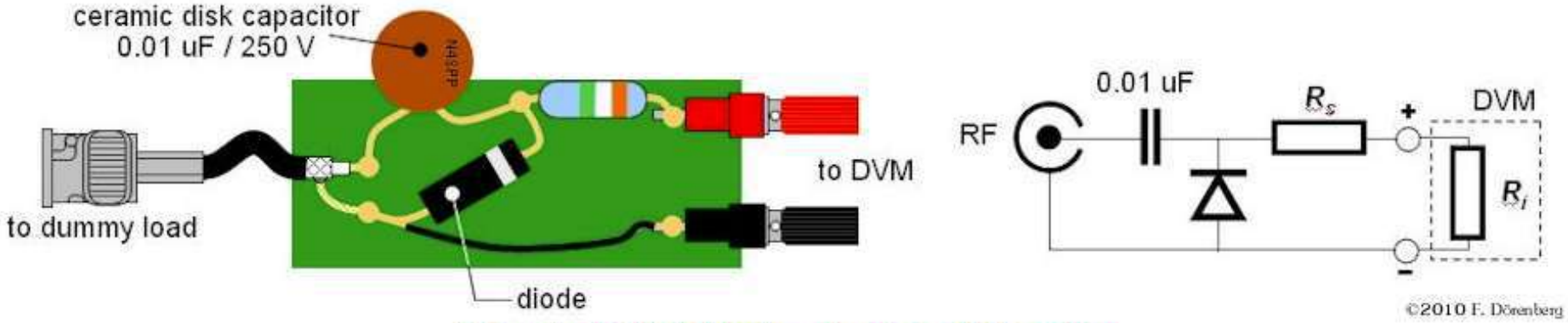
Here is a simple standard circuit:



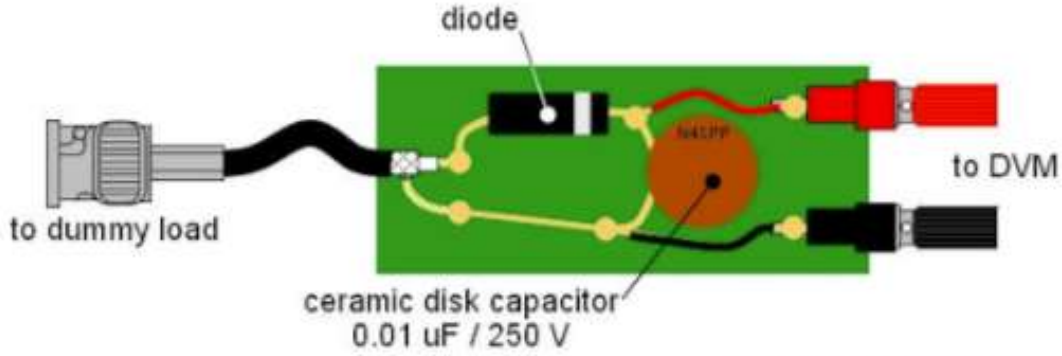
A simple RF-probe

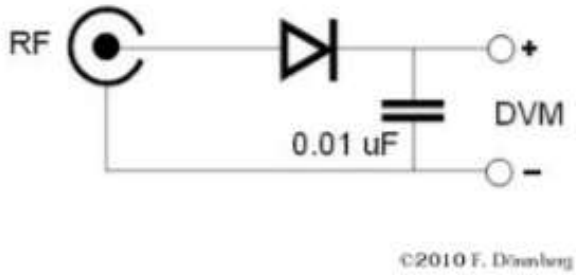
Obviously, this circuit will be fooled by a DC-offset on the RF signal. We can fix this by swapping the diode and the capacitor. Note that this is not necessary if you measure an RF voltage via a transformer, such as a directional coupler.

We can also make life a little easier by including a voltage divider with a scaling factor that is equal to the reciprocal of √2. Then the output voltage will be the RMS value that we are interested in. We can make a voltage divider where one resistor is the input impedance of the DVM. My DVM has a published input resistance of 10 MΩ. The second resistor should be 4M14 Ω,since 10 / (10+4.14) = 1 / √2). So 3M9 + 220k = 4M12 would be a good choice. This approach is shown below. Note that the resistor should be non-inductive (e.g., bulk-metal-foil or carbon).



RF-probe with DC-block and peak-to-RMS scaling



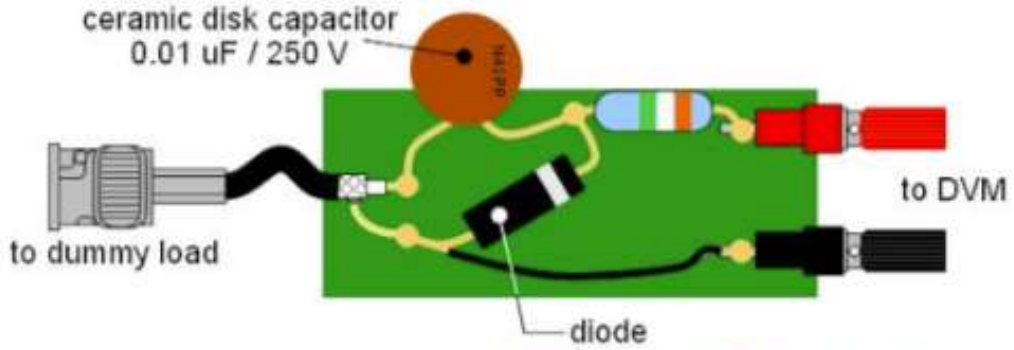


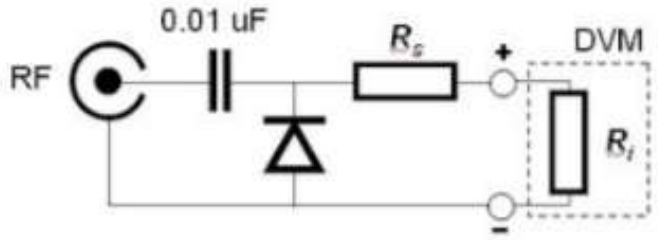
©2010 F. Dönnberg

A simple RF-probe

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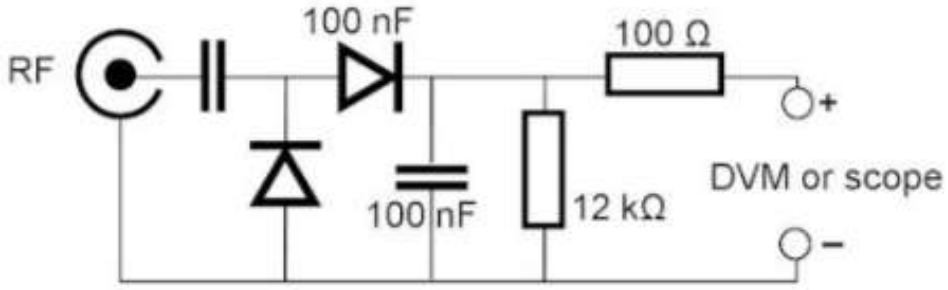




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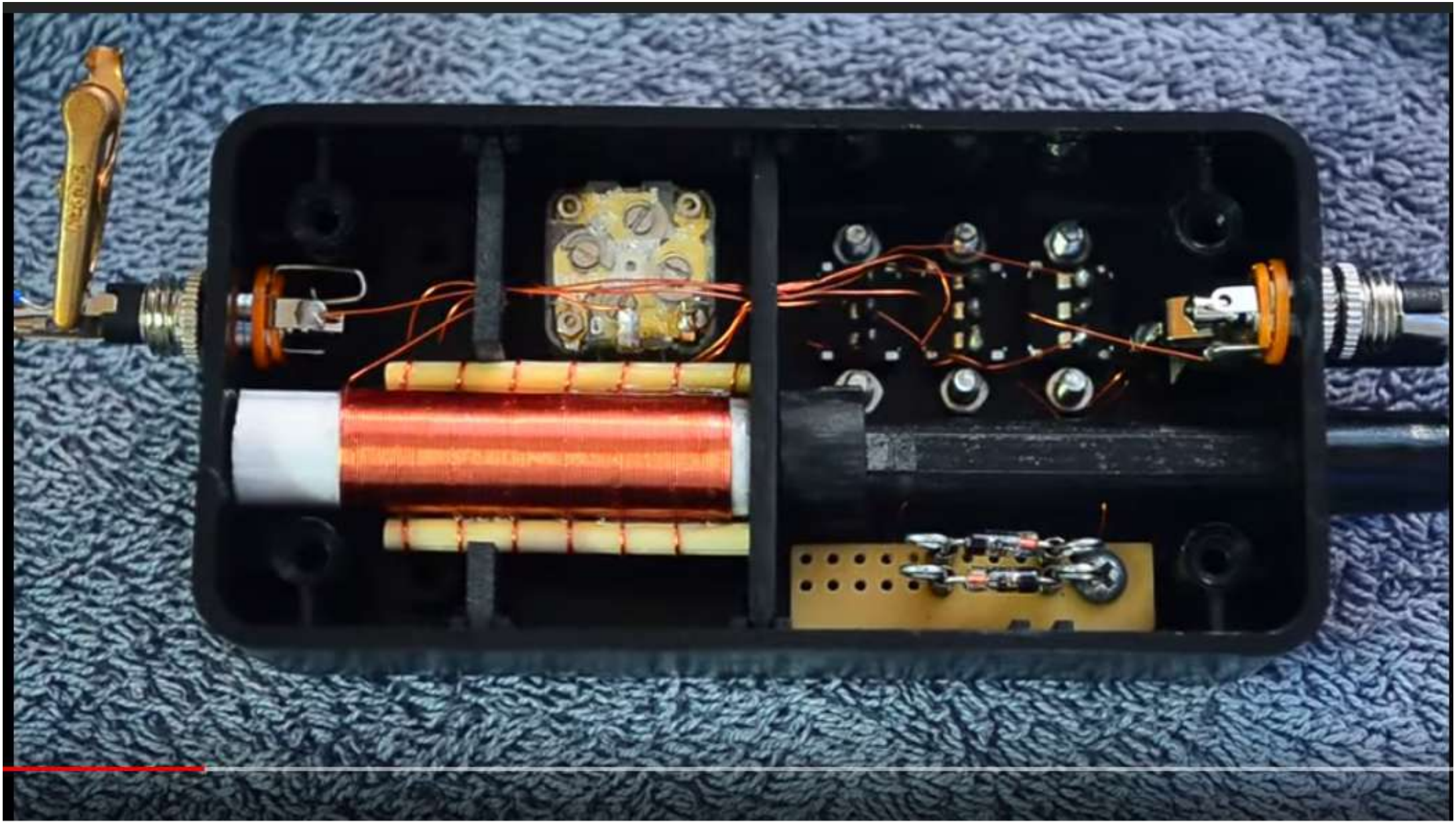
RF-probe with DC-block and peak-to-RMS scaling

A variation on this, with a full-wave rectifier, is shown below:

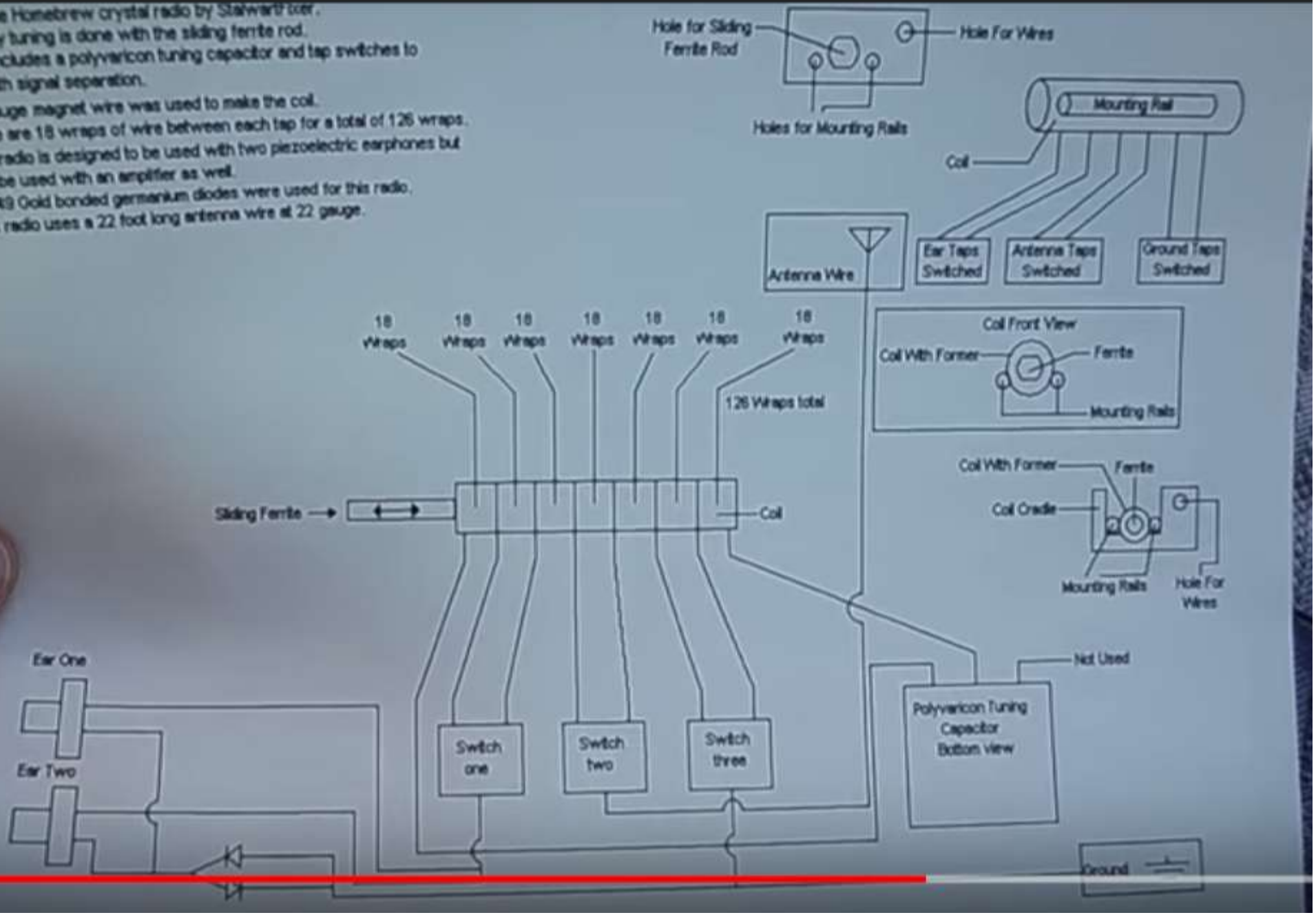


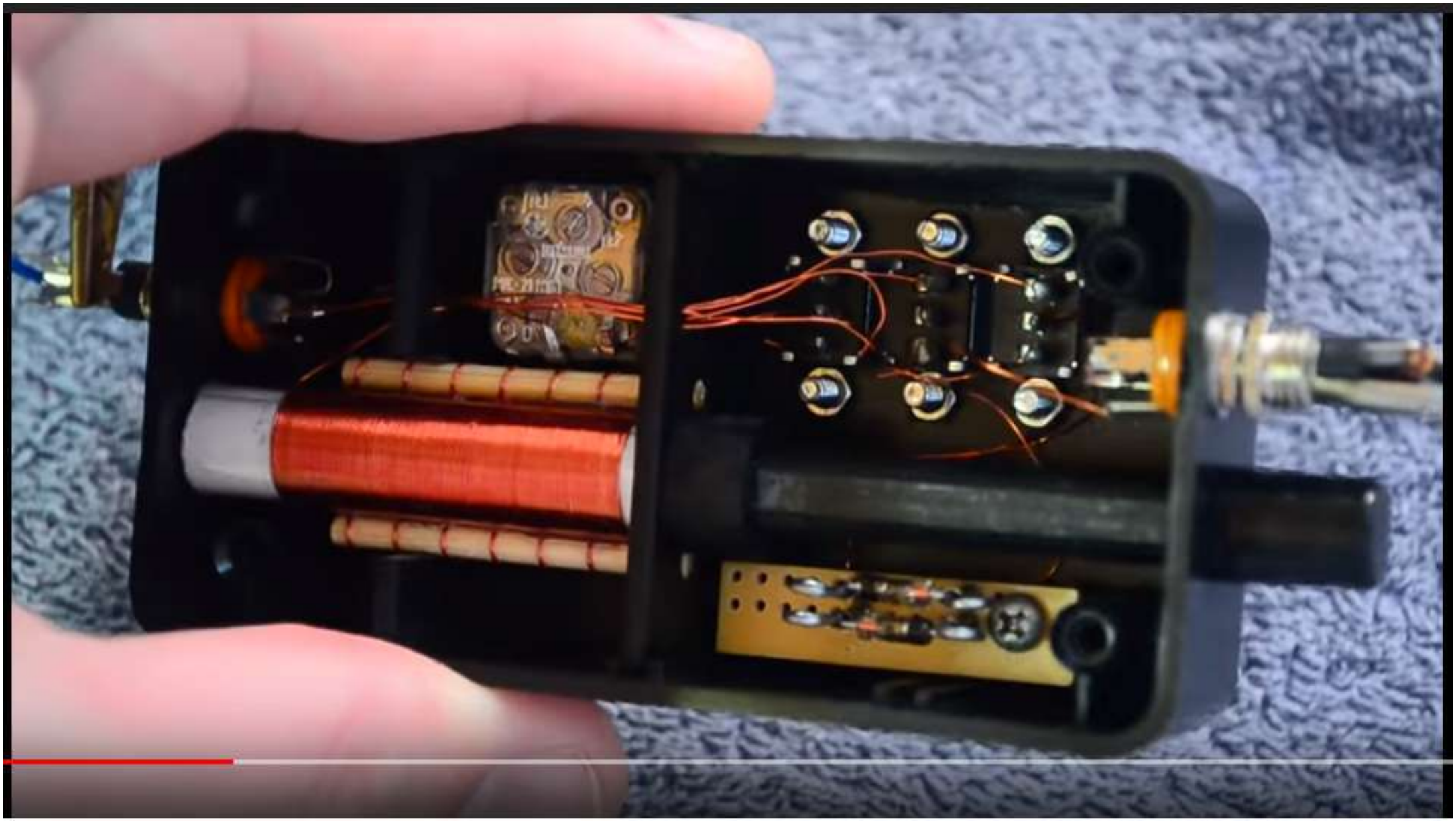
Note that these diodes are available from several manufacturers and the Vf and Vrrm may vary slightly between them. I opted for an OA91 diode, as I had one in my junk box. Note that this limits the measured power to 20 W. The AA118 (or its substitutes AA113 and 1N60) is good through 32 Watt into 50 ohm. For further considerations, see ref. 2 and 8.





Portable Homebrew crystal radio by Stalwart Doer.
Primary tuning is done with the sliding ferrite rod.
Also includes a polyvaricon tuning capacitor and tap switches to aid with signal separation.
30 gauge magnet wire was used to make the coil.
There are 18 wraps of wire between each tap for a total of 126 wraps.
This radio is designed to be used with two piezoelectric earphones but can be used with an amplifier as well.
1N949 Gold bonded germanium diodes were used for this radio.
This radio uses a 22 foot long antenna wire at 22 gauge.



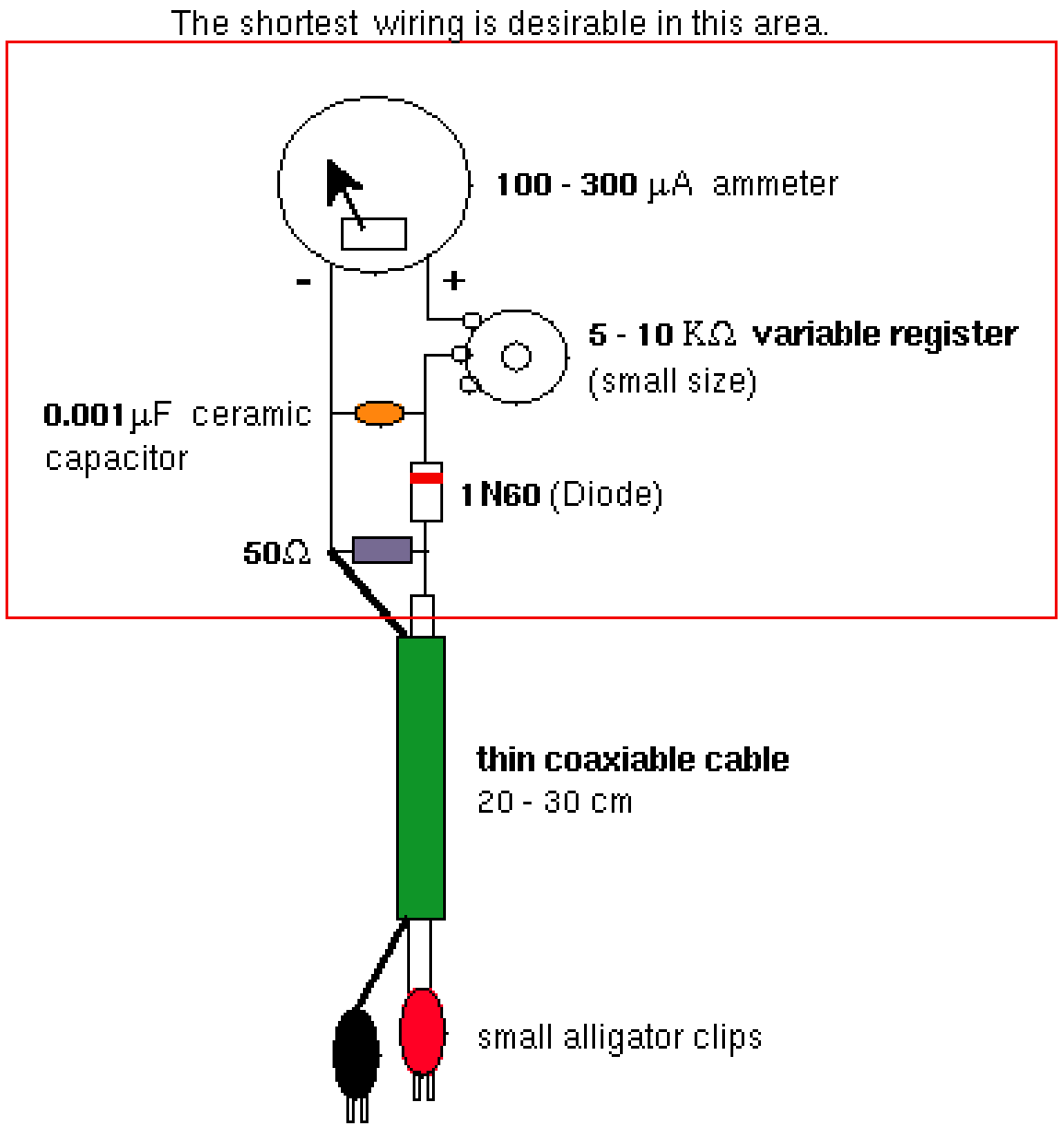




Homebrew Crystal Radio

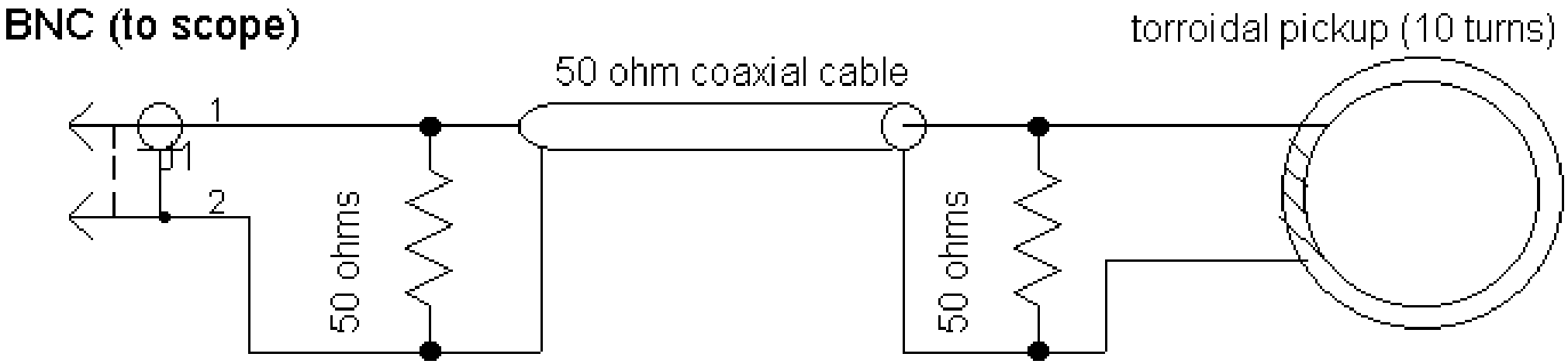
Up next

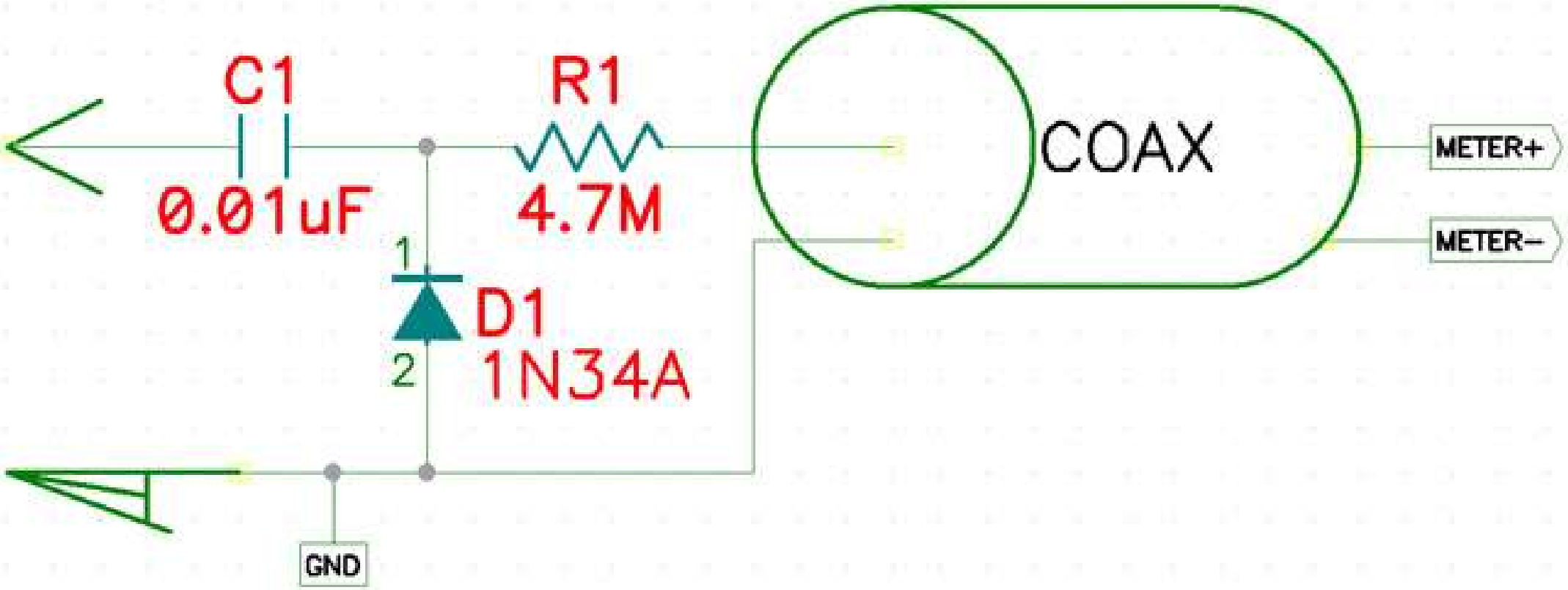
The simplest power meter



As for the ammeter, you can use an used one taking from junked audio amplifier, tape-recorder, radio-cassette, and so on.

RF Current Probe





Simple RF Probe




K-S Precision Metals
Stock # 164



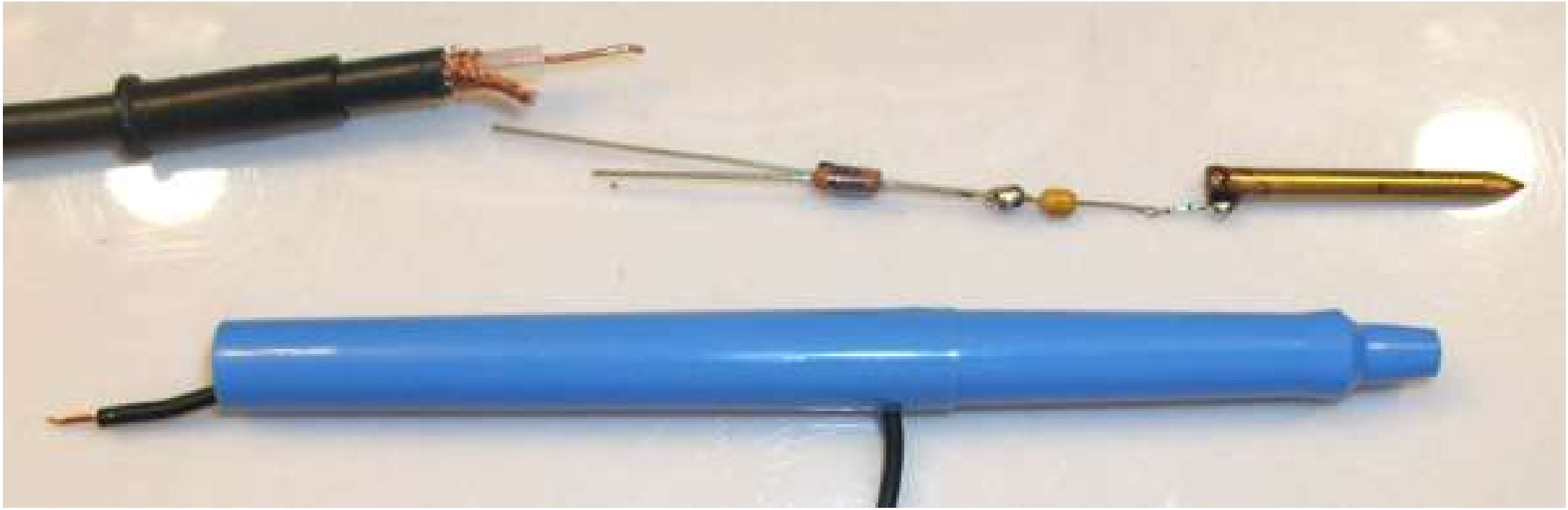


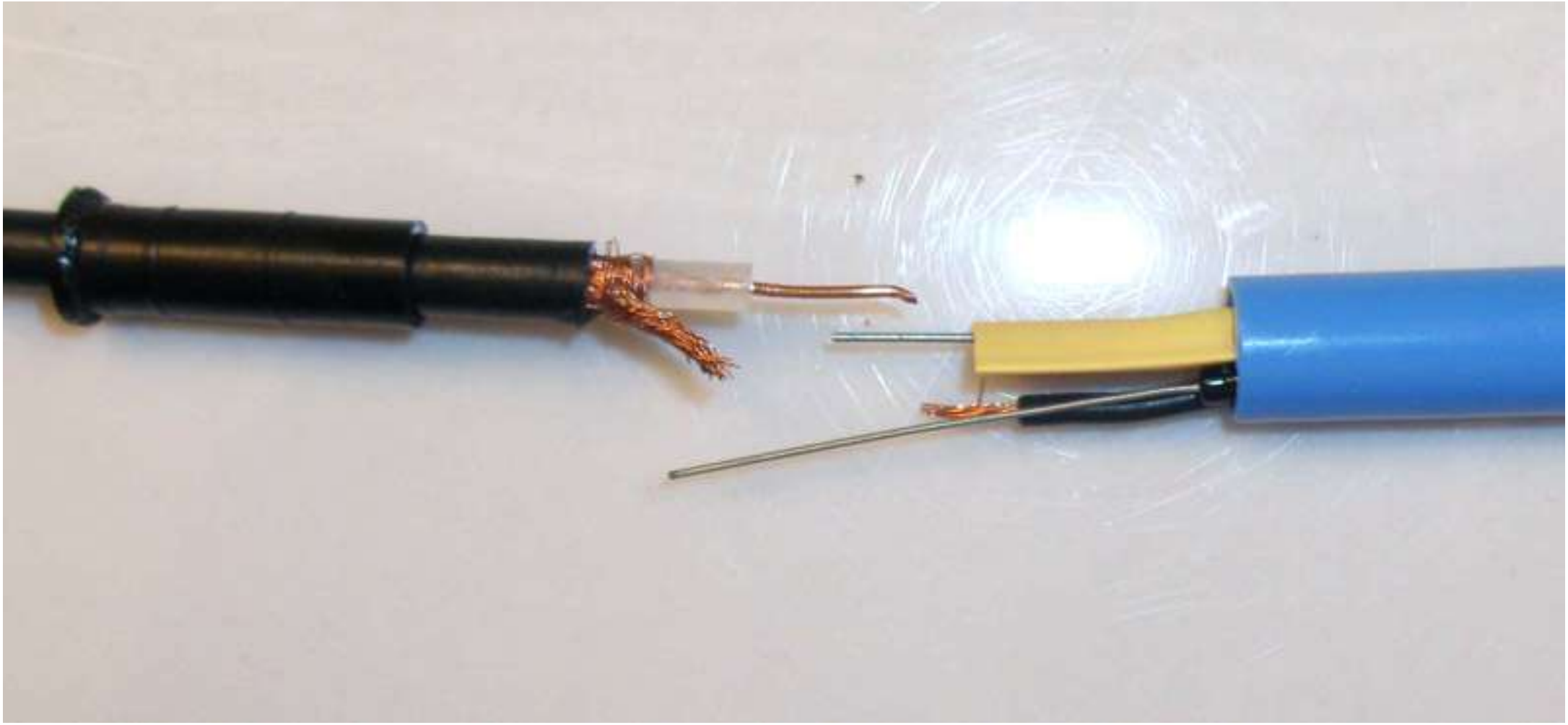


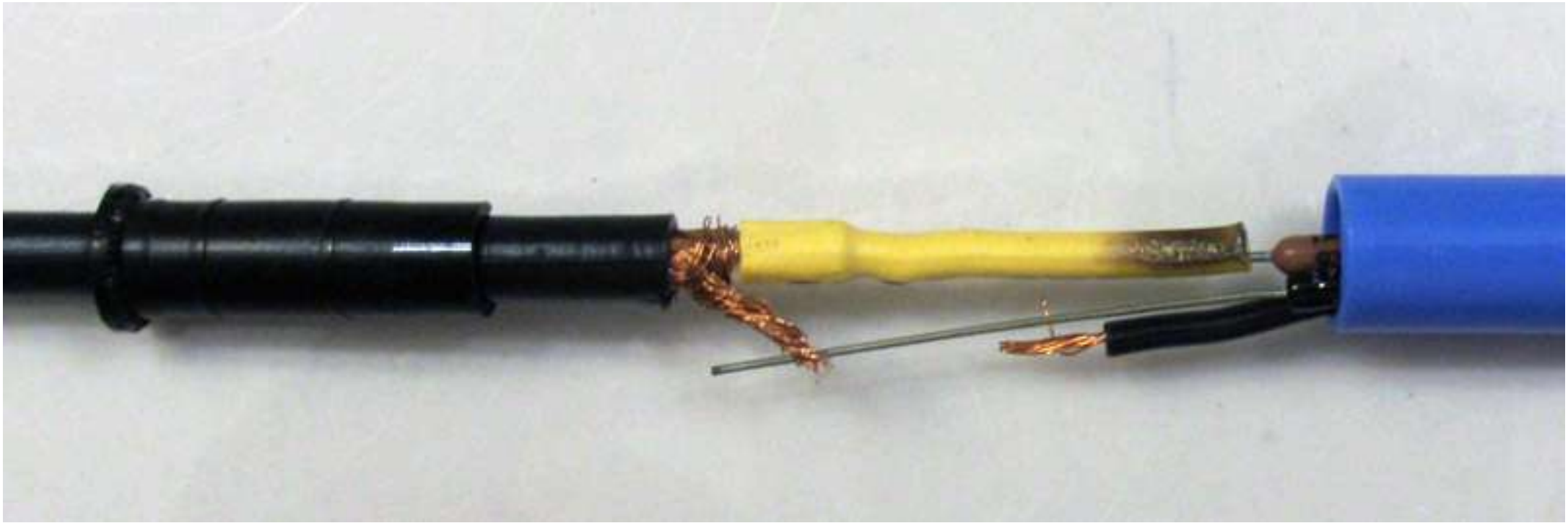

RG-58









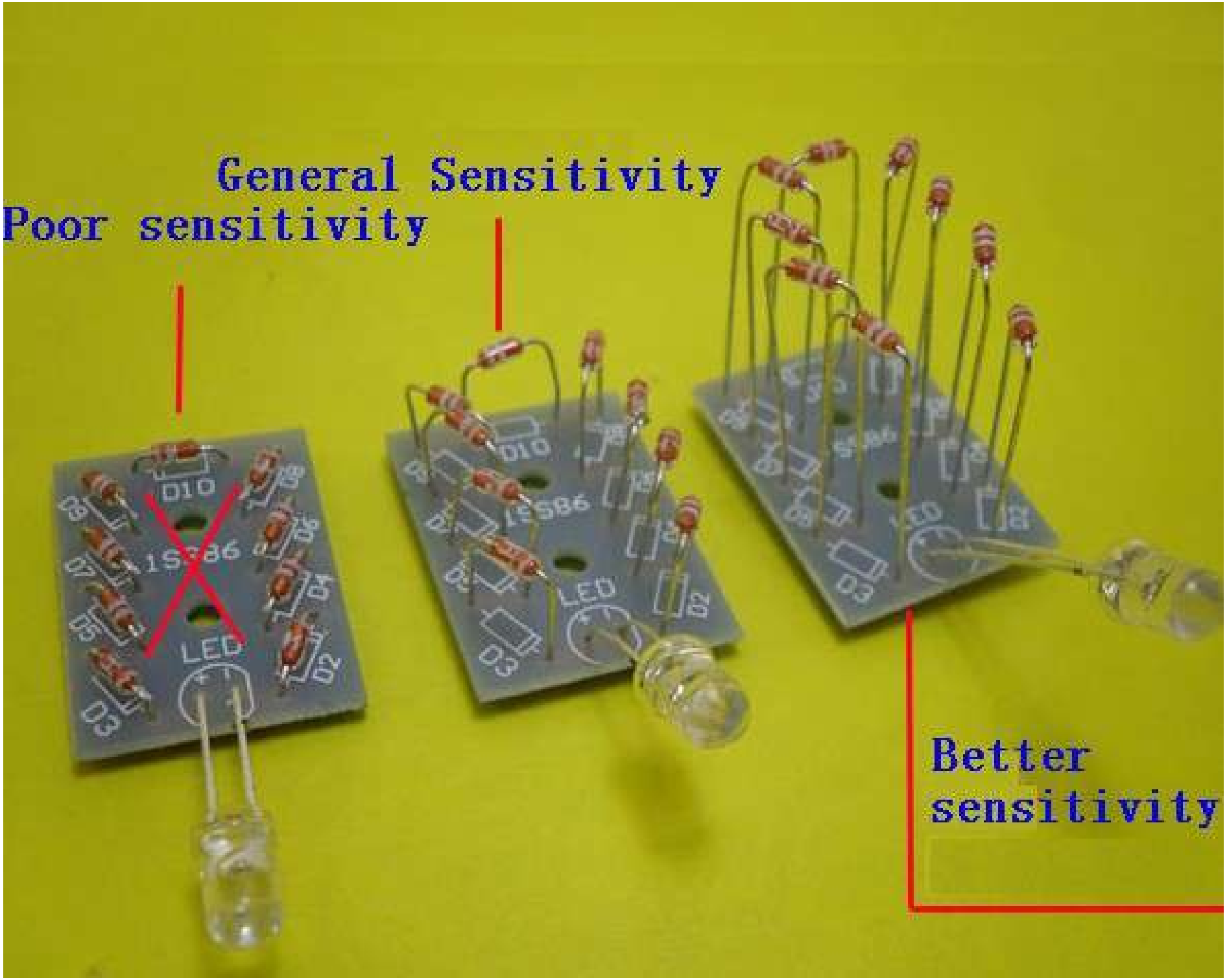


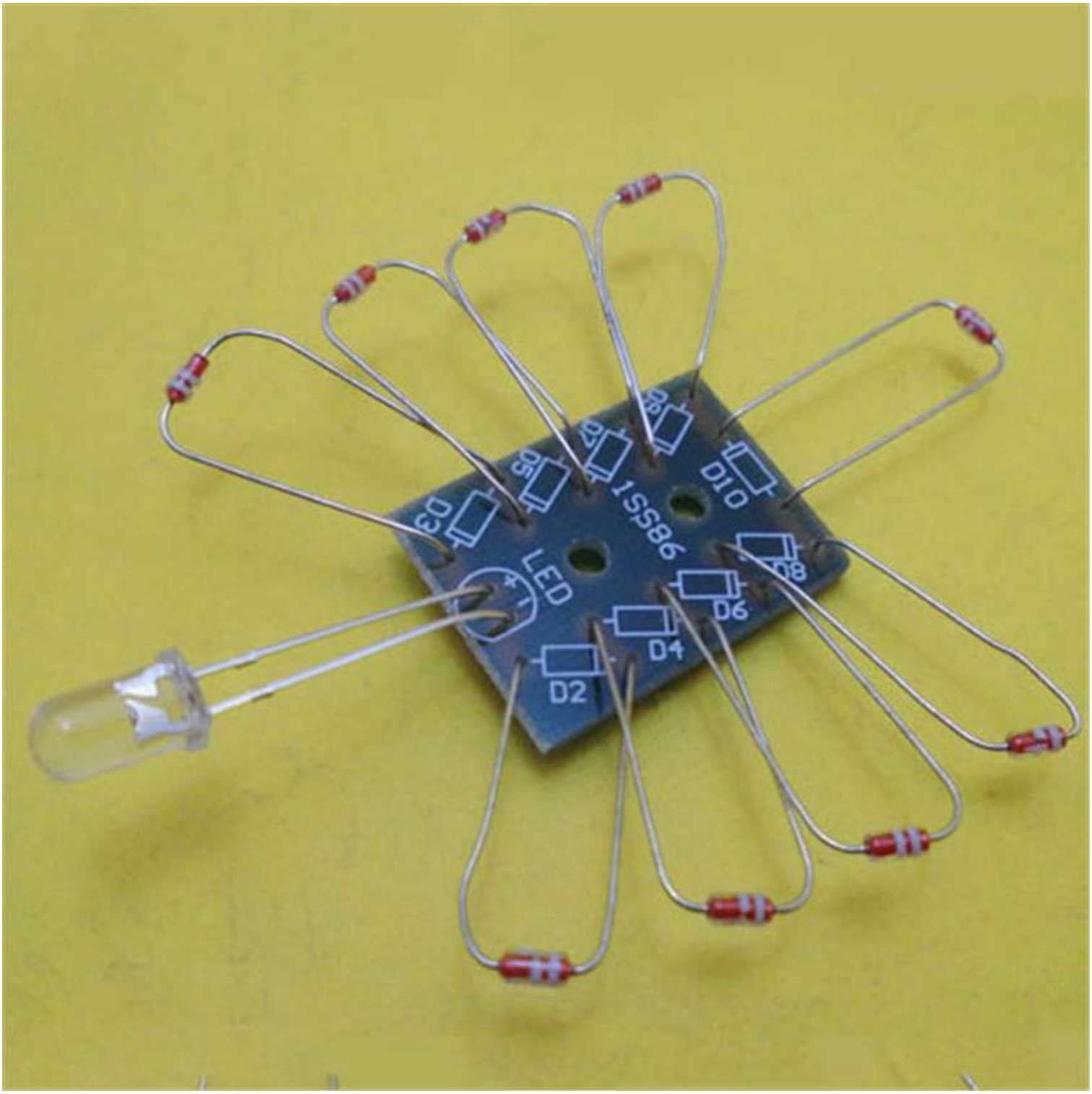




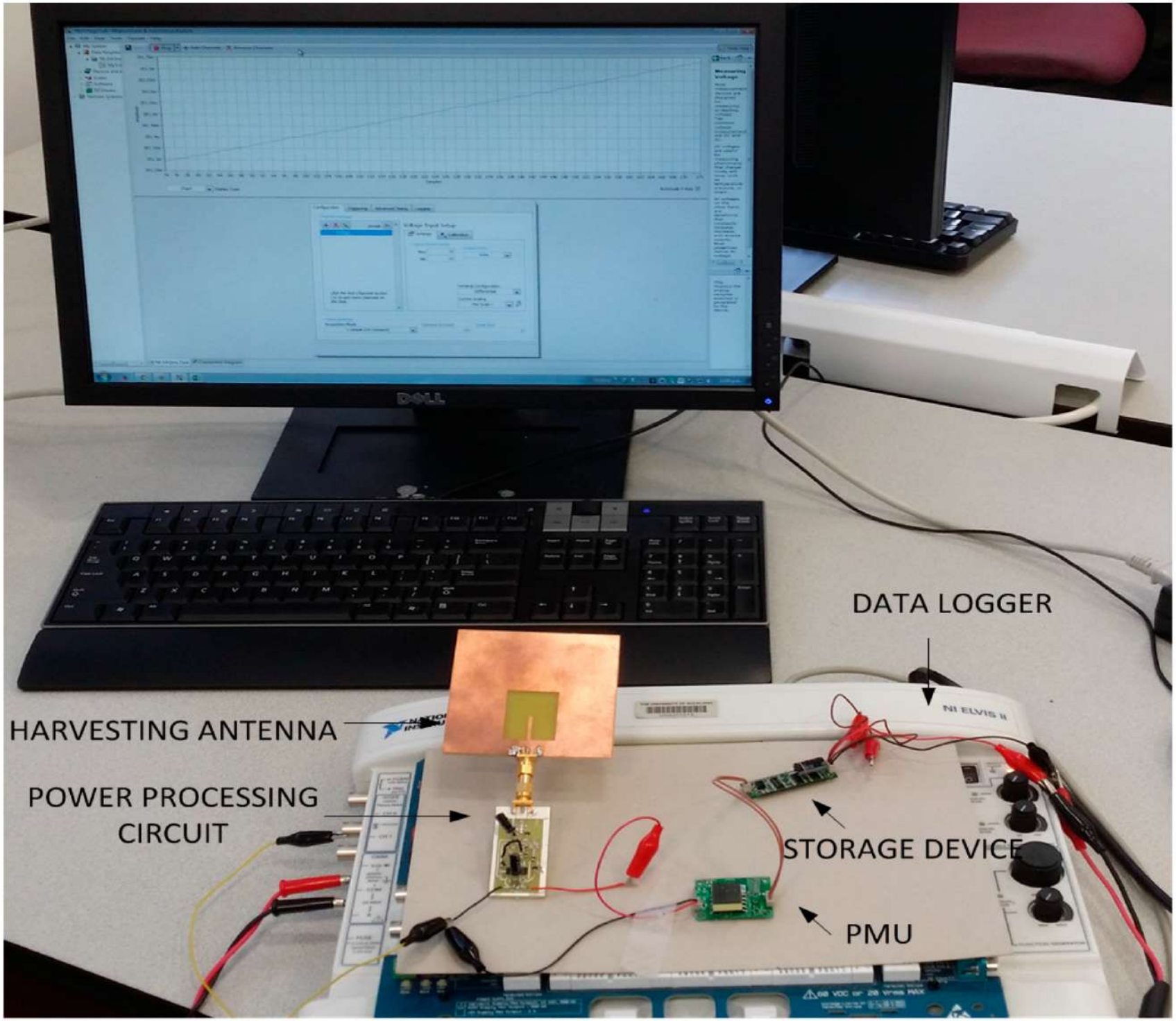

TENMA
72-4025
.583
POWER
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LOGIC
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mA
COM
VΩ
10A

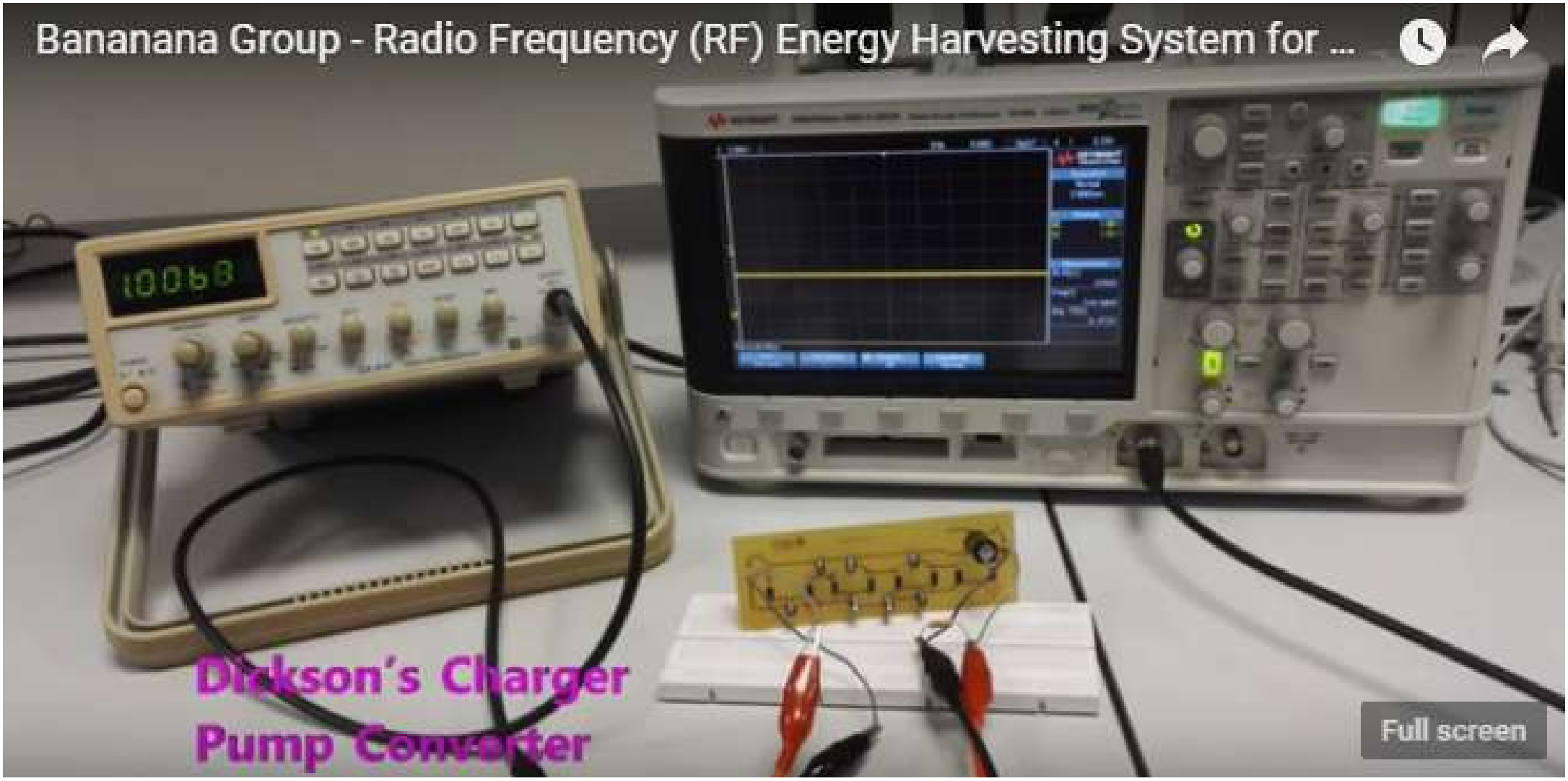

Ham Radio Project
BAND
C1
D1
D2
C2
D3
D4
Harvester Aerial
Charge
Tes
L1
R1
AF Out
C4
D5
External Tune
Tune
Battery
V +
On
R2
Radio
I wanted to see the ambient radio harvesting voltage as the battery was not charging....
1:01 / 6:54

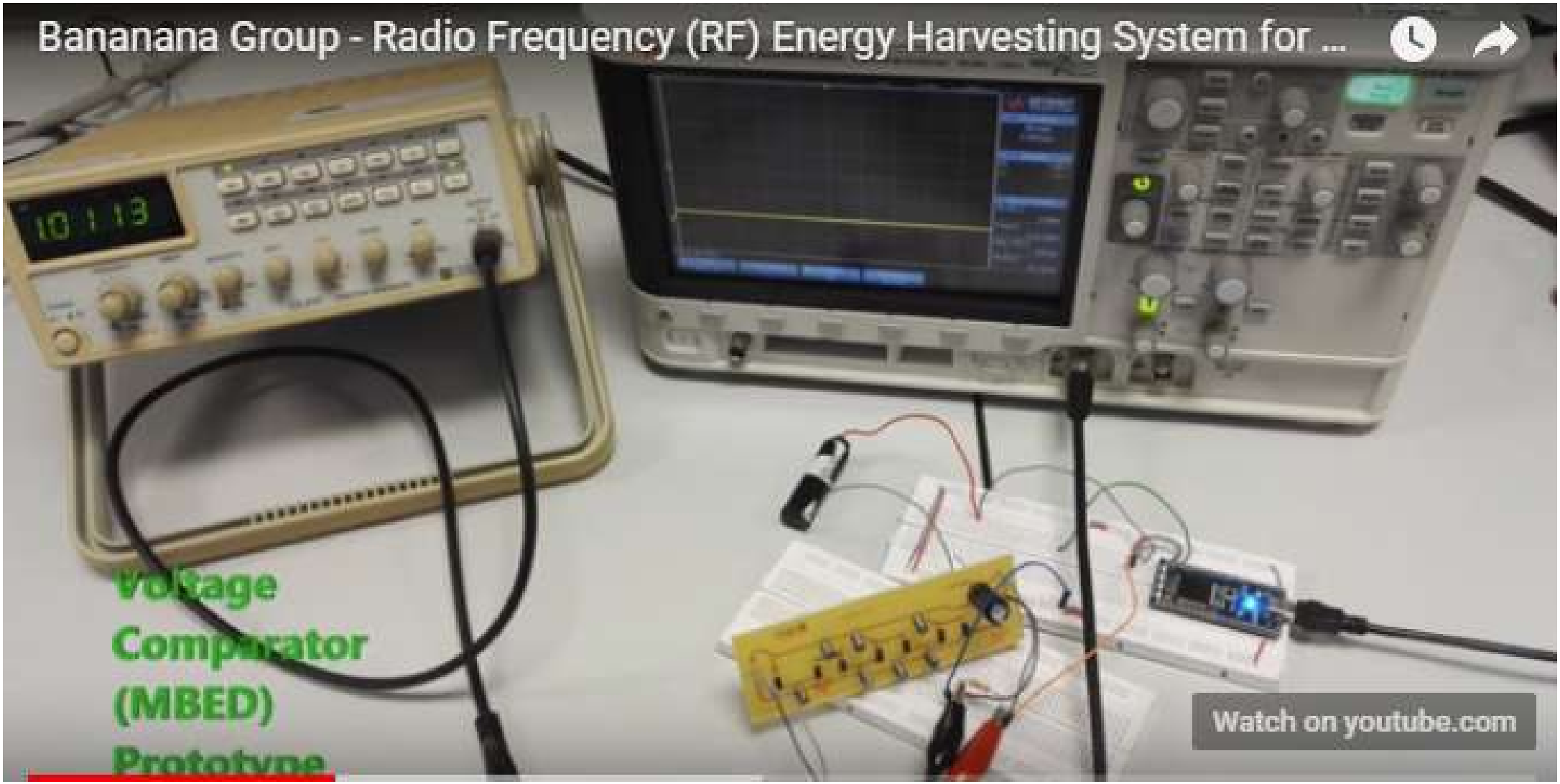

General Sensitivity
Poor sensitivity
Better
sensitivity

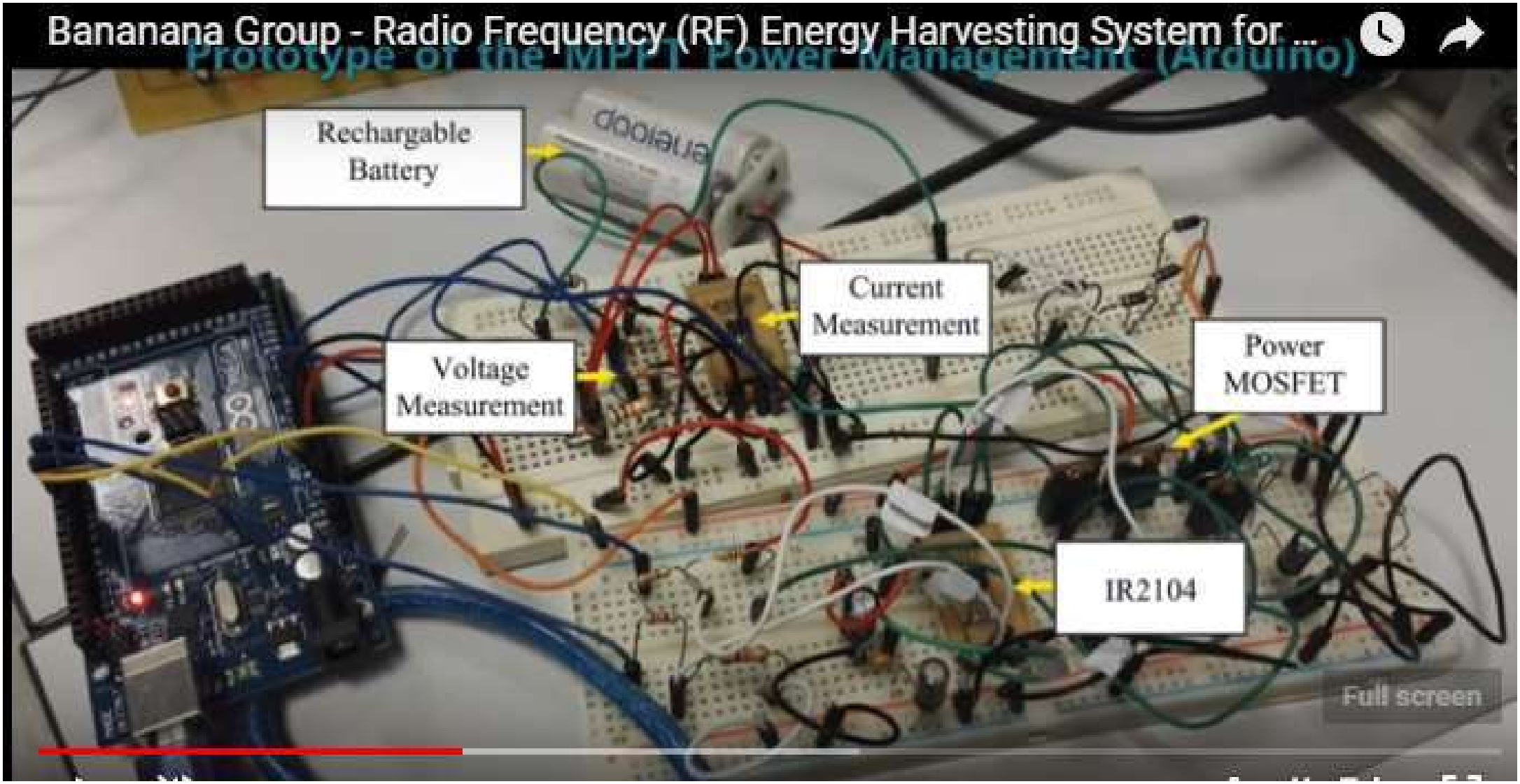

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D7
D9
D10
1SS86
LED
D8
D6
D4
D2

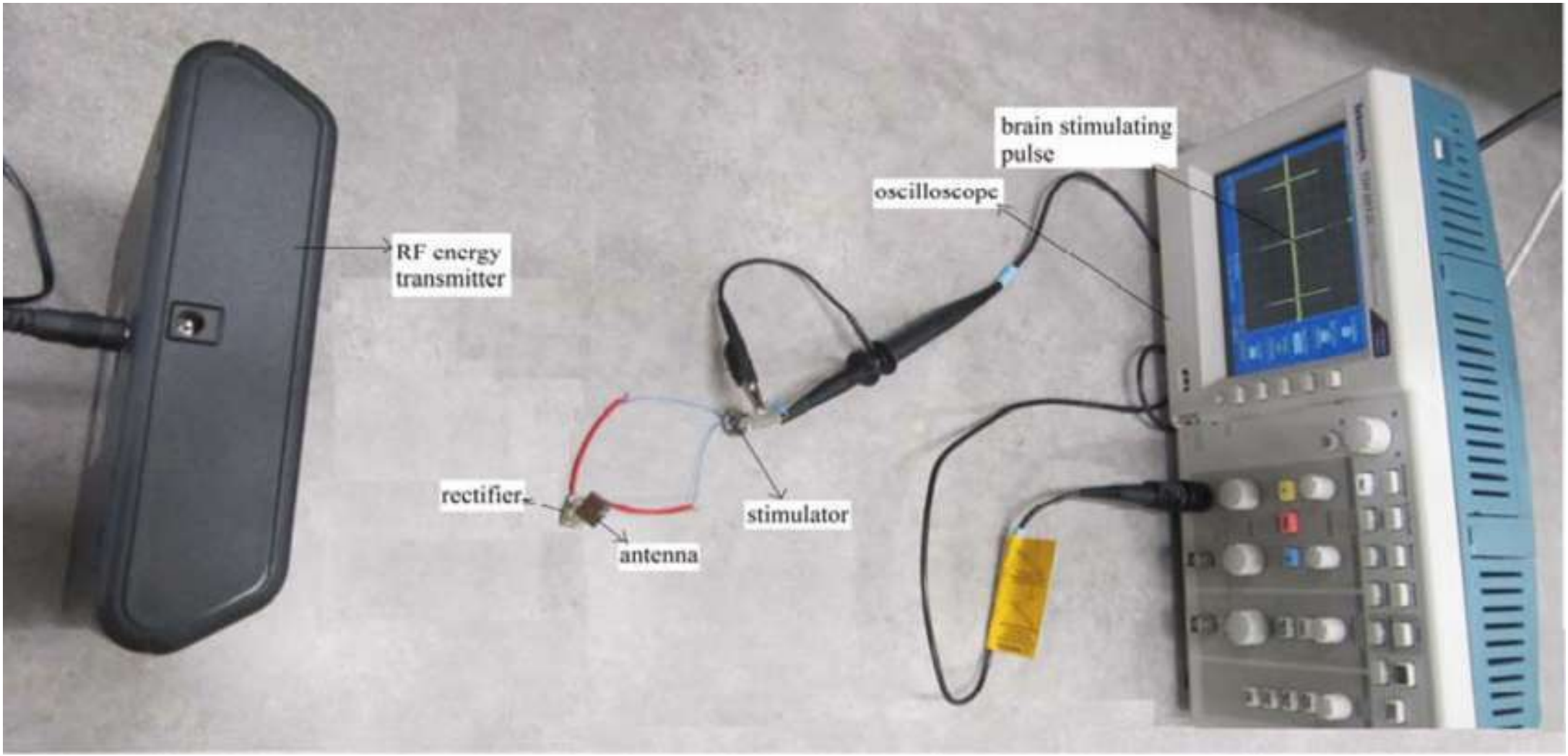

D10
1SS86
LED
D1
D2
D3


DATA LOGGER
HARVESTING ANTENNA
POWER PROCESSING CIRCUIT
STORAGE DEVICE
PMU


Bananana Group - Radio Frequency (RF) Energy Harvesting System for ...
Dickson's Charger
Pump Converter
Full screen

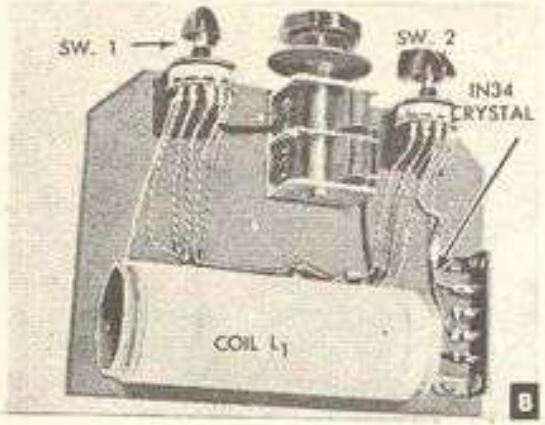

Bananana Group - Radio Frequency (RF) Energy Harvesting System for ...
Voltage
Comparator
(MBED)
Prototype
Watch on youtube.com


Bananana Group - Radio Frequency (RF) Energy Harvesting System for ...
Prototype of the MPPT Power Management (Arduino)
Rechargable Battery
Voltage Measurement
Current Measurement
Power MOSFET
IR2104
Full screen


brain stimulating pulse
oscilloscope
RF energy transmitter
rectifier
antenna
stimulator

RADIO RECEIVERS





SINCE a crystal set is the simplest form of radio receiver, it is the logical starting point for the student or junior experimenter. Unlike other types of receivers a crystal set uses no batteries or power-line supply, therefore the sound that emerges from the headphones is derived entirely from radio energy picked up by the antenna. Use a long, high antenna and a ground connection to a cold-water pipe.

The selective tapped-coil crystal receiver illustrated in photos A and B employs adjustable loading in a simple tuning arrangement that is very effective when used with a good sensitive pair of headphones. A schematic circuit diagram and the coil-winding details appear in Fig. 1; pictorial wiring diagram in Fig. 2 shows all connections clearly.

The 2-gang variable-condenser stator plates (S), are connected in parallel; the rotor plates (R) are common with the frame. This lead goes to the lever of switch No. 1; the lever of switch No. 2 is connected to one side of the 1N34 germanium crystal, and the headphones are in series.

When winding the coil, place a toothpick or

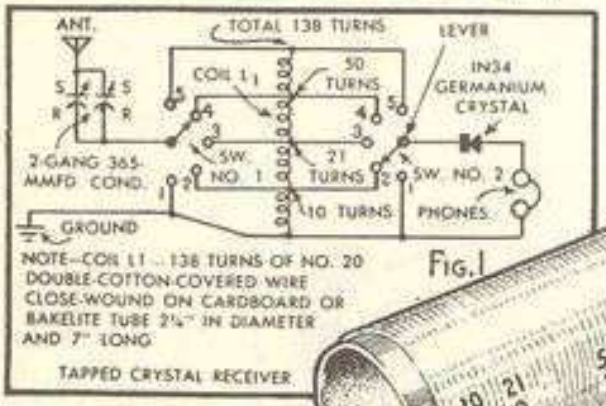


FIG. 1

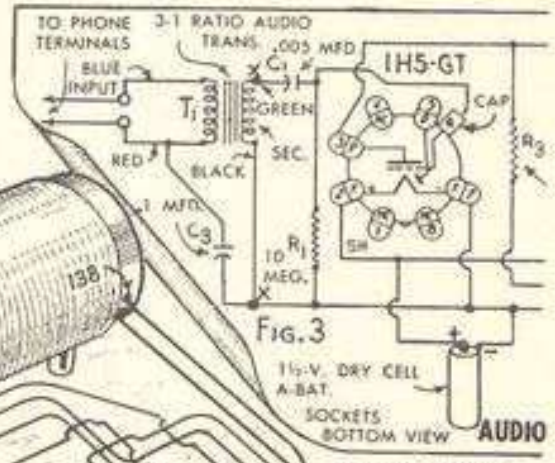
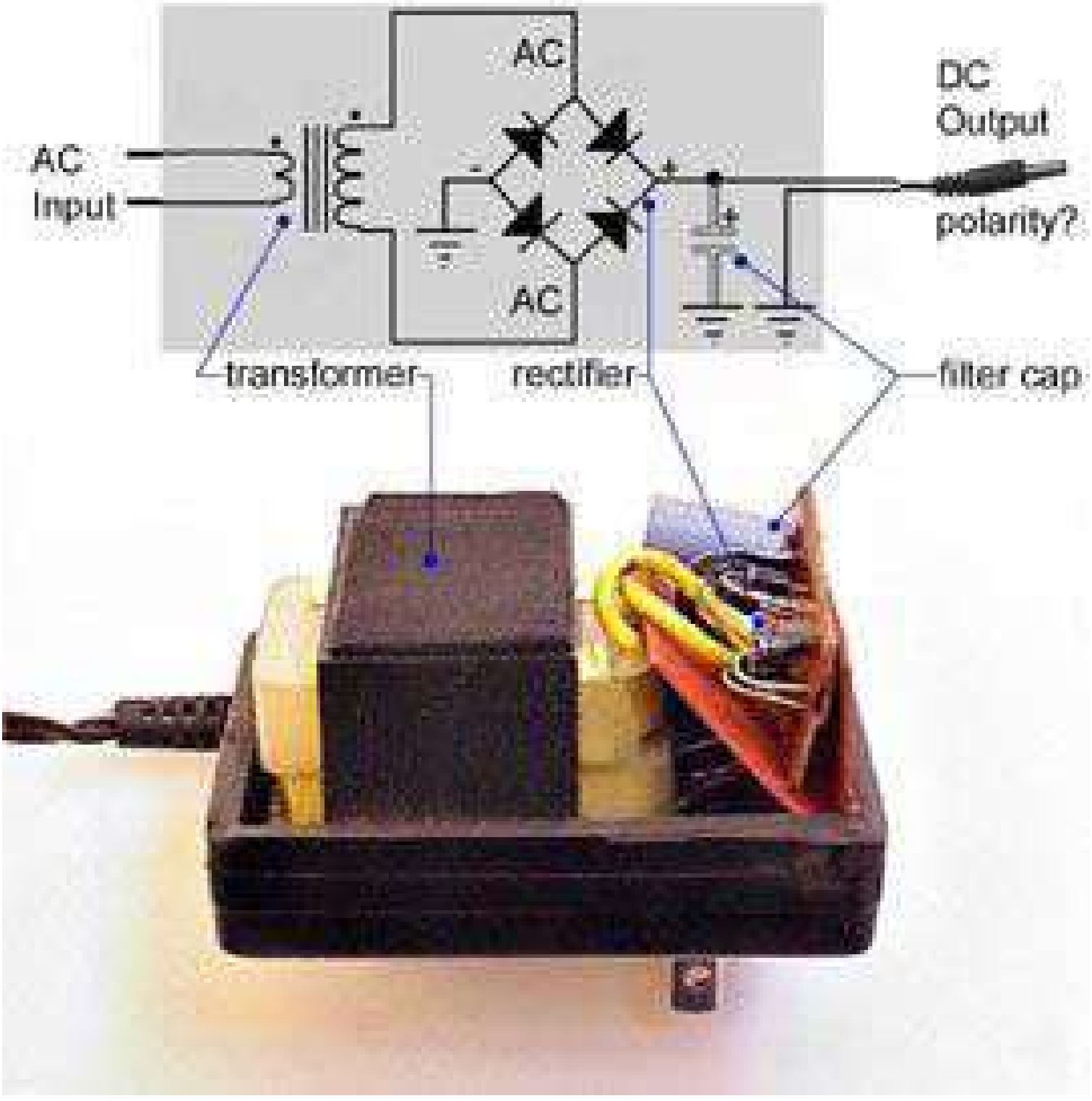


FIG. 3

FIG. 2

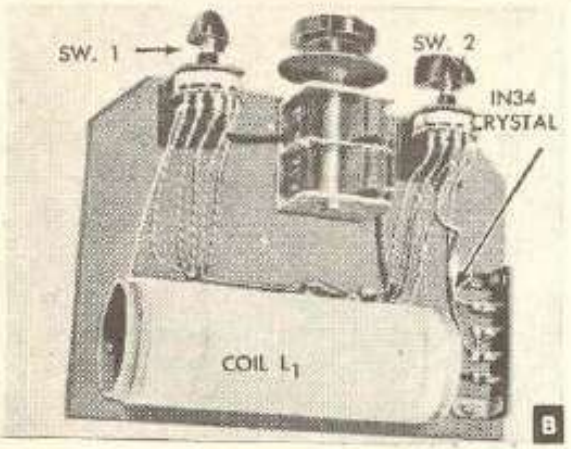
CRYSTAL RECEIVER

Typical "Wall Wart"



RADIO RECEIVERS





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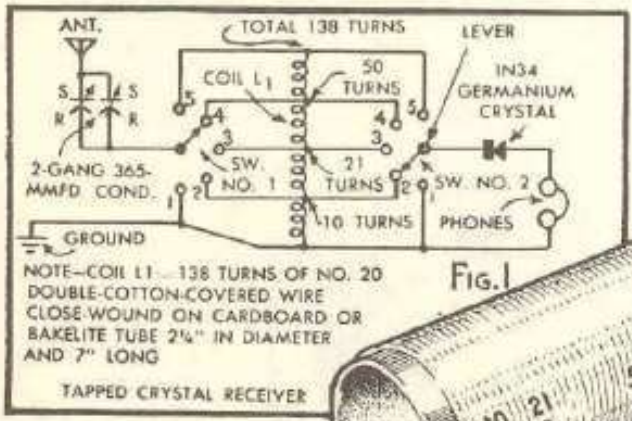


FIG. 1

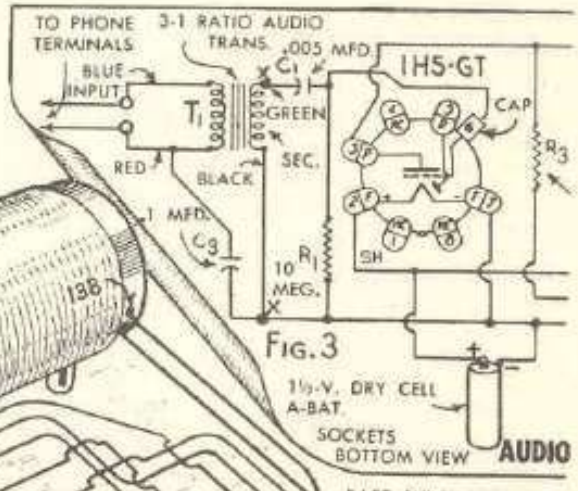
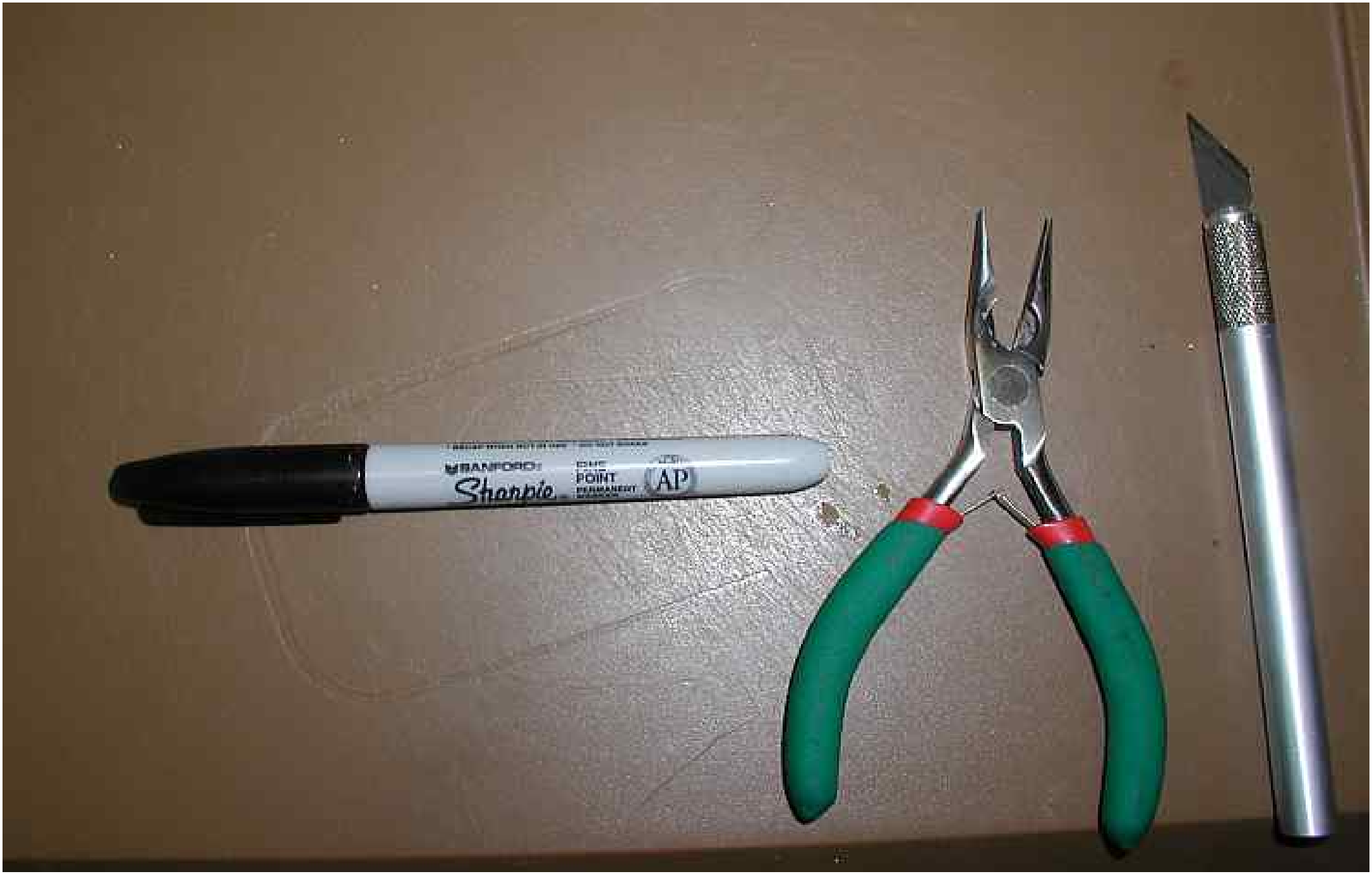


FIG. 3

FIG. 2

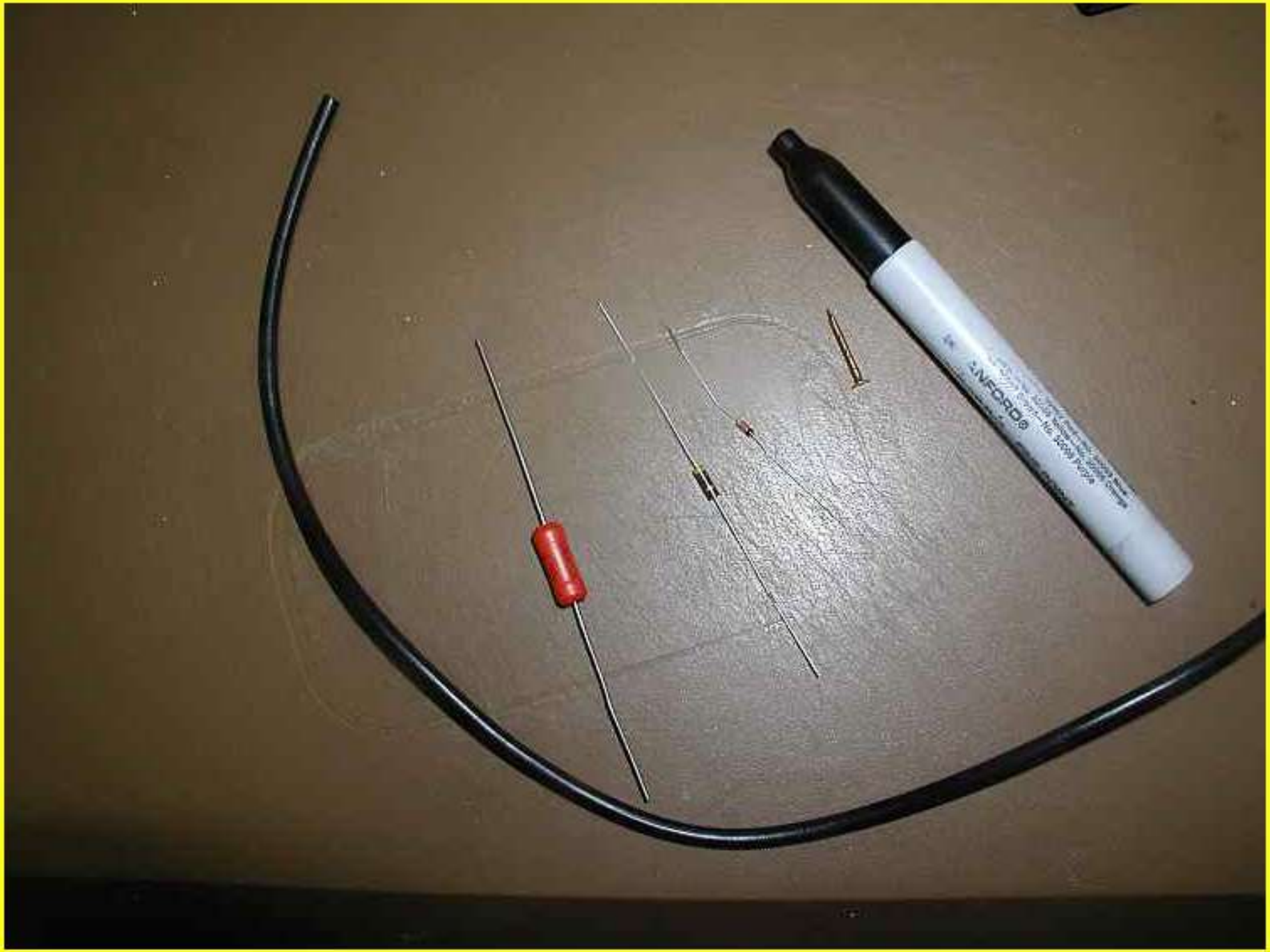


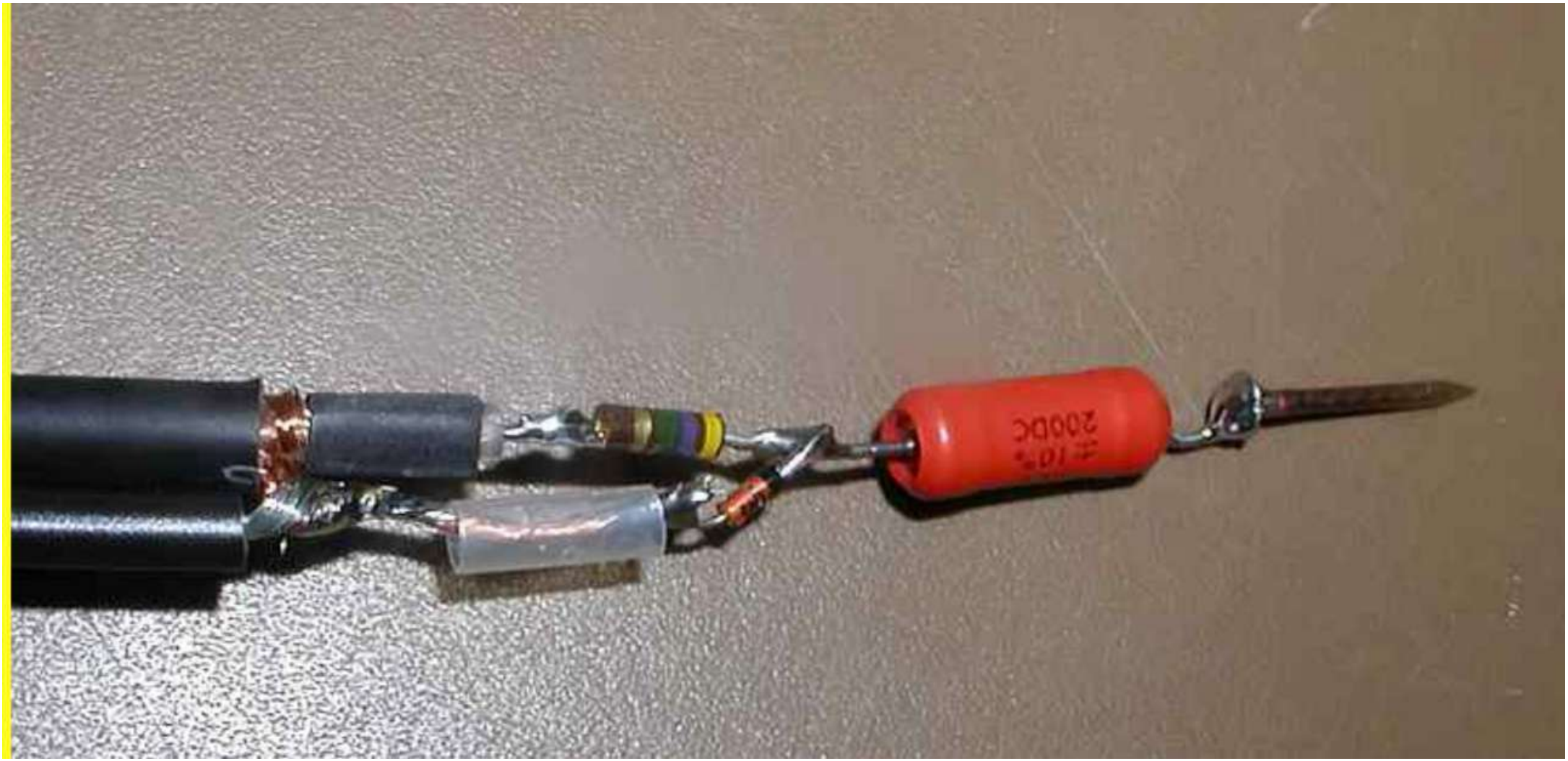

SANFORD
Sharpie
FINE
POINT
PERMANENT
AP


FINE POINT

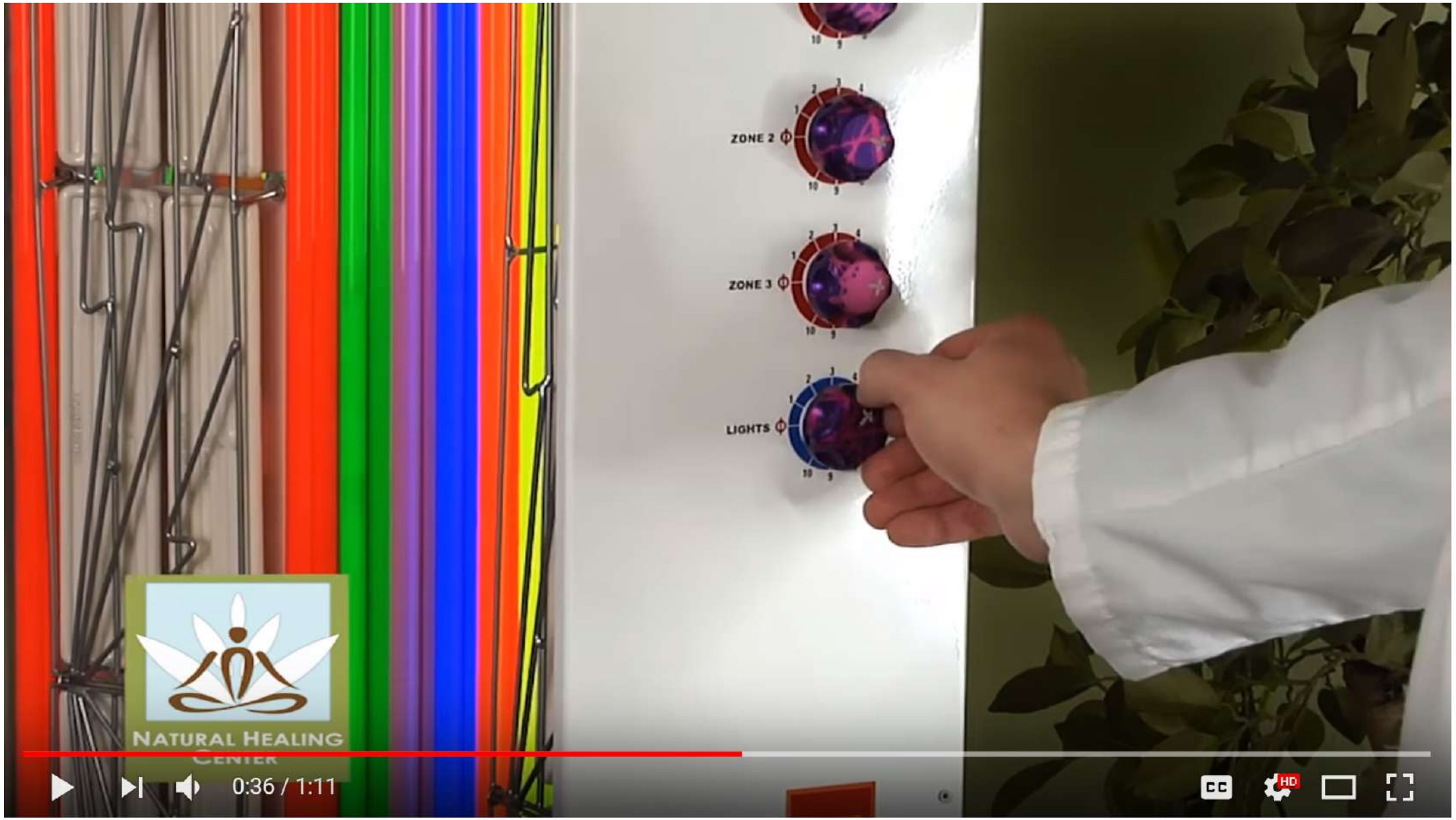


I used a .02ufd cap because it was the perfect physical size, a 4.7 meg resistor, and a 1N34A diode. I had a nice, flexible, p
copper nail that would be easy to solder to for a tip.

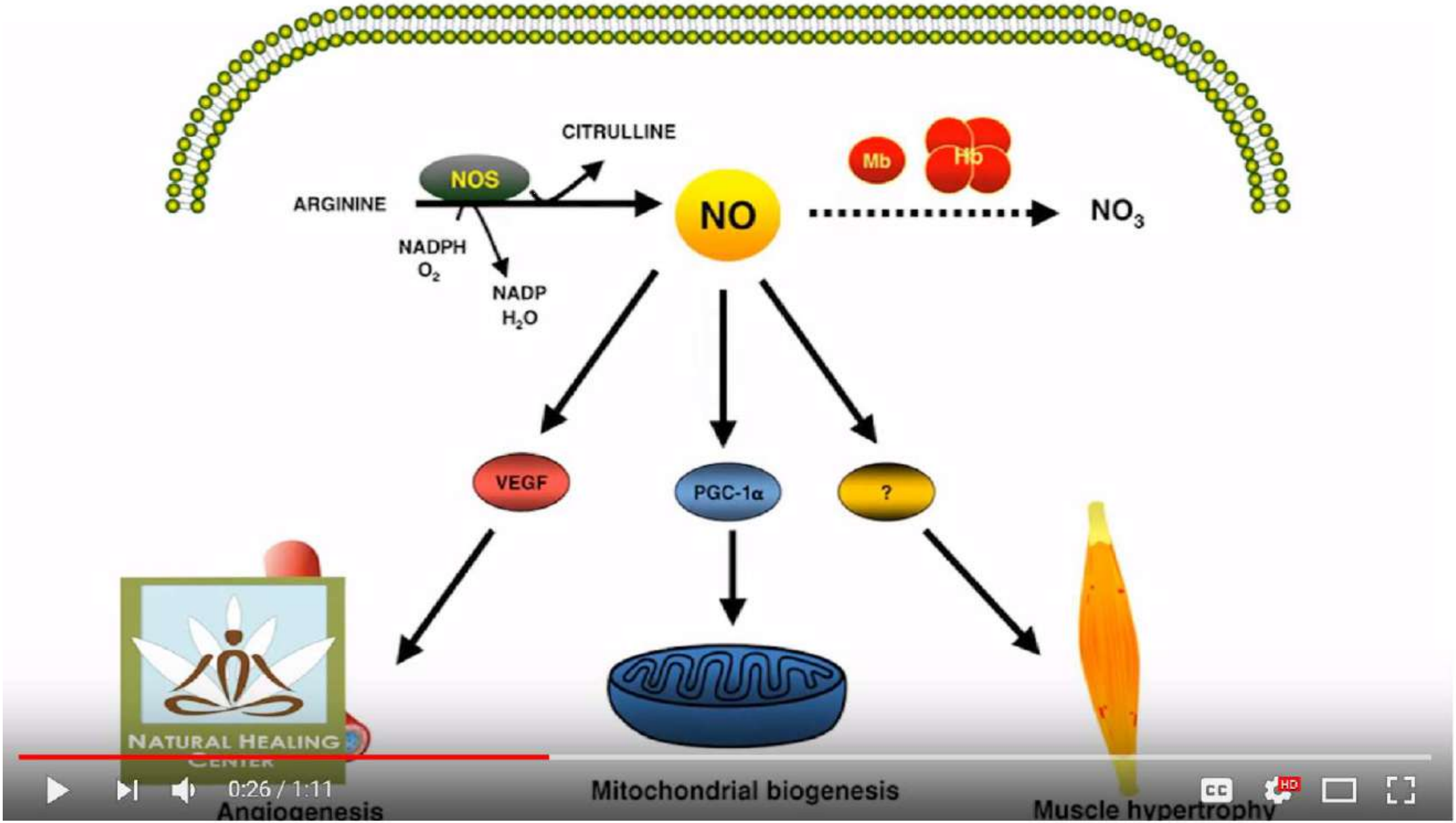


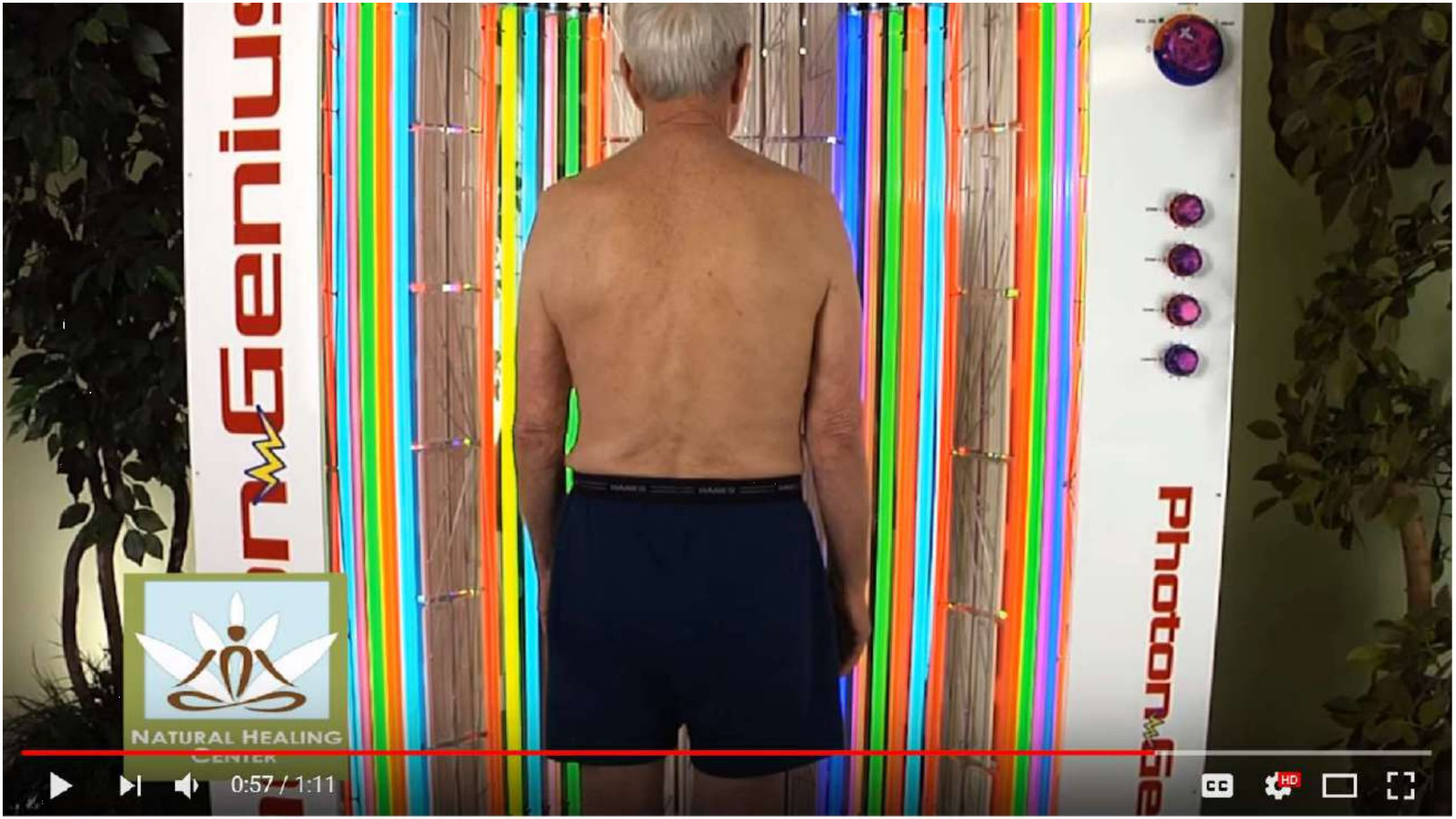

±10%
200DC


BRAIN POWER
brain-power.com



PHOTON GENIUS


CITRULLINE
NOS
ARGININE
NADPH
O_2
NADP
H_2O
NO
Mb
Hb
NO_3
VEGF
PGC-1α
?
NATURAL HEALING
CENTER
0:26 / 1:11
Angiogenesis
Mitochondrial biogenesis
Muscle hypertrophy


NATURAL HEALING
CENTER
0:57 / 1:11

Highlights

Renaven (formerly Kidney Complex)
Strengthens kidney function; promotes safe kidney detoxification; helps clear putrid odors in the digestive tract; contains Ayurvedic herbs to tonify and nourish the kidneys.
Read more...

Liver ND (formerly Liver Nano-Detox)
Liver ND promotes healthy bile flow, fat digestion, normal range cholesterol levels; helps alleviate pain. Skilling Store
Read more...

Premier Research Labs
Skilling Institute's online store offers results oriented specialty supplements including Premier Research Labs and more . . .
Read more...

Lyme Disease
Lyme Disease mimics other diseases and is now known as the "great imitator." It is often misdiagnosed and mistreated.
Read more...

Contact Info



Skilling Institute
4340 E Indian School, Suite 21
Phoenix, AZ 85018
Email: info(at)edskilling.com

Phone: (877) 777-4788
Fax: (877) 457-5207

- **Detoxify the body**
- **Strengthen cardiovascular system**
- **Devitalize and clear pathogens, fungus, mold, bacteria, germs, etc.**
- **Regenerate tissue & bone**
- **Improve symptoms of most diseases**
- **Reflow nerve pathways**
- **Empower body's immune system**
- **Promote longevity**
- **Promote weight loss (30 minute session burns over 700 calories)**

Noticeable & Comprehensive Health Benefits

Using the Photon-Genius produces potent antioxidants, neurotransmitters and artery wall relaxers. The Photon-Genius helps regulate muscle tone of the arteries and prevents arteriosclerosis and is anti-inflammatory preventing injury to vessel walls and normalizing blood pressure in the process.

Using the Photon-Genius produces powerful brain cell protectors, neurotransmitters, memory and learning enhancers (transmitting harmonic, balanced chemical messages in the brain).

The Photon-Genius transmits, imprints, and reminds the human body at the cellular level of the essential creative process of perpetual enlivening energy that results in more natural and empowered regenerative processes throughout the body.

The Photon-Genius is a wonderfully safe and easy-to-use dynamic means of achieving ever-accelerating levels of health, wellness and more efficient, natural regeneration and rejuvenation. The Photon-Genius technologies provide "noticeable" and "comprehensive" health benefits to make your body the best it can be. (Photon-Genius Health Benefits)



Compare the BioCharger™ NG versus Photon Genius/Super Sauna

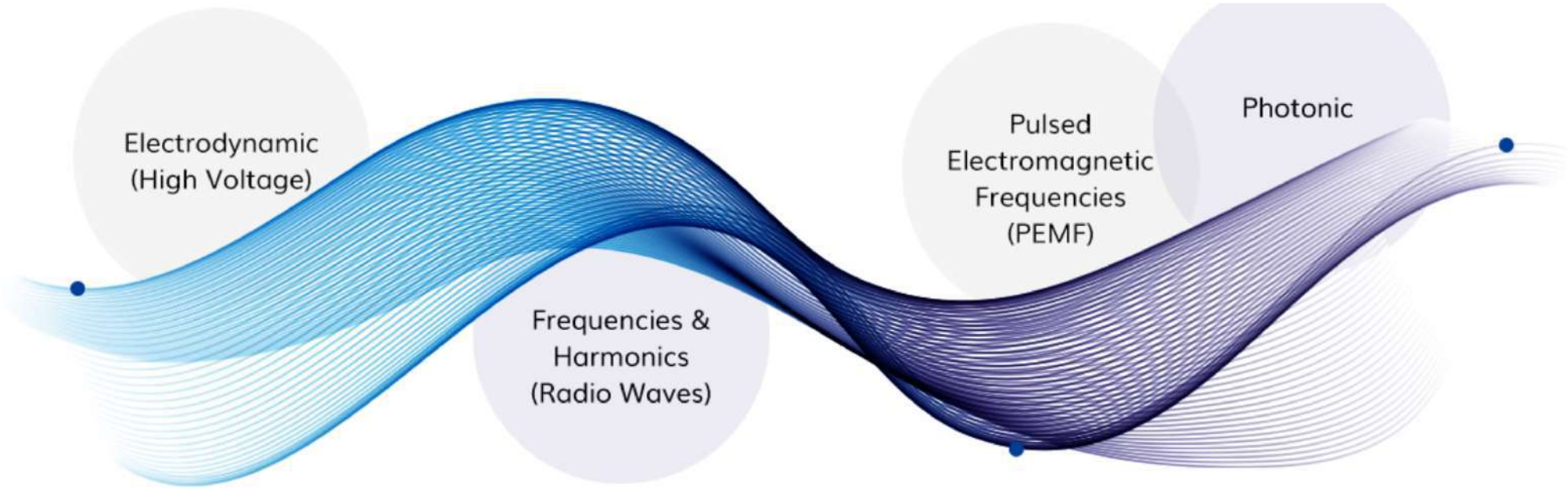


VS



Devices are not to scale

Click here to edit the announcement-bar module. This text is only for editing and will disappear after you publish the changes. Are you considering buying a Super Sauna, Photon Genius, or some other multiwave oscillator device? Check out our free MWO Reference Guide to help you! Download Free Reference Guide Types of Energies Produced and Controlled **The BioCharger™ NG produces 4 types of subtle energies:** *Photonic, Pulsed Electromagnetic Frequencies (PEMF), Electrodynamic (High Voltage), and Frequencies & Harmonics (Radio Waves).* **The Photon Genius produces ONLY 2 of the 4 types:** *Photonic and Frequencies-Harmonics.* Both PEMF and electrodynamic energies, which the Photon Genius lacks, are important for delivering voltage, improving uptake of nutrients, and detoxifying the nucleus of the cell. Although both systems produce frequencies-harmonics, only the BioCharger™ NG provides unlimited combinations of frequencies (fixed or sweeps), voltage, duration and duty cycle through software based outcome focused "Recipes". Currently more than 350 recipes have been created through the input of our worldwide customer network, including practitioners and researchers, and are accessible to all customers via myCloud. The Photon Genius is hardwired and not software based, and is only capable of providing fixed predefined sets of frequencies-harmonics. Far Infrared Sauna The Photon Genius incorporates infrared sauna as a standard offering. The BioCharger™ NG does not. Although Far Infrared is proven to be an effective therapy, especially for detoxification, **there are far more advanced standalone Far Infrared Saunas available for less than $5000**. Therefore if you bought a combination of the top quality infrared sauna and the more technologically advanced BioCharger™ NG, you would still **save about $10,000 over the purchase price of the Photon Genius**



Click here to edit the announcement-bar module. This text is only for editing and will disappear after you publish the changes.

Compare Subtle Energies

Subtle Energies	BioCharger™ NG	Photon Genius (Super Sauna)
Photonic	Yes	Yes
Frequencies & Harmonics (Radio Waves)	Yes	Yes
Pulsed Electromagnetic Frequencies (PEMF)	Yes	No
Electrodynamic (High Voltage)	Yes	No

ALL PHOTONIC ENERGIES ARE NOT CREATED EQUAL

Gases Photon Genius's photonic energy is produced by a fixed array of color coated "fluorescent light" tubes containing 5 distinct Noble gases. **The BioCharger™ NG can use up to 12 unique gases simultaneously including the 5 used in the Photon Genius.** The additional gases available for the BioCharger™ NG represent a broader range of the visible light spectrum. Power Source Gas tubes are energized in very different ways. The Photon Genius relies on individual power supplies to energize the plasma tubes (much like fluorescent lights). **The BioCharger™ NG plasma tubes are ignited purely by the PEMF component – without wiring or an external power source.** This illustrates the PEMF strength and provides the most biocompatible form of light energy. Color Aspects Another important difference is related to color. The Photon Genius uses colored coatings which are similar to that used by neon sign companies. **The BioCharger™ NG plasma tubes are unfiltered and crystal clear until energized**, at which time they produce a range of pure colors based on gas combinations.



Compare Features *

Features	BioCharger™ NG	Photon Genius (Super Sauna)
Subtle Energies Produced	Photonc (light), PEMF*, Electrodynamic (high voltage), Frequencies & Harmonics (radio waves)	Photonic Frequencies-Harmonics
Far Infrared Sauna	Not offered**	Yes combined
Power Requirements	Standard 110v 15 Amp	220/240V 50 Amp
Programmable Voltage via Arc and/or Toroid	0 -750,000V	No. Estimated 15,000V max output
Programmable Frequencies & Sweeps Presets	(5Hz-50,000 kHz)	No. Hardwired presets with multi position dials.
Programmable and wireless PEMF* fields	Yes	N/A
Programmable Pulsed Modulation	Yes	No
Internet & Cloud Enabled	Yes	N/A
Individual Noble/Inert Gases Available	up to 12 Unique Gases	5 standard no substitutions
Software Upgradeable	Yes (Updates included)	No (hardwired, analog)
Meets ISO 9001 Mfg Quality Standards	Yes (certified facility)	No
Easy to Use Touch Screen	Yes	No. (hardwired knobs and switch)
Warranty	2 year parts & labor / 1-way shipping included.	1 year from purchase date- Depot service shipping at



Photon Genius



Advanced Electromedicine - The Photon Genie







40 Minutes Of ASMR Plasma Therapy

PHOTON GENIUS VS LIGHT STREAM MANTRA™ COIL



VS



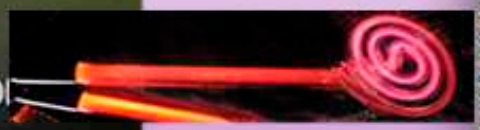

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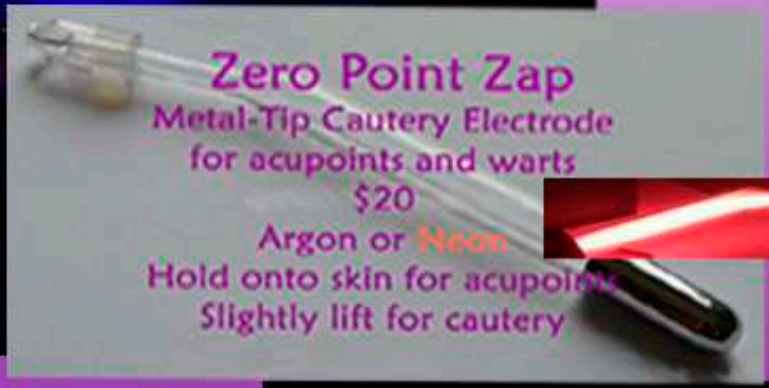
Zero Point Zap

Optional Electrodes









No Additional Shipping Cost
When Ordered With A Wand





ZeroPointZap@gmail.com

The Violet Ray Wand

Tesla's Lost Electrotherapy Technology from Zero Point Zap

WWW.ZPZAP.NET



Solid State Violet Ray Wand from Zero Point Zap
$170 with 7 Violet Argon Gas Electrodes

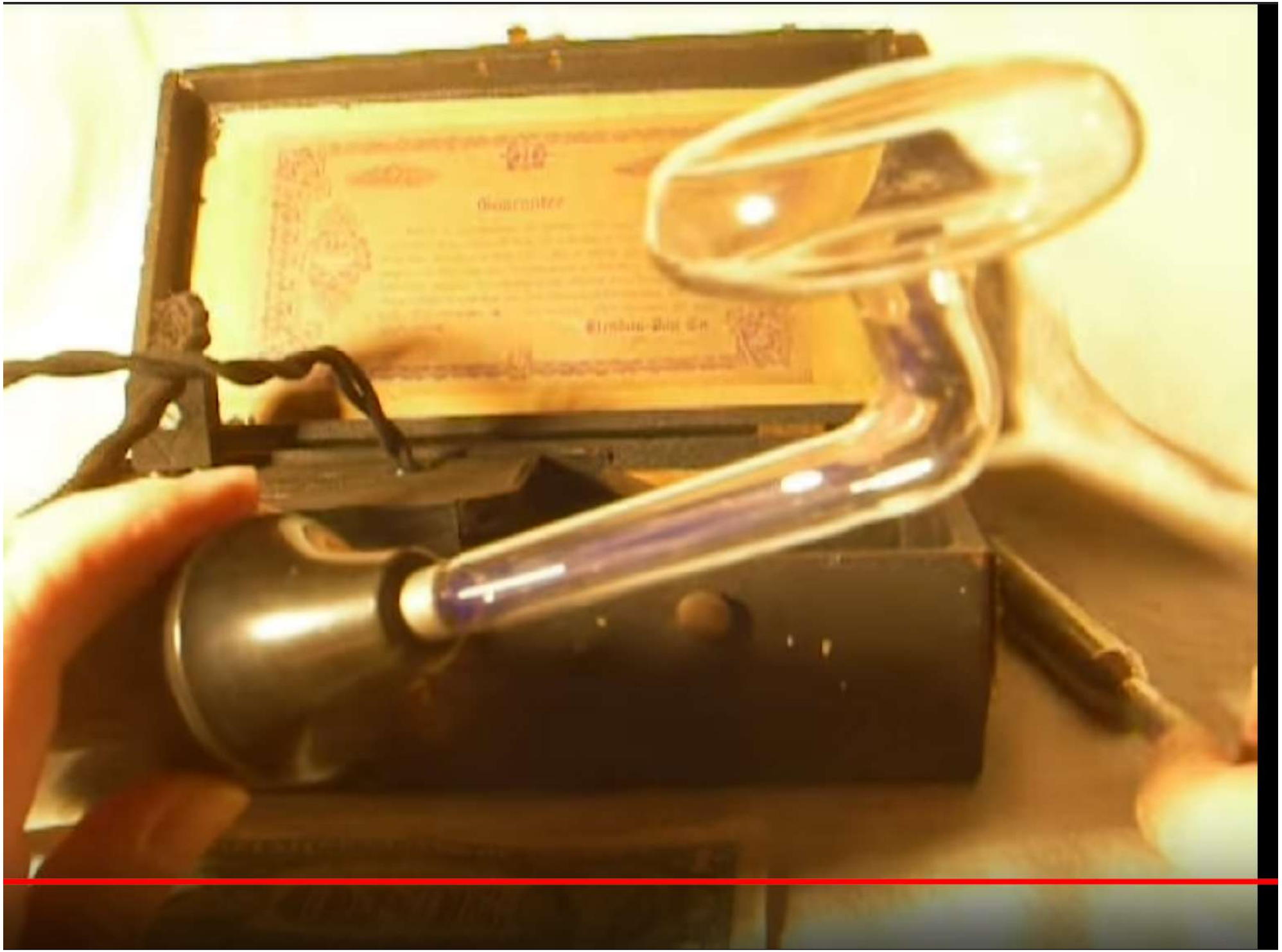
Roller with Argon and Neon Gas
Comb for Hair or Holding in Hand
Light Saber for Internal & External Applications
Ball-Point Sparker for Sparking & Trigger Points
Spoon with Flat Area & Point
Mushroom for Gentle Treatments
Y-Shaped for Neck/Throat/Curved Areas
***Optional Electrodes: Spiral $25, Sinus,Cautery & More $20**







ZeroPointZap@gmail.com




Ren

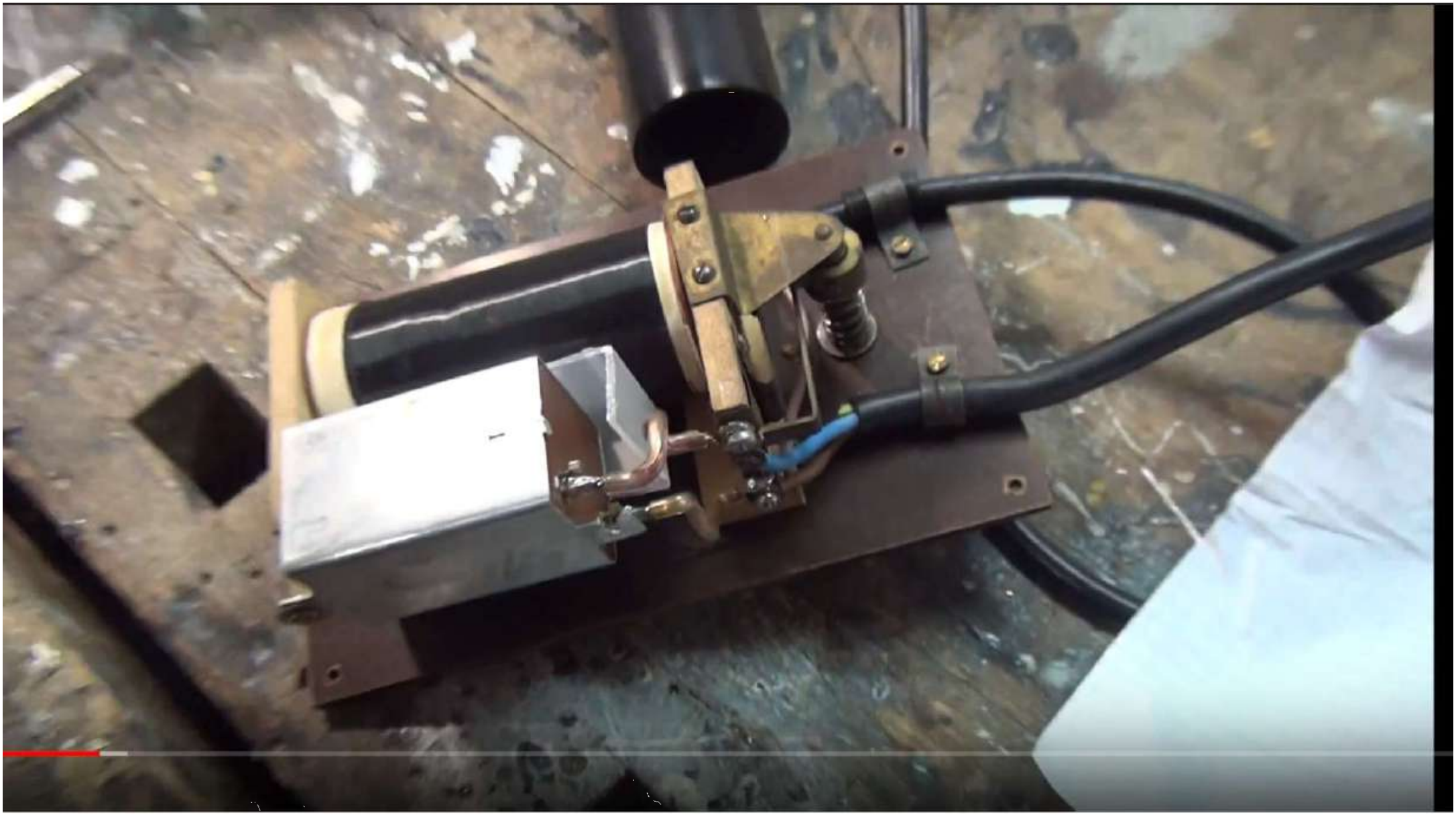

Remuflex

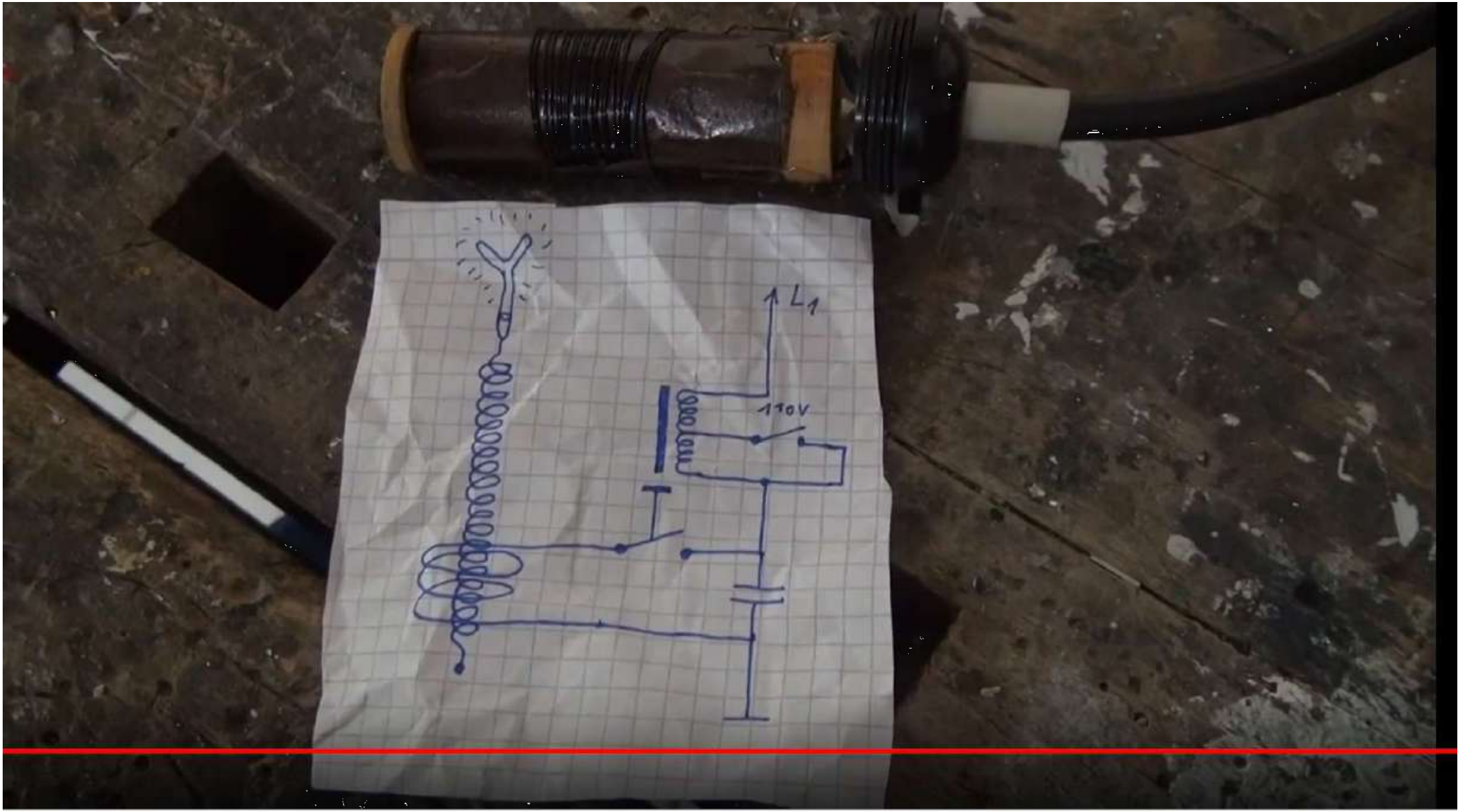


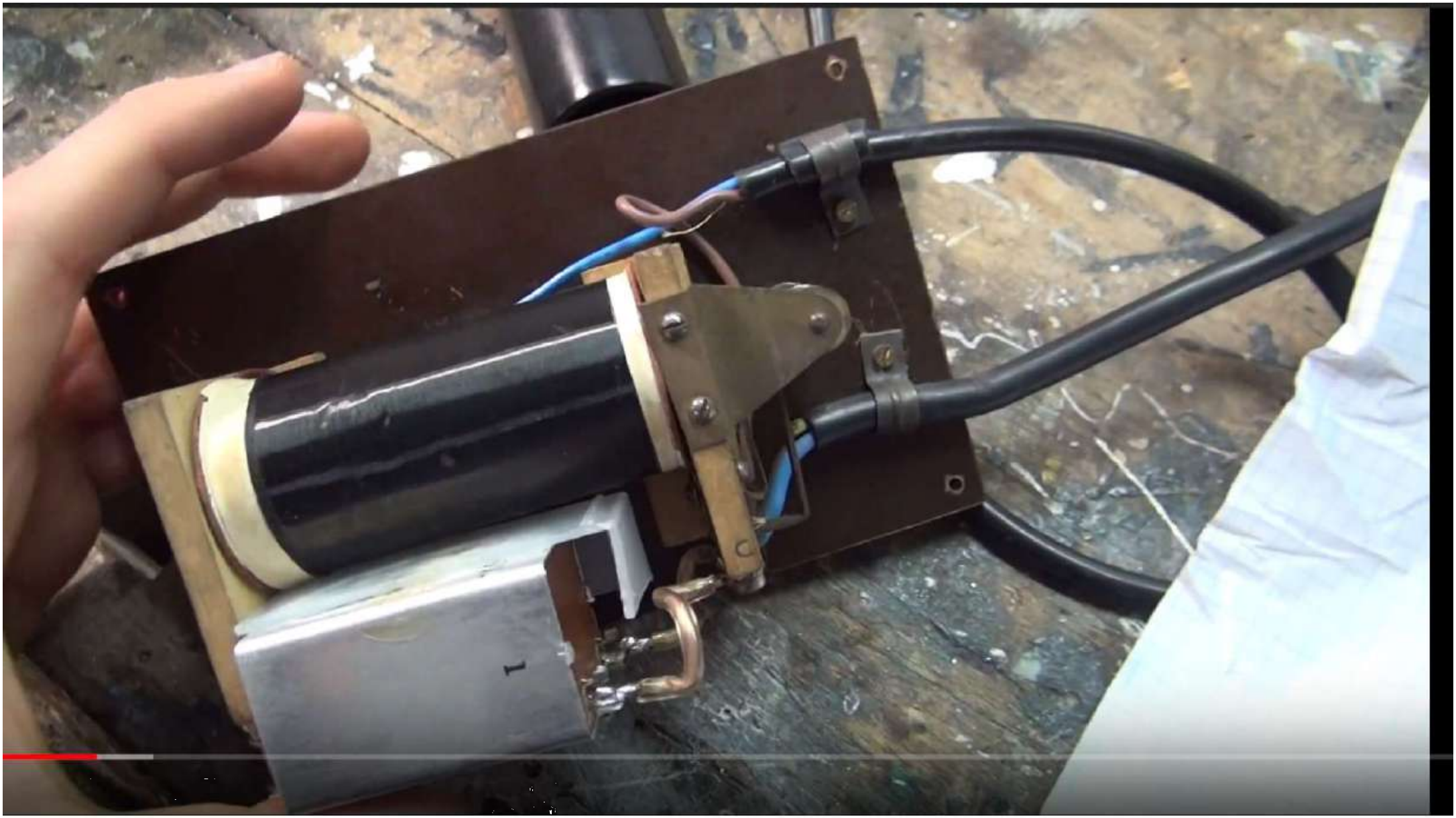

HELIO-LUX

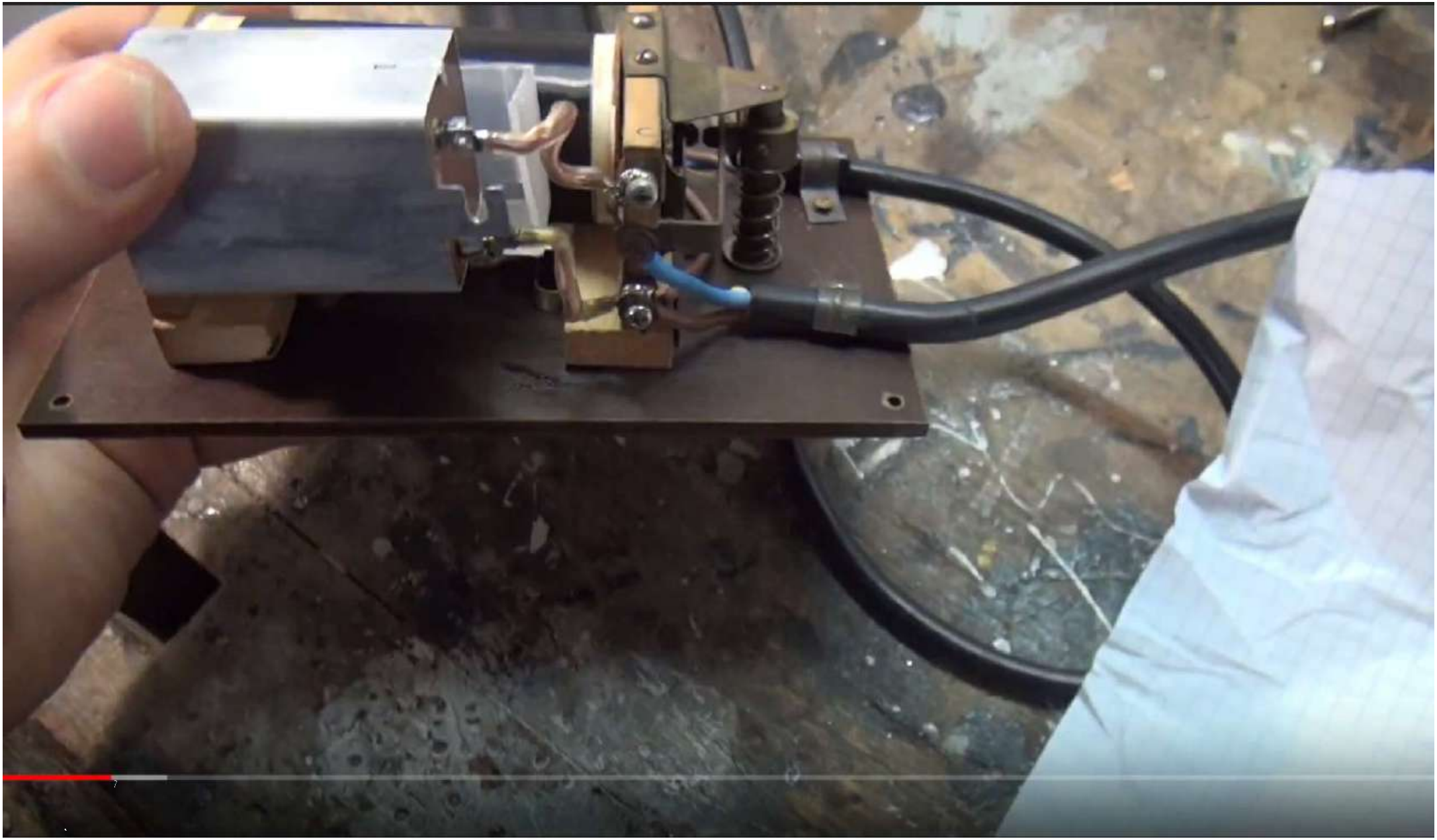




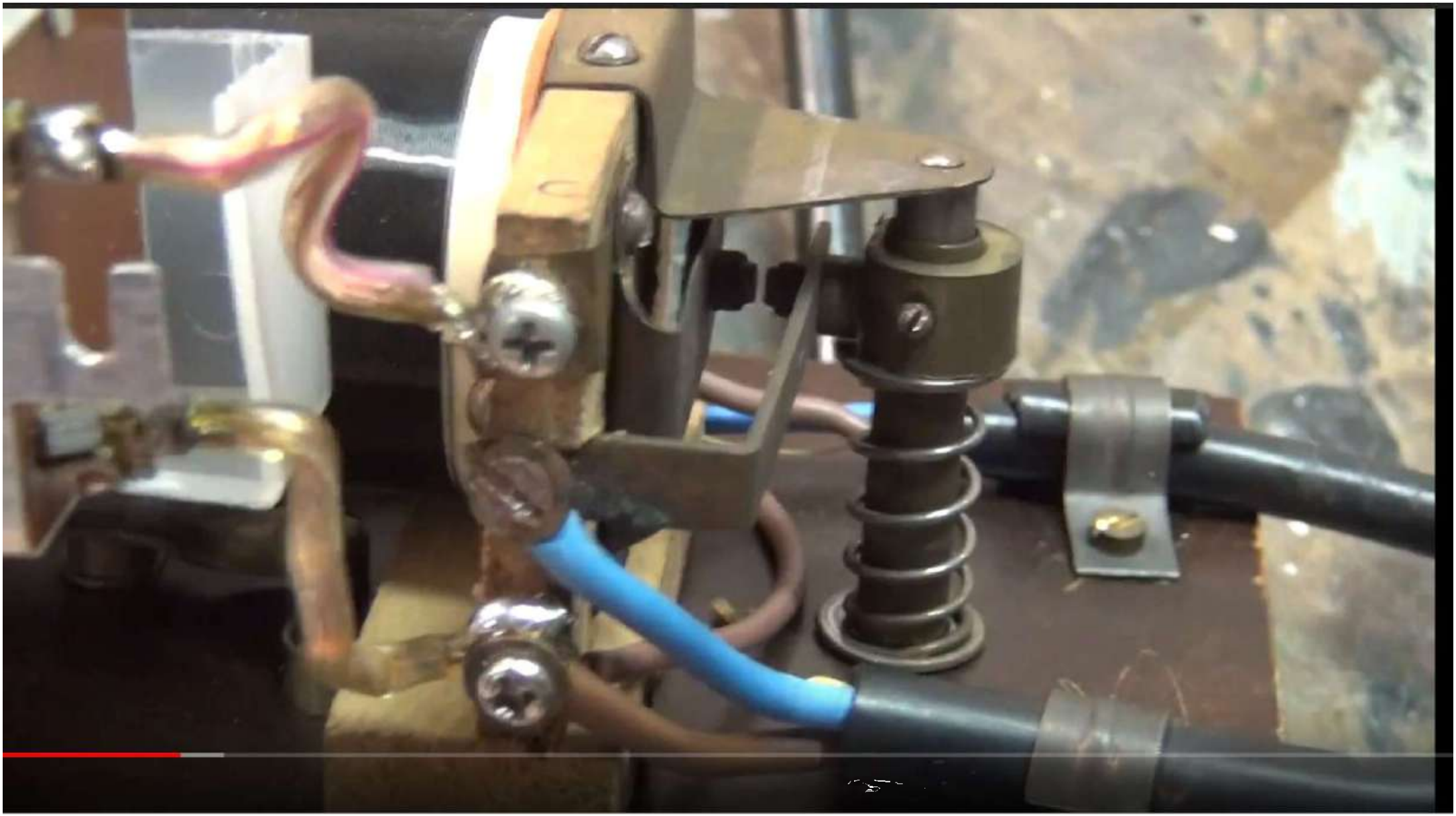



L1
110V









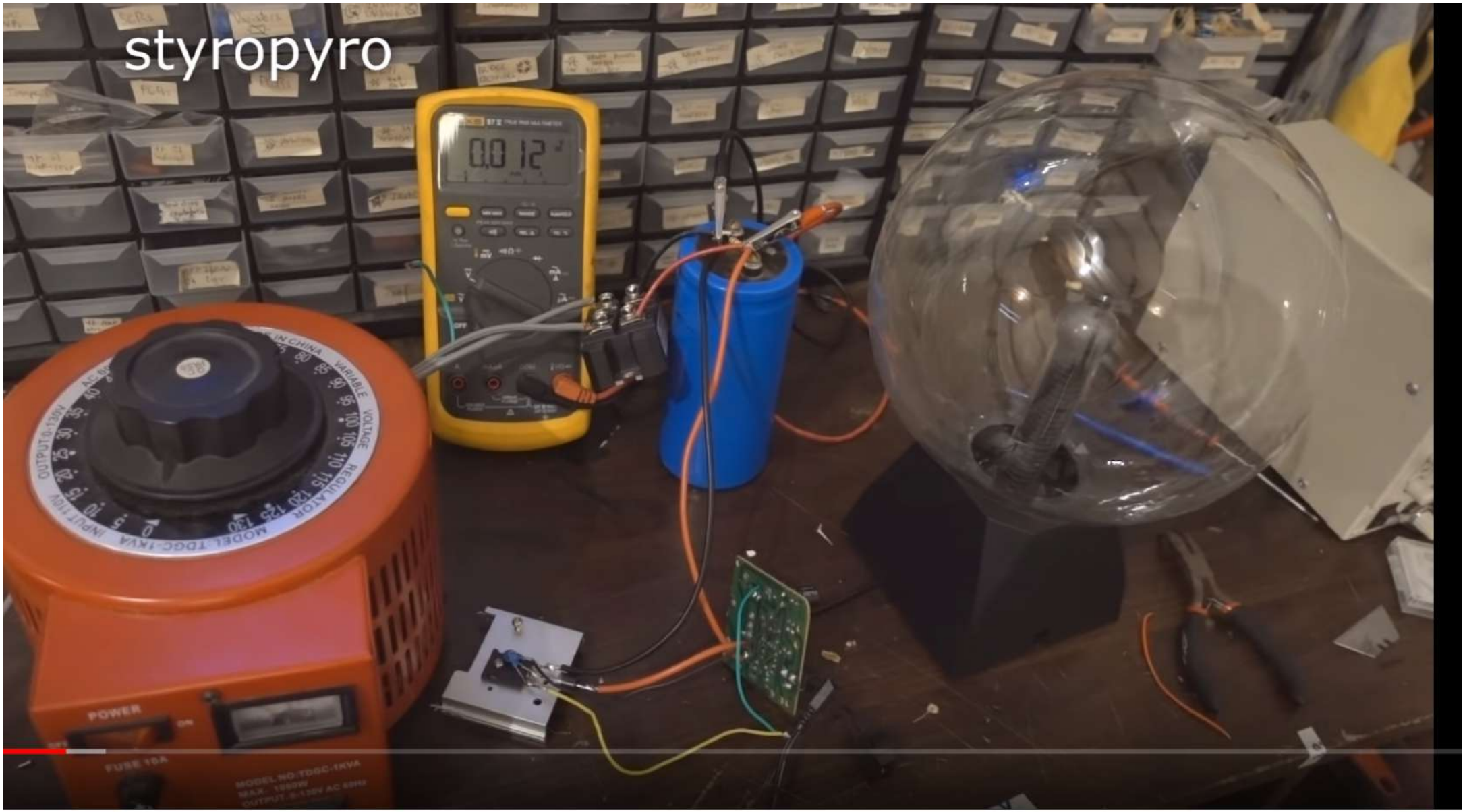


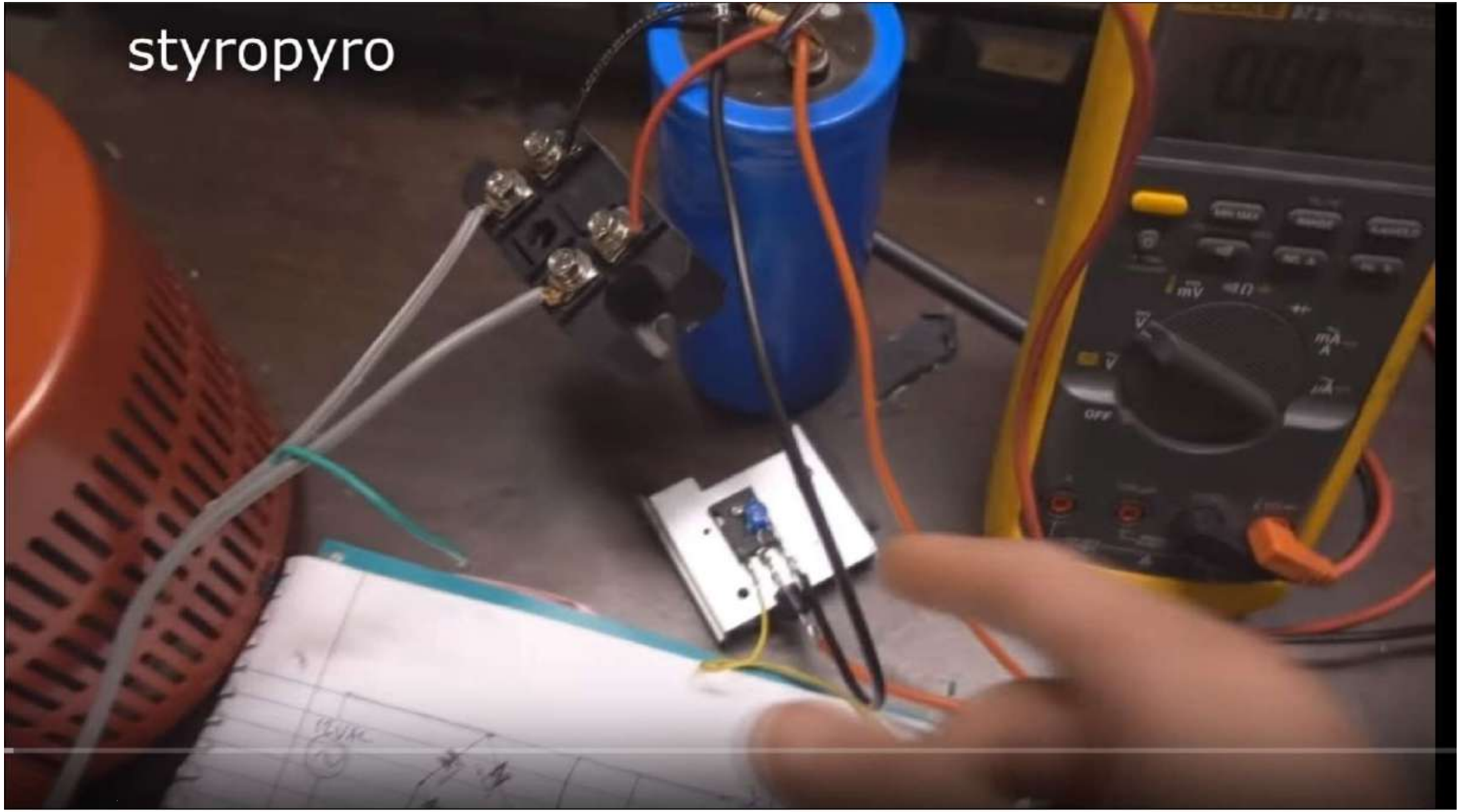

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1:20 / 2:12


7:50 / 19:17
CC
HD


11:39 / 19:17


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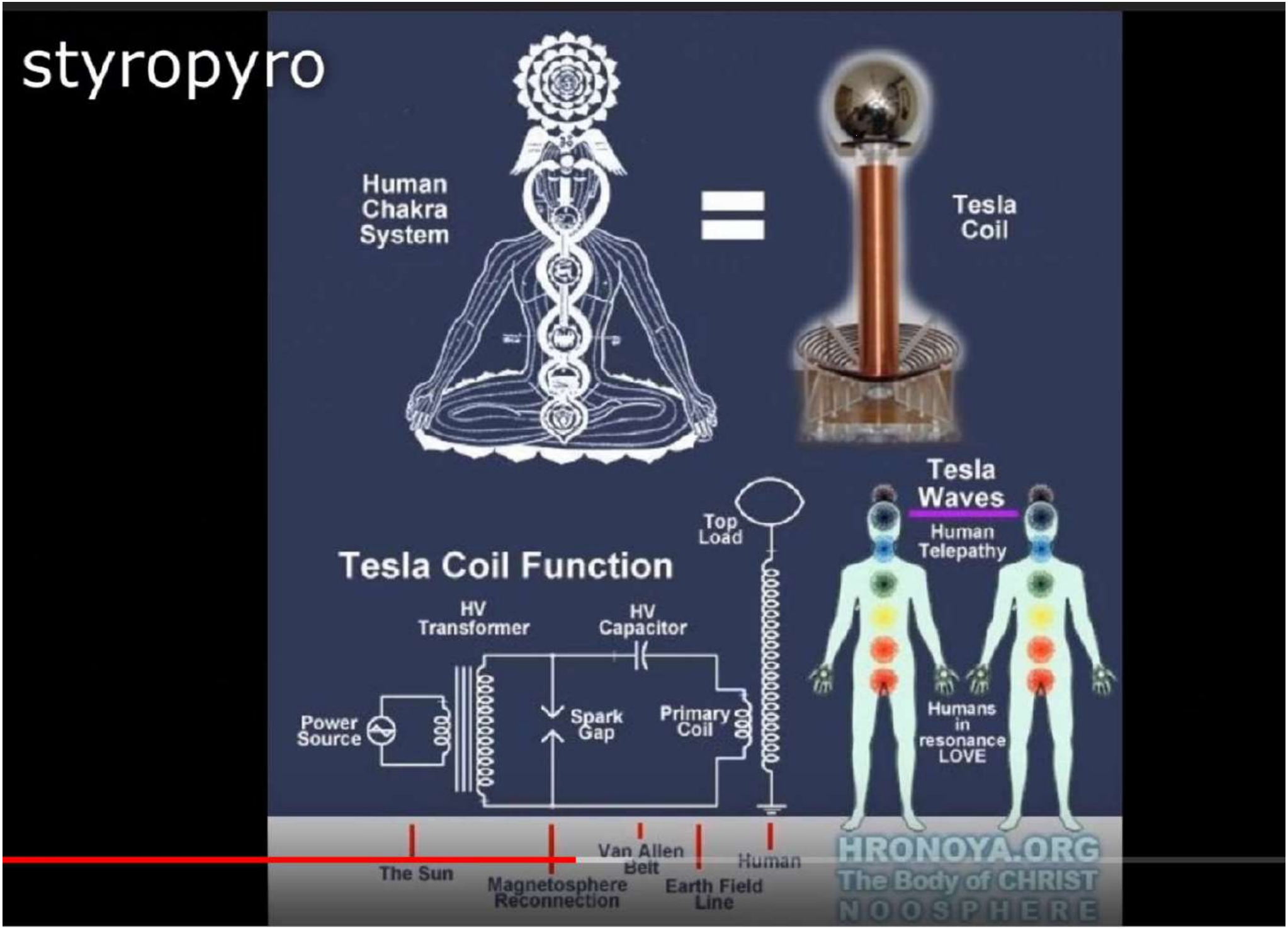

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0.012
POWER
FUSE 15A

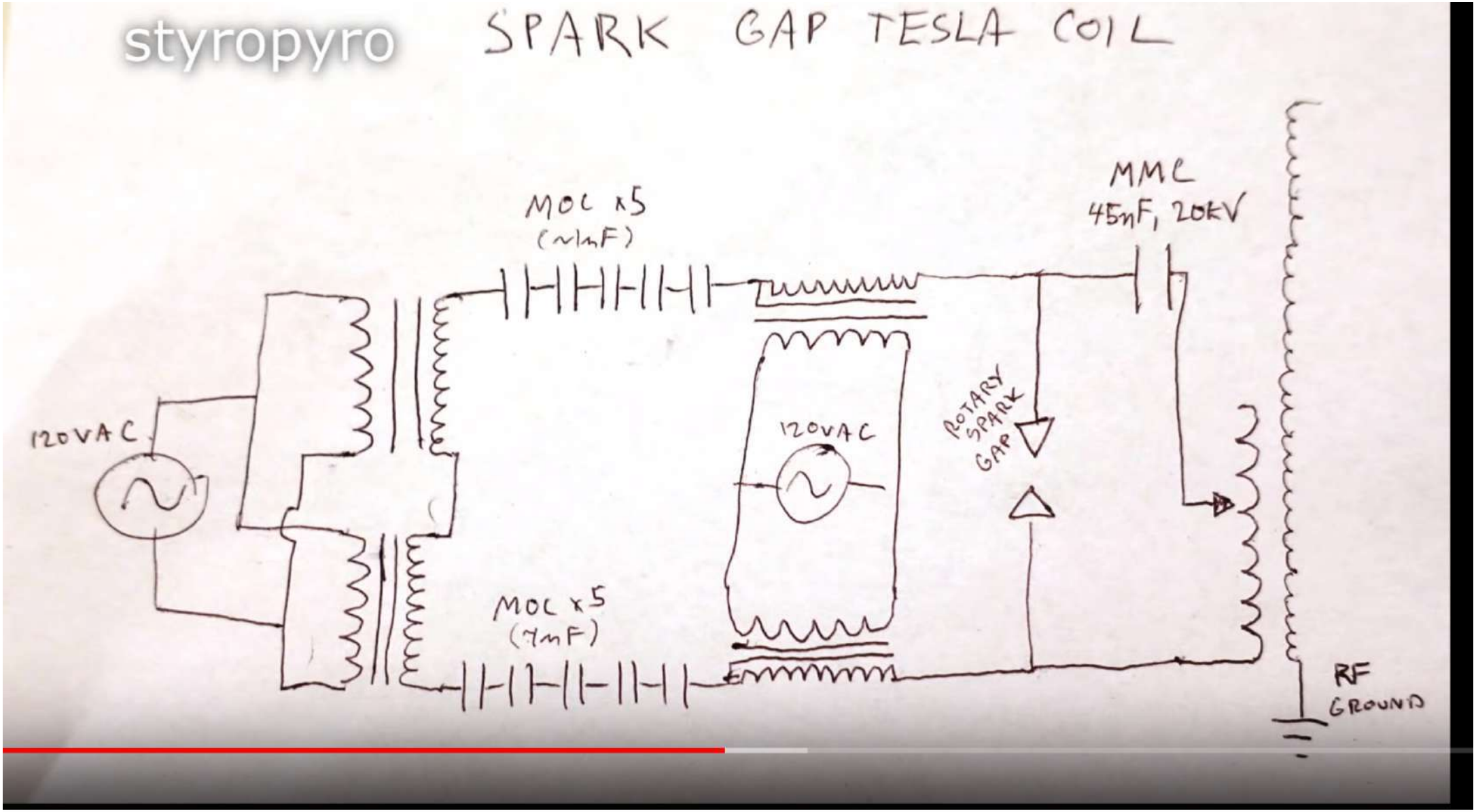

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Human
Chakra
System
=
Tesla
Coil
Tesla
Waves
Human
Telepathy
Humans
in
resonance
LOVE
Tesla Coil Function
Top
Load
HV
Transformer
HV
Capacitor
Power
Source
Spark
Gap
Primary
Coil
The Sun
Magnetosphere
Reconnection
Van Allen
Belt
Earth Field
Line
Human
HRONOYA.ORG
The Body of CHRIST
NOOSPHERE


styropyro
SPARK GAP TESLA COIL
MOC x5
(~1mF)
MMC
45nF, 20kV
120VAC
120VAC
ROTARY
SPARK
GAP
MOC x5
(7mF)
RF
GROUND

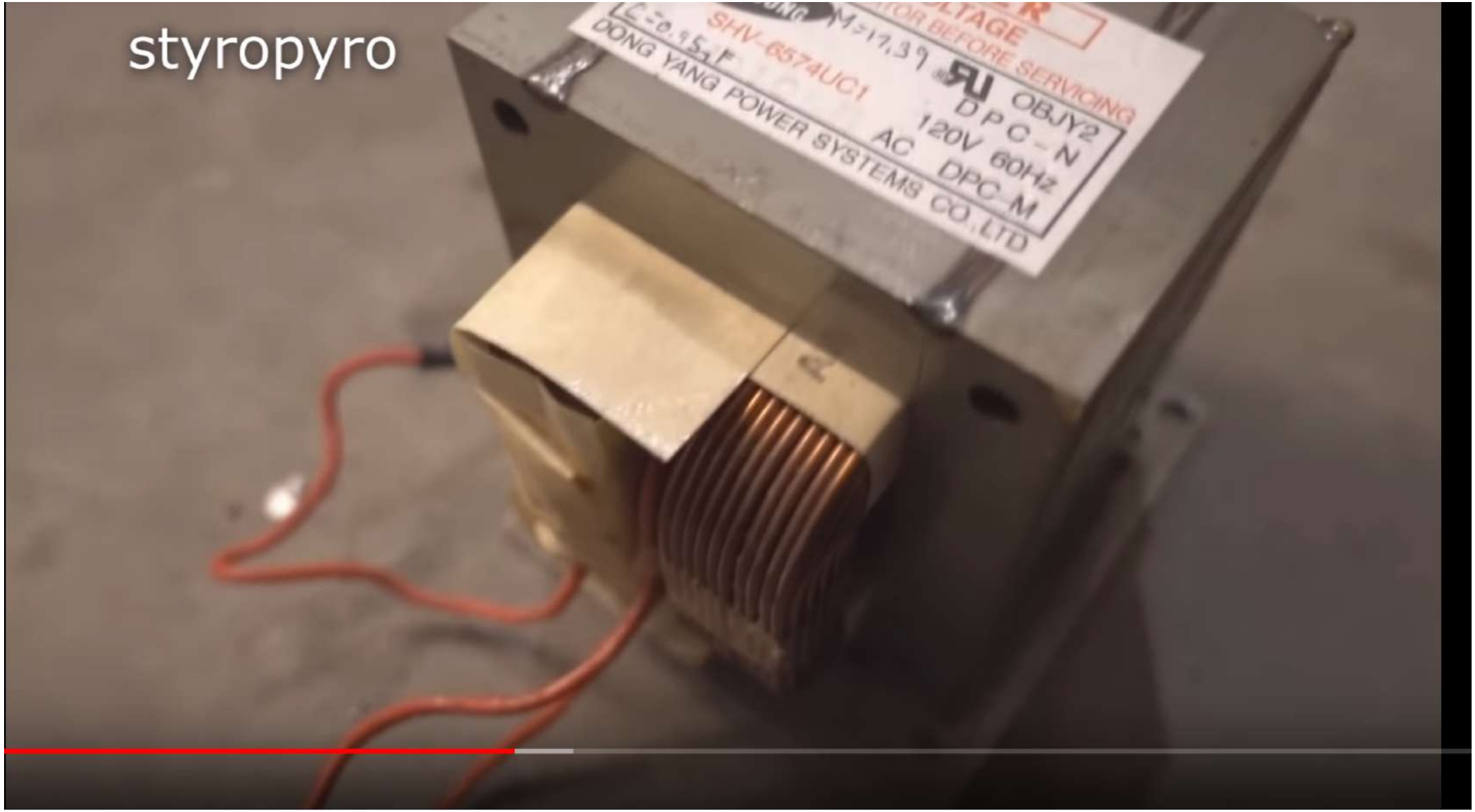


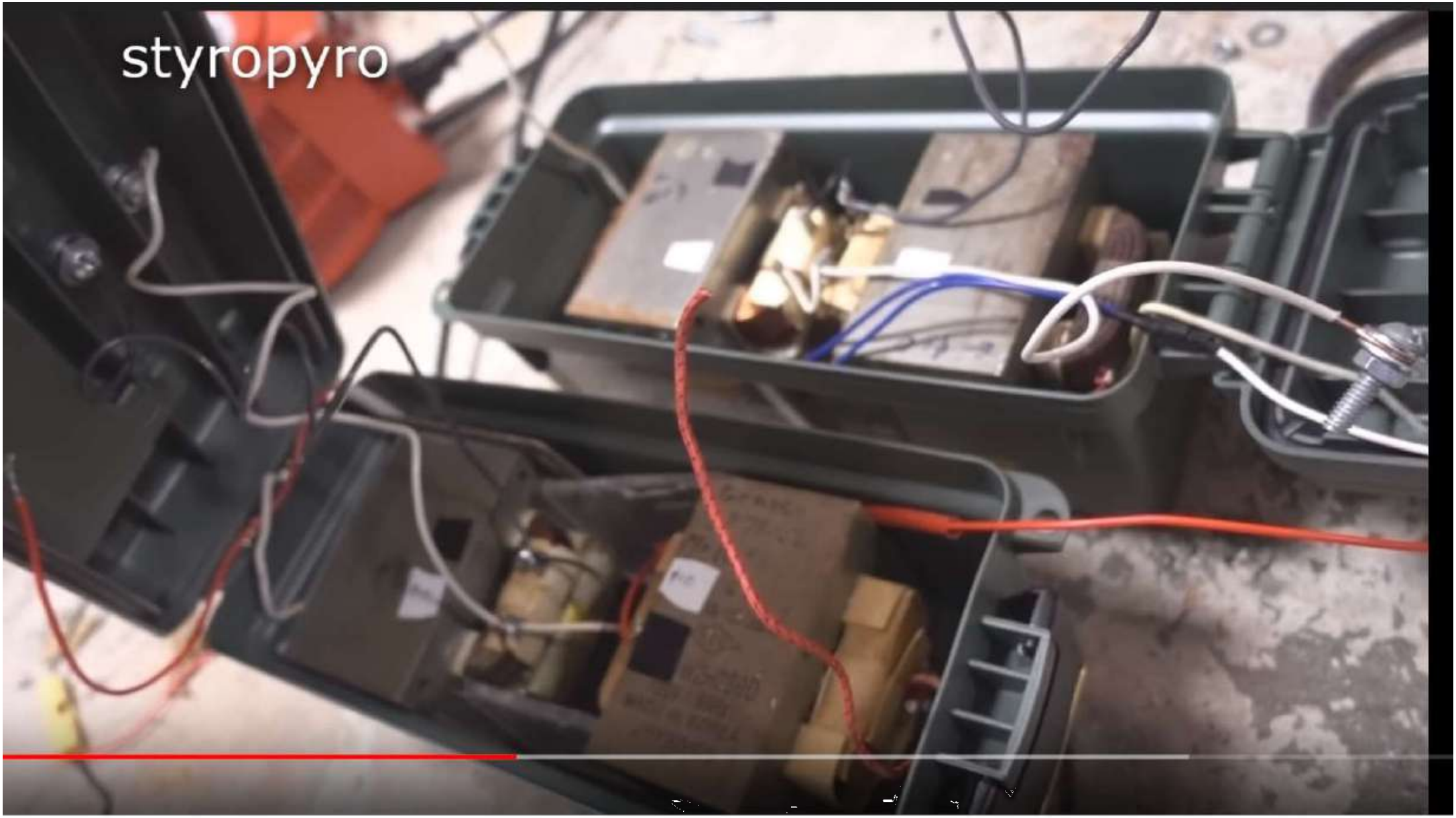
DIY Overclocked Plasma Globe. 2500V to a MILLION volts

Up next


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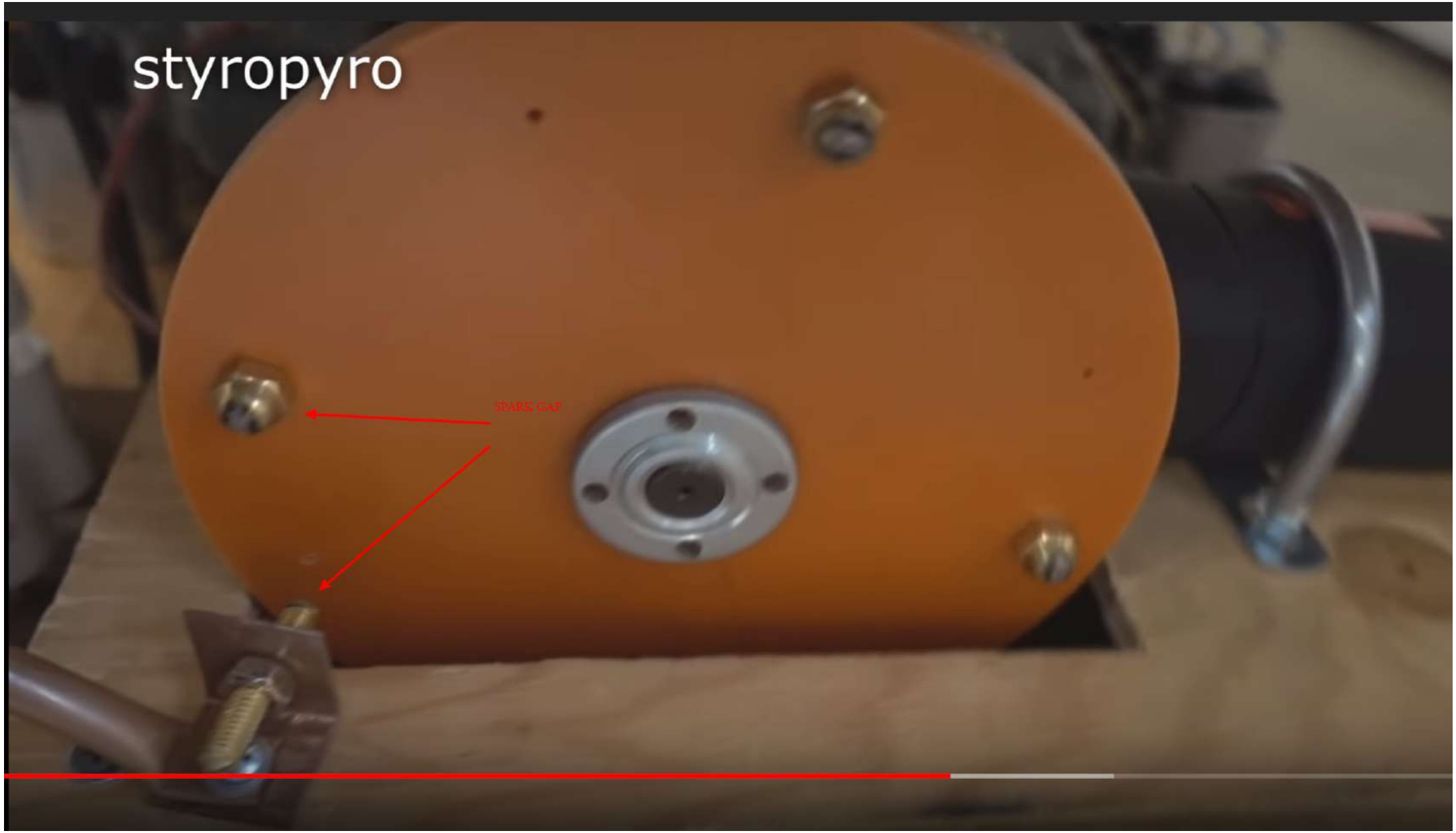

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DANGER
DO NOT TOUCH
HIGH VOLTAGE

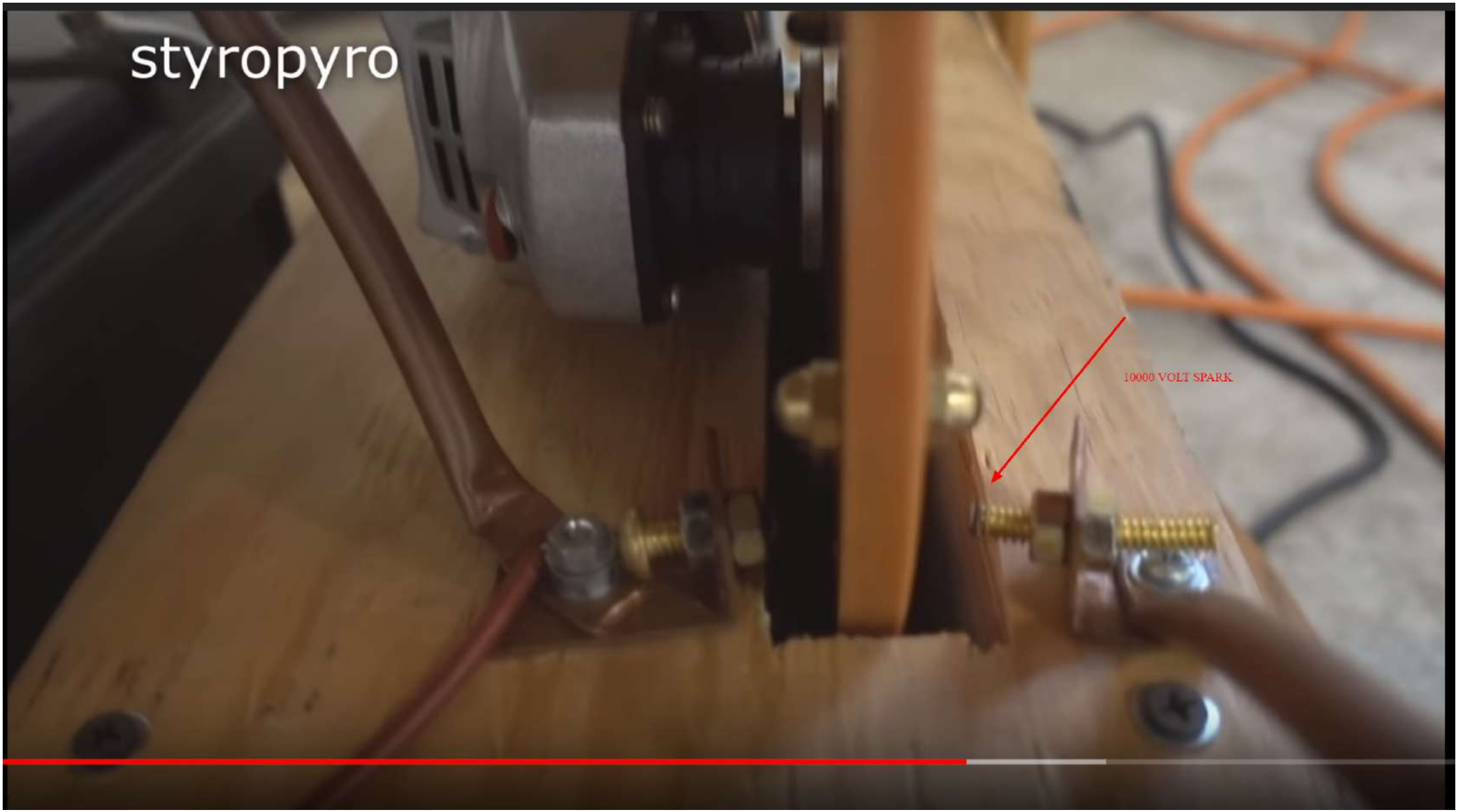

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SHV-6574UC1
DONG YANG POWER SYSTEMS CO.,LTD
OBJY2
DPC-N
120V 60Hz
AC DPC-M


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REFRIGERATION TUBING


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SPARE CAP


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10000 VOLT SPARK


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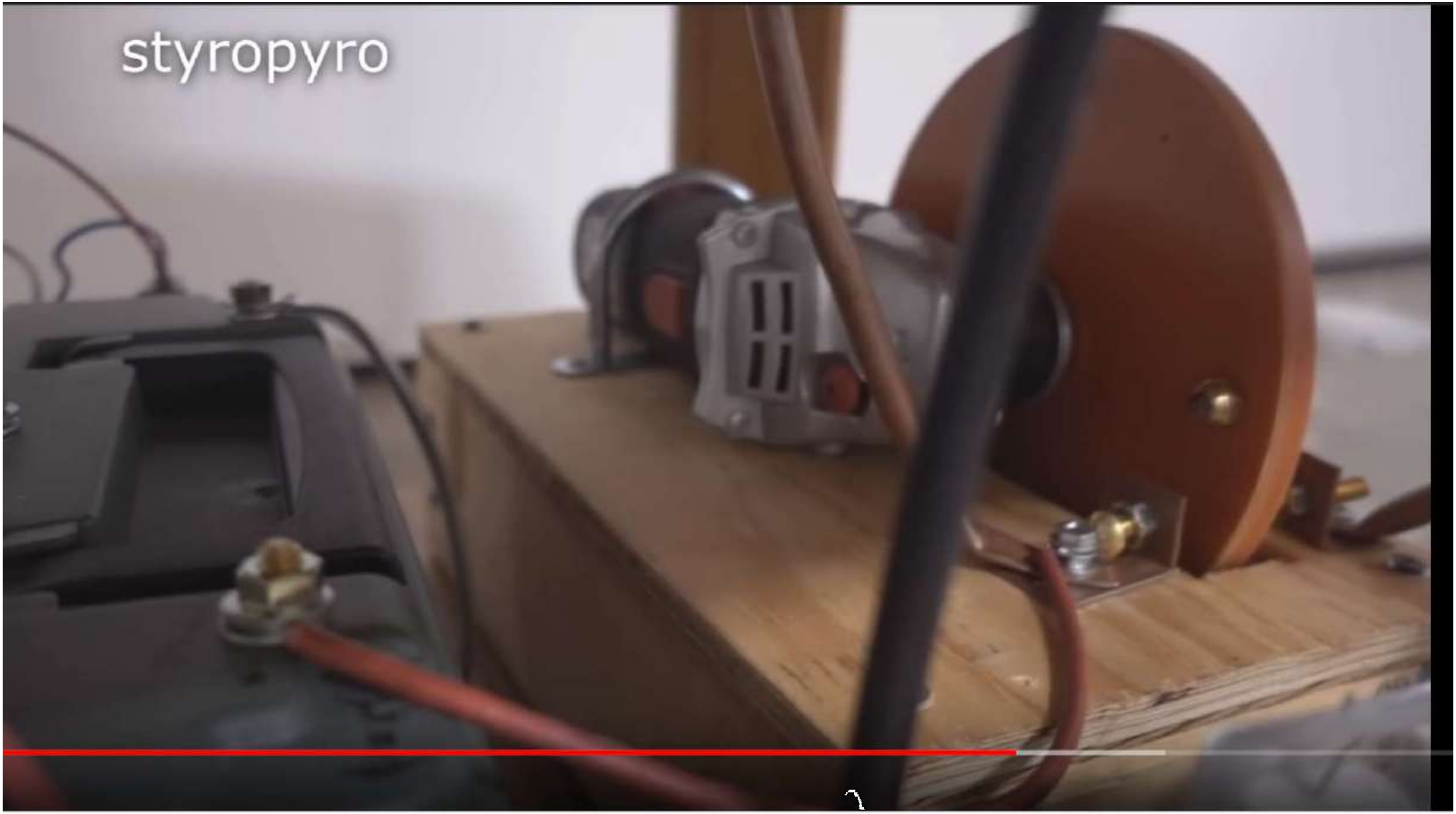


DIY Overclocked Plasma Globe. 2500V to a MILLION volts

Up next


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MICROWAVE OVEN
DANGER

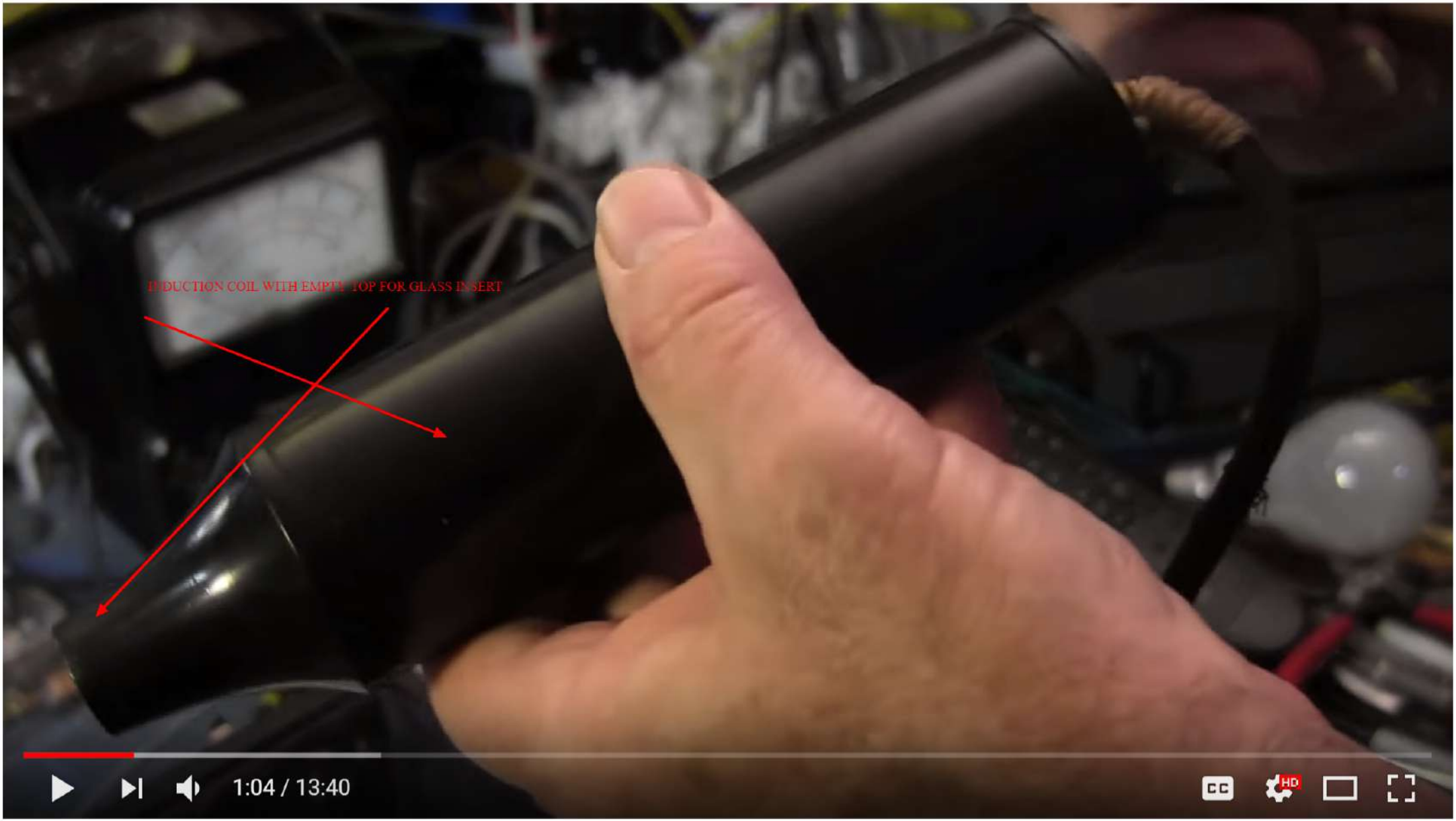

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CAPACITOR BANK

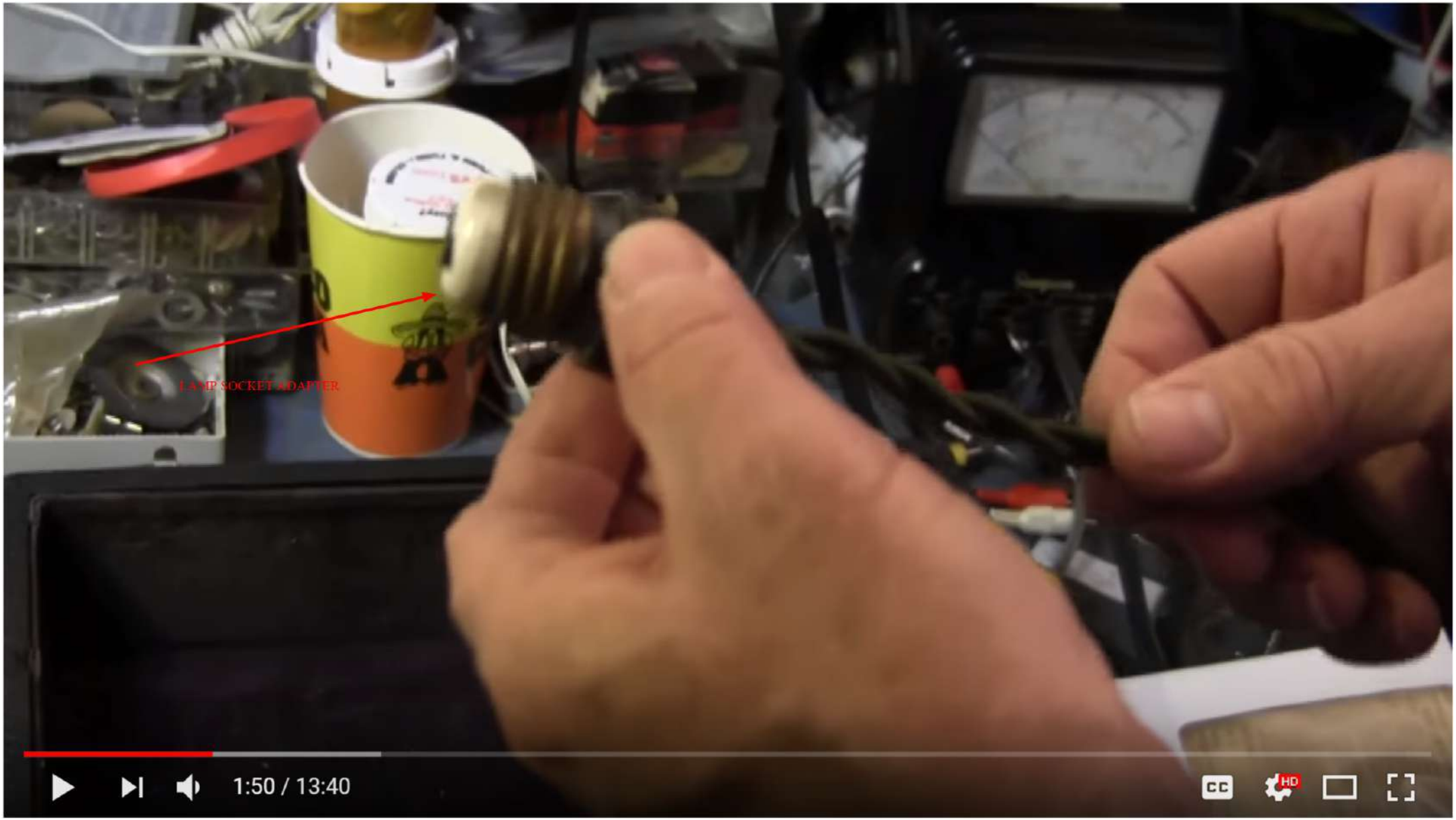

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INDUCTION COIL WITH EMPTY TOP FOR GLASS INSERT
1:04 / 13:40



Violet ray antique healing device - Tech Talk with Paul and Al



Universal LIGHT BULB ADAPTER for Violet Wands. Makes a Violet Wand Electrode out of any Standard Base Light Bulb

$19.95

Ask a question

CONNECTOR SIZE

Select an option

Quantity

1

Add to cart

Overview

- Handmade item
- Materials: aluminum, bakelite


You need 7/16" for these units
MASTER VIOLET RAY
NO. 2B
Master
Electric
Company





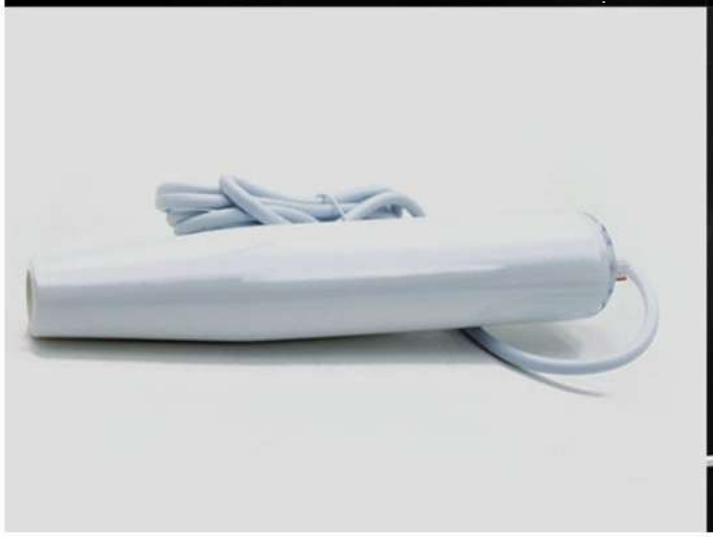




You need 11.25 mm for these devices










For these units you need 12 mm




11:29
2:52 / 13:40



EL OSCILADOR DE ONDAS MÚLTIPLES DE GEORGES LAKHOVSKY

Up next



Lakhovsky Multiple Wave Oscillator original device (part 1)

Up next

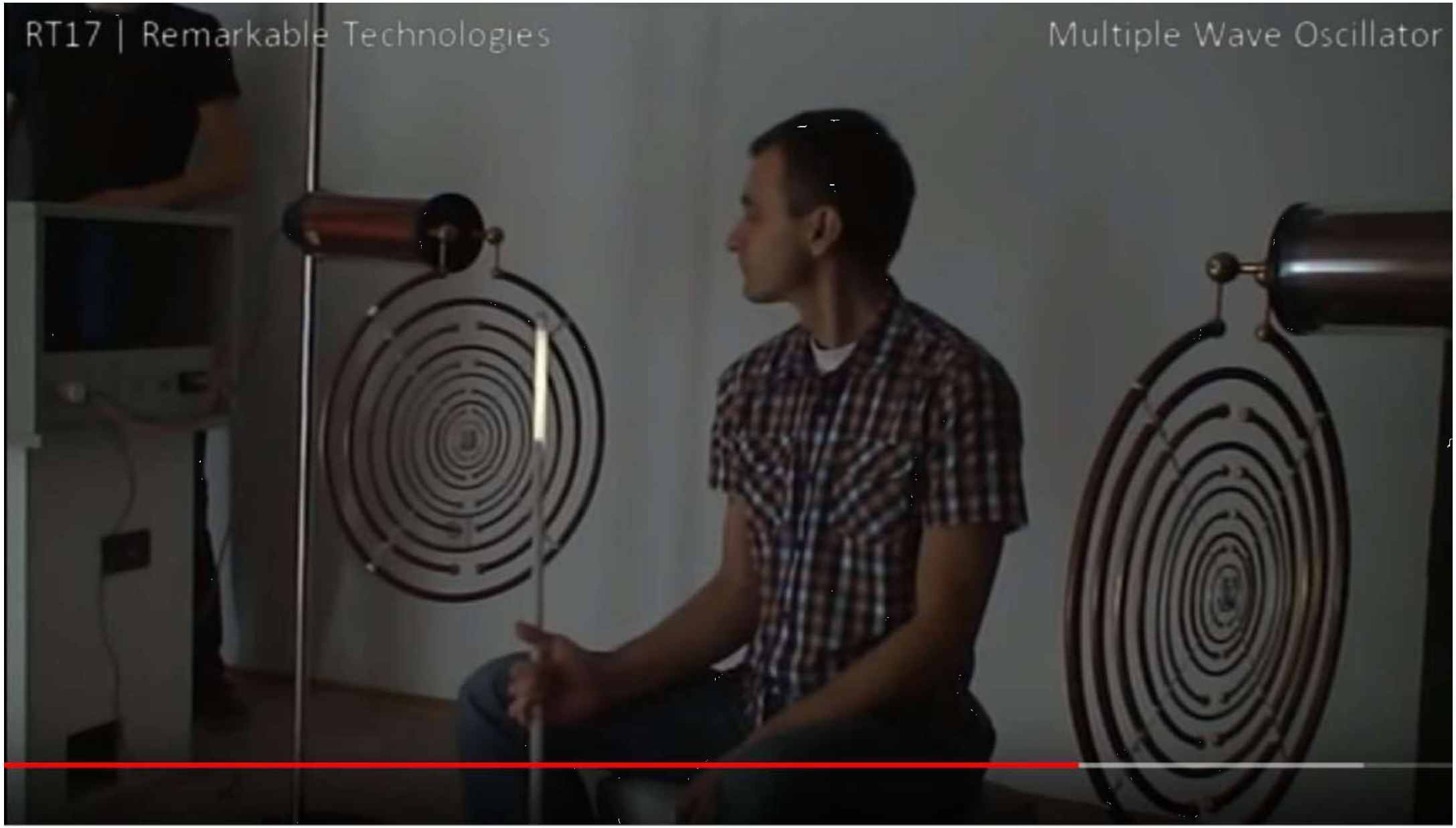

http://users.skynet.be/Lakhovsky/

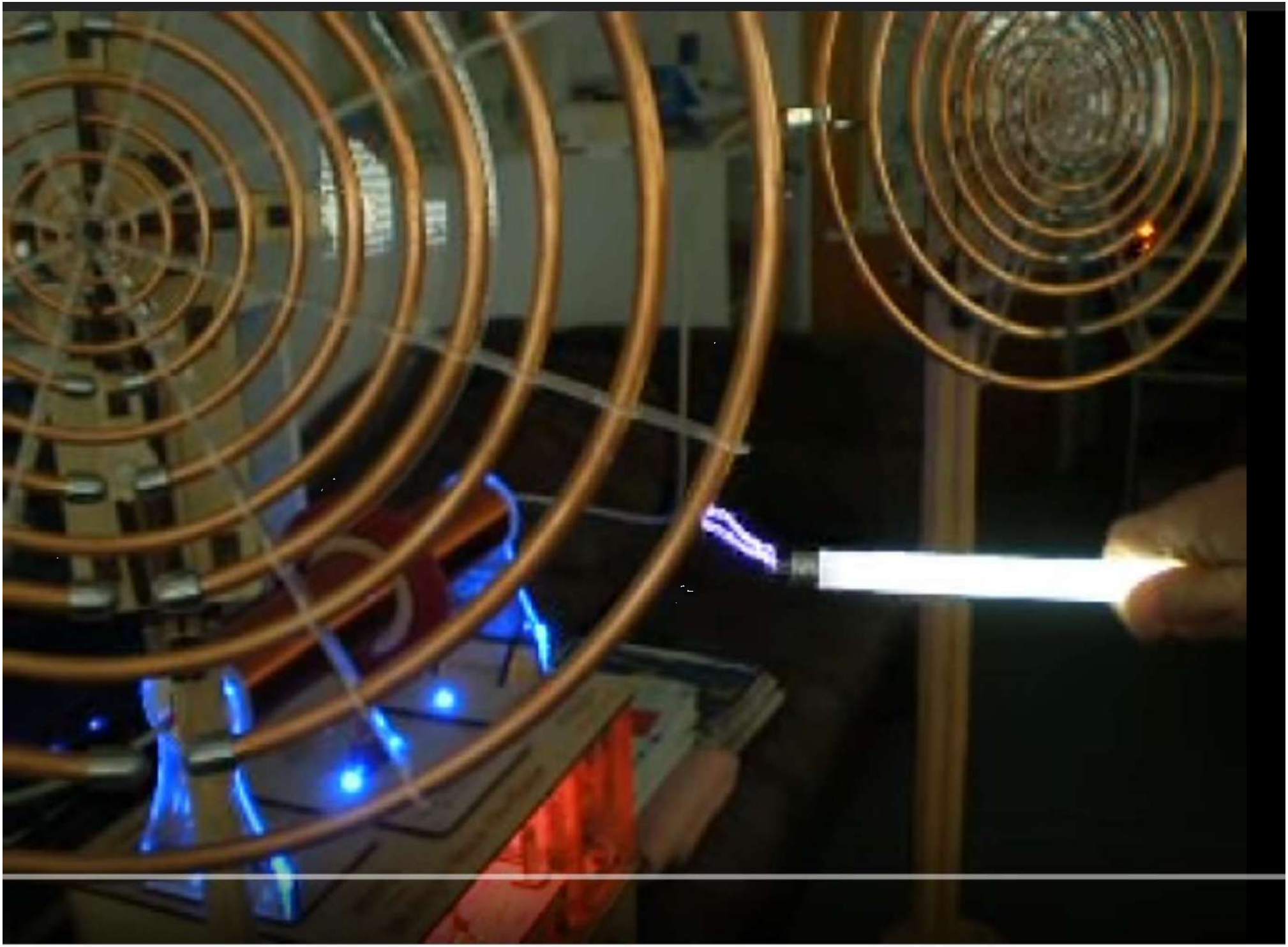

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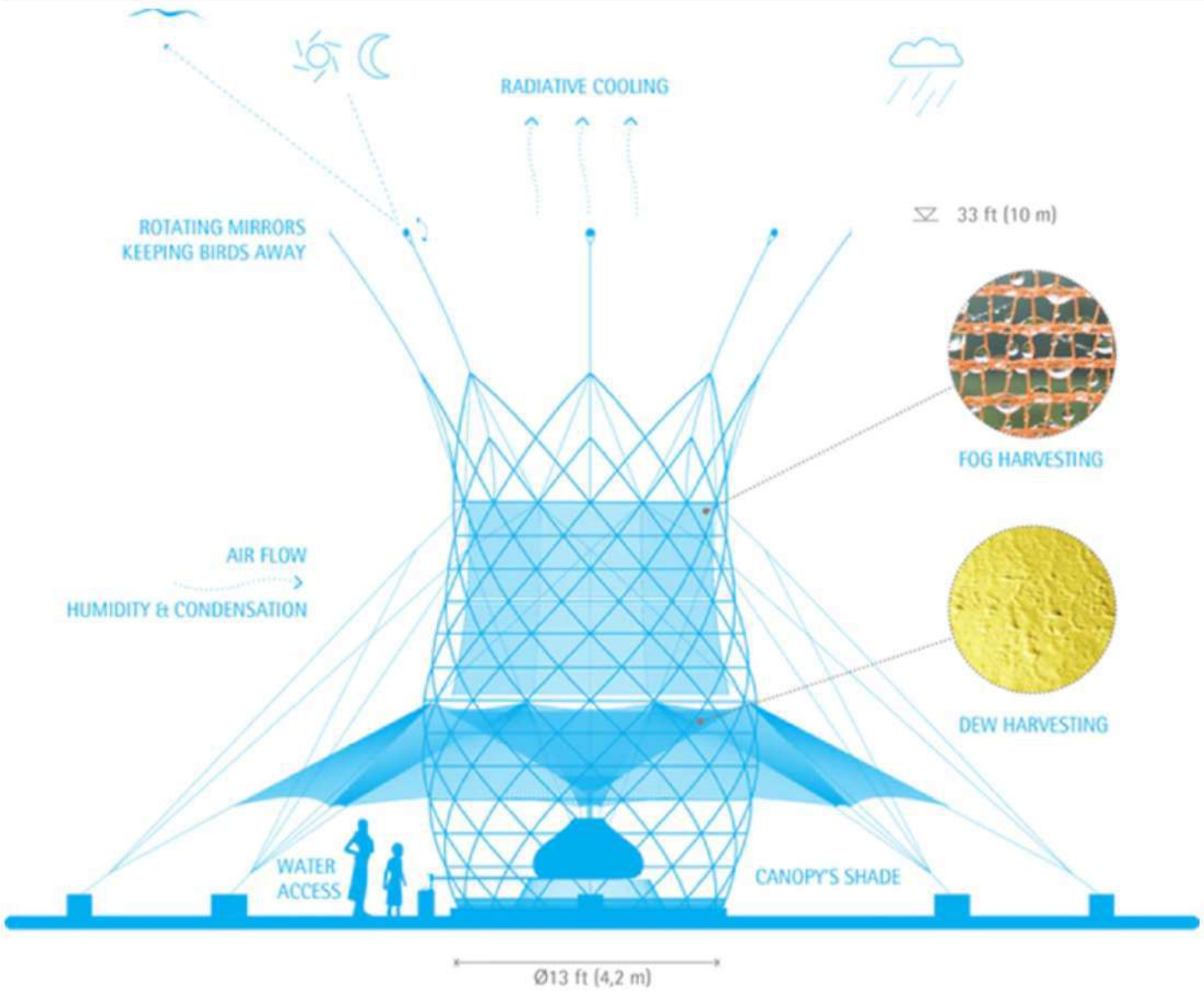

http://users.skynet.be/Lakhovsky/


http://users.skynet.be/Lakhovsky/




RT17 | Remarkable Technologies
Multiple Wave Oscillator





back to Rome in the evening
Day 5: 1/2 day tour of Rome and remainder of day at leisure
Day 6 : Flight back home
*The Italy trip is planned for spring-summer 2015. Itinerary is preliminary and subject to change. Includes accommodation, local guide and transport for 2 people. Flights not included

ESTIMATED DELIVERY
May 2015

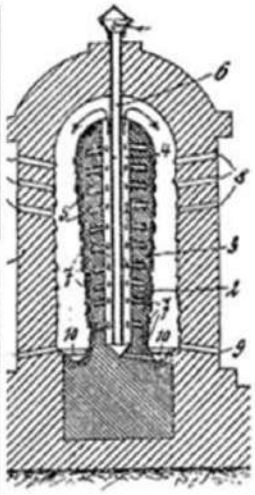
Limited
0 backers

Pledge US$ 10,000

An opportunity to visit the Warka pilot site in Ethiopia. See the Warka in action and spend time with the villagers. 8-day itinerary includes:
Day 1: Arrive in Addis Ababa and transfer to your hotel.
Day 2: An optional full-day tour of Addis Ababa, the diplomatic capital of Ethiopia. Traditional Welcome Dinner.
Day 3: Drive to Warka Water pilot site and



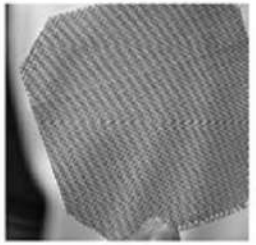


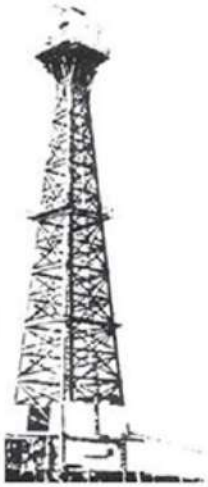


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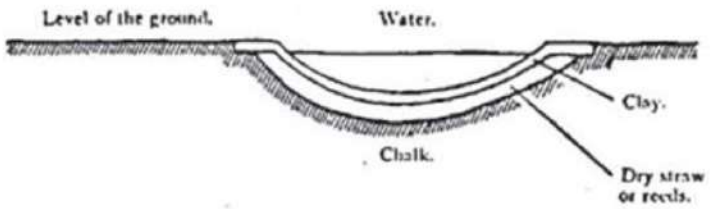
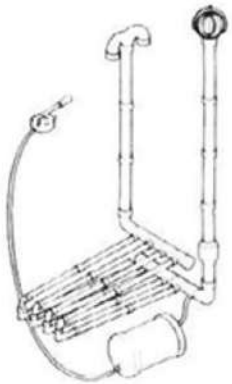
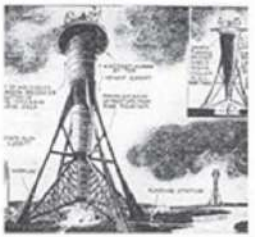








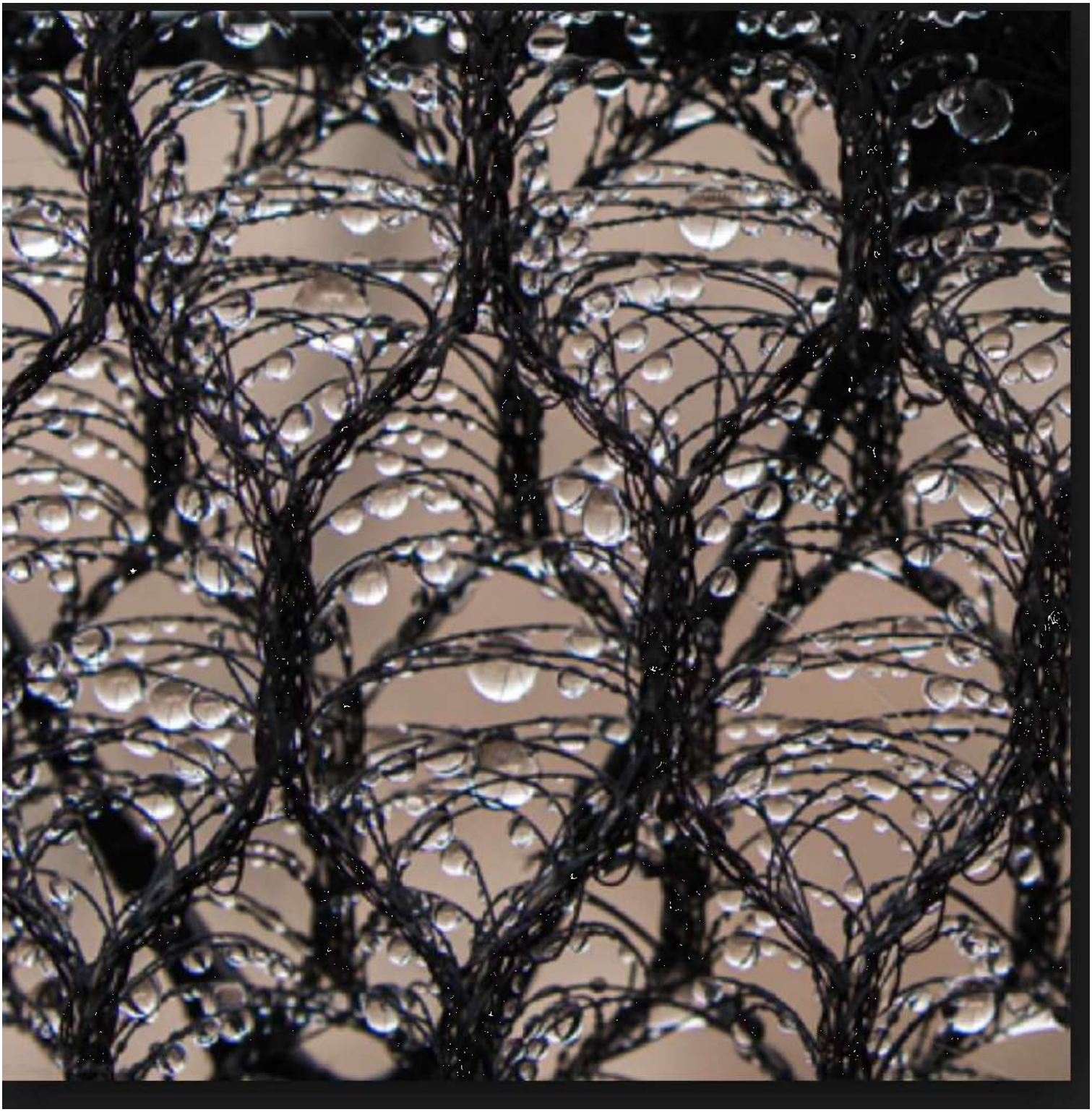




Level of the ground.
Water.
Clay.
Chalk.
Dry straw or reeds.













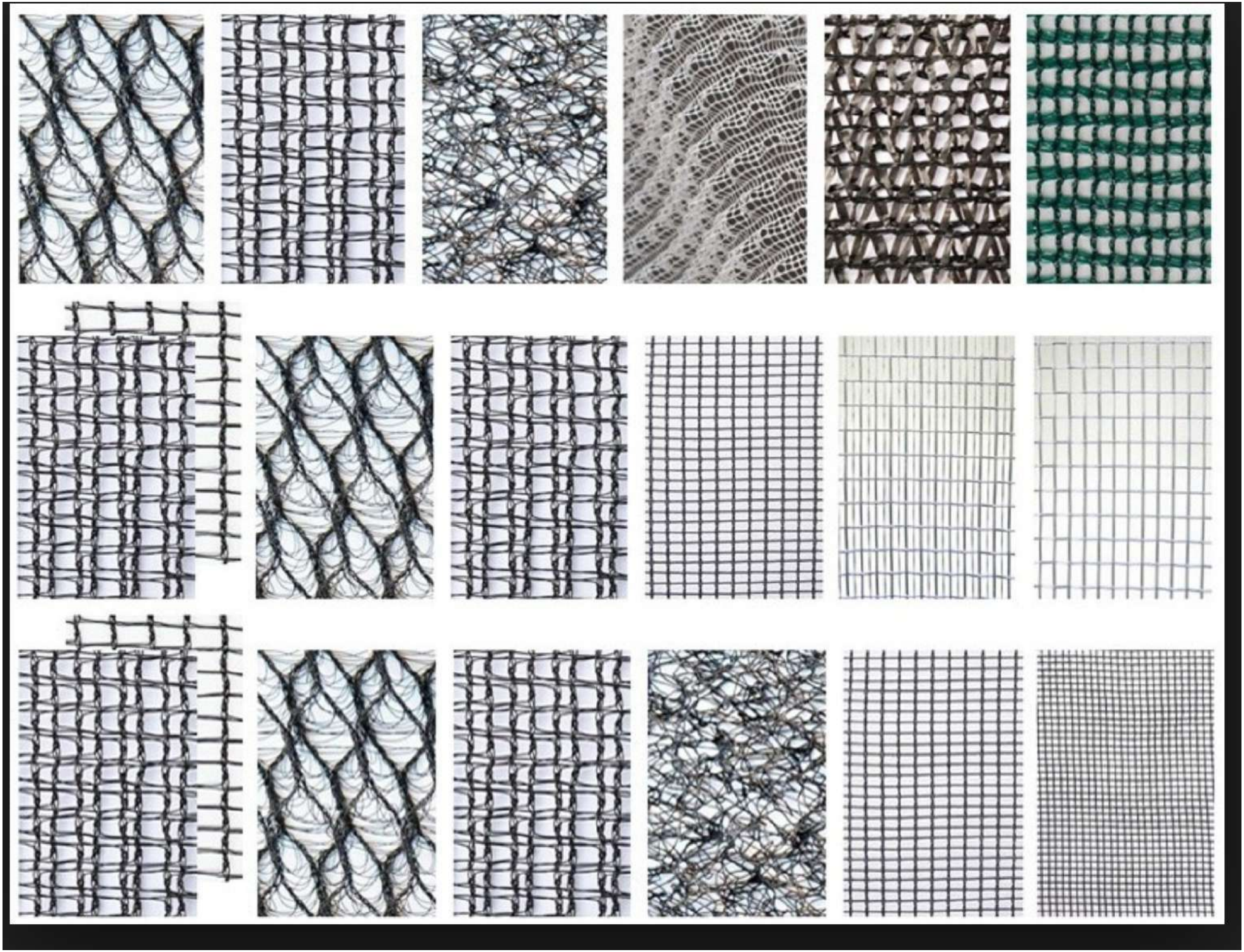












Figure 48:Dew Pond (Oxteddle Bottom, Sussex)

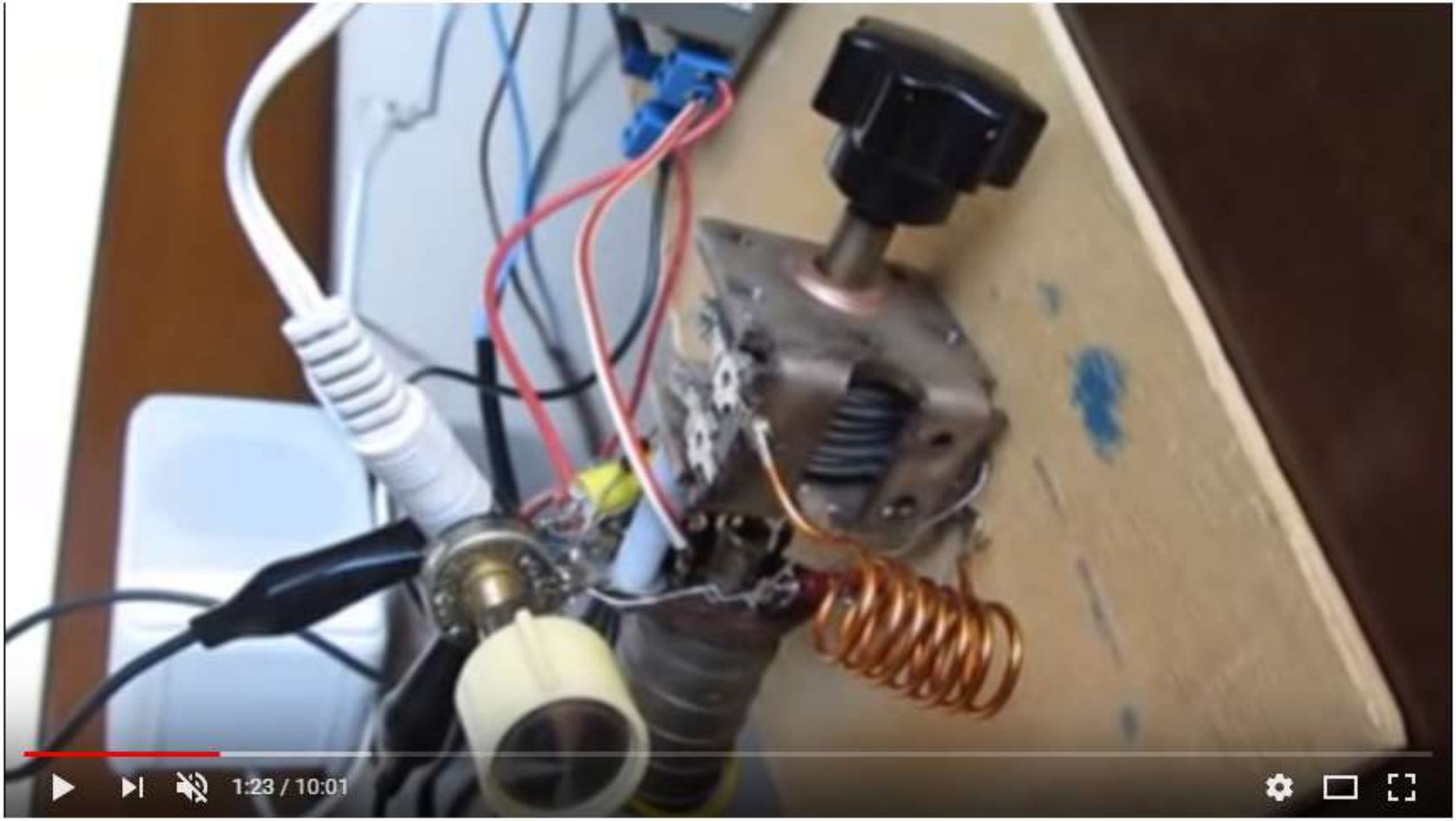


Figure 49:Dew pond


FogNets
WaterAid
FOG HARVESTING NETS
Fogs can provide an alternative source of fresh water in dry regions and can be harvested through the use of simple and low-cost systems.
The water droplets are collected on a mesh and drip into a gutter at the bottom of the net from where they are channelled via pipes to a storage tank or cistern.
A single billboard (9'x 22' FT) can provide enough drinking water to 25 thousand people over 10 years.
1 yd²
(23 USD)
UP TO 17 GALLONS OF WATER PER DAY

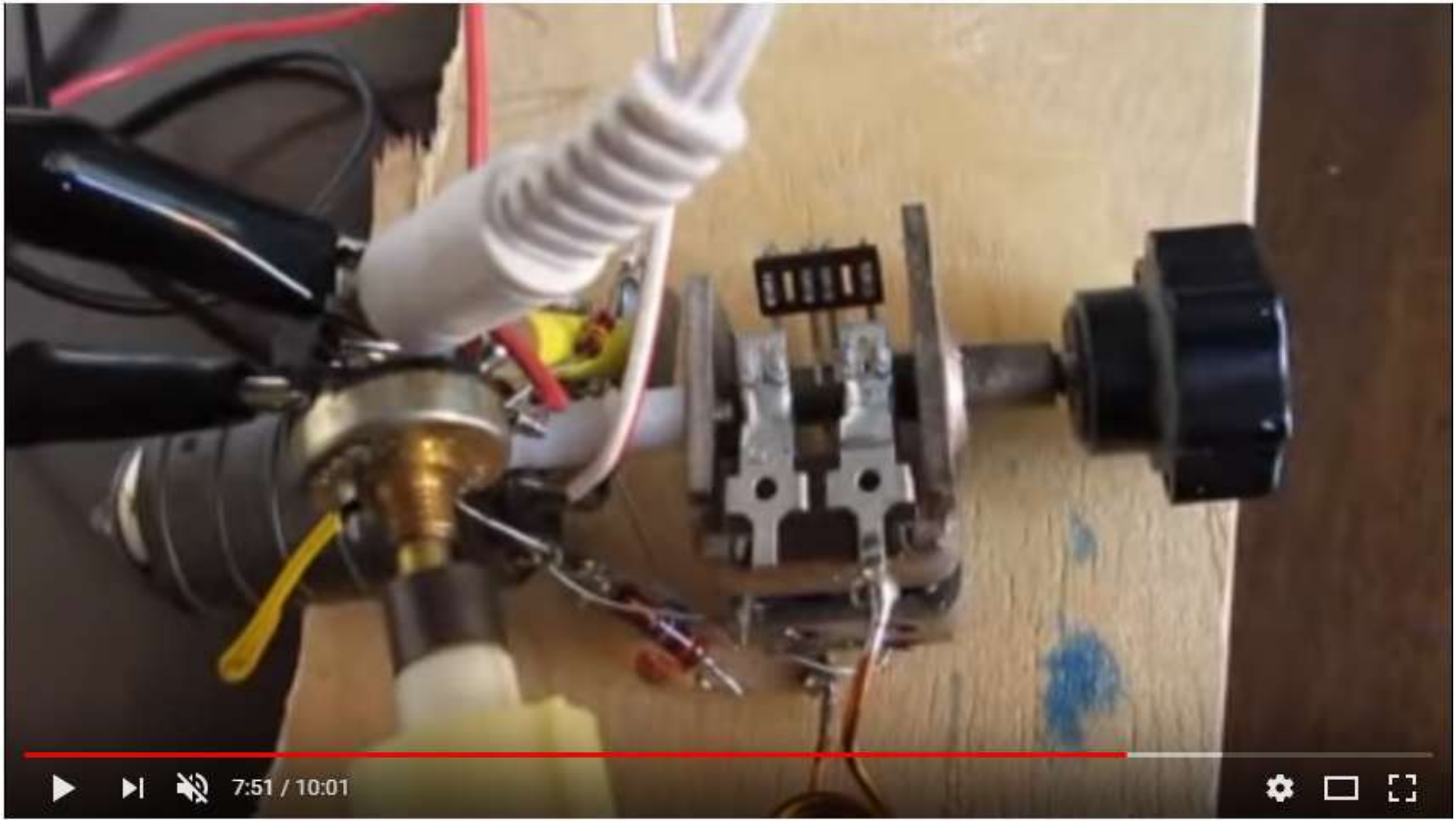
List of components

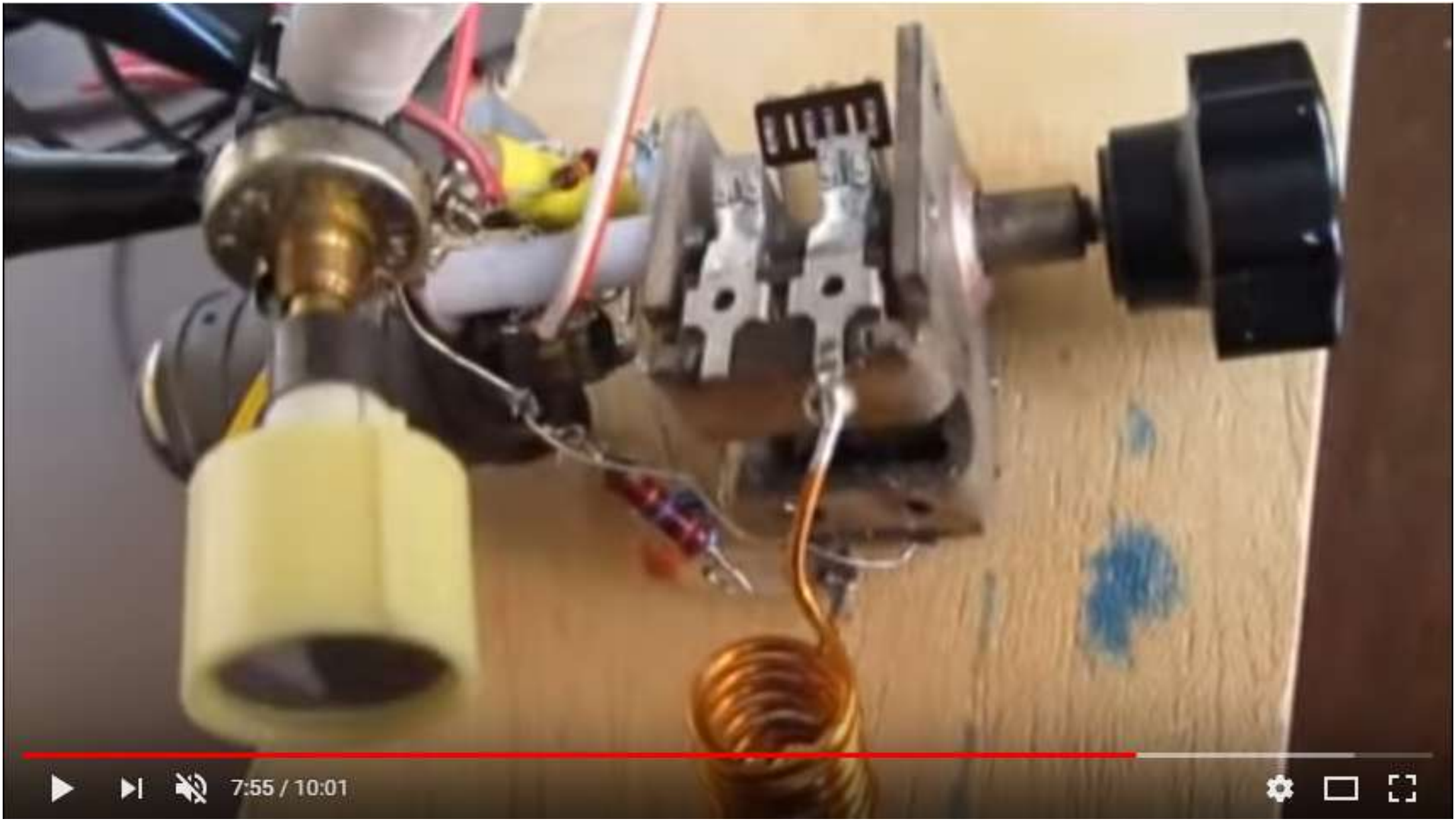
V1 = valve ECC81 or 12AT7
R1 = 10Mohm
R2 = 100Kohm
R3 = 47Khohm
R4 = potentiometer 22Kohm linear
R5 = 1Mohm
R6 = 1Kohm
C1 = variable capacitor in air 20 + 20pF
C2 = ceramic 47pF
C3 = 10nF minimum 100V
C4 = 2.2nF
C5 = 25uF 16V electrolytic
C6 = 10nF 250V or more
L1 = 7 spiers spaced 1.5mm, diameter 1.4mm thread on 1cm support
L2 = 2 spaced spaced 1.5mm, diameter 1.4mm thread on 1cm support
JAF1 = 5-10uH Noval
valve plinth with screen support or take the screen separately.
Stereo jack to be connected with the two earphones in series (do not connect the central mass terminal).
2 knobs for tuning and reaction.
mammoths for connections.
Directional stylus antenna.
For resistances to the maximum use from half a watt but also 1 / 4W should not give problems.



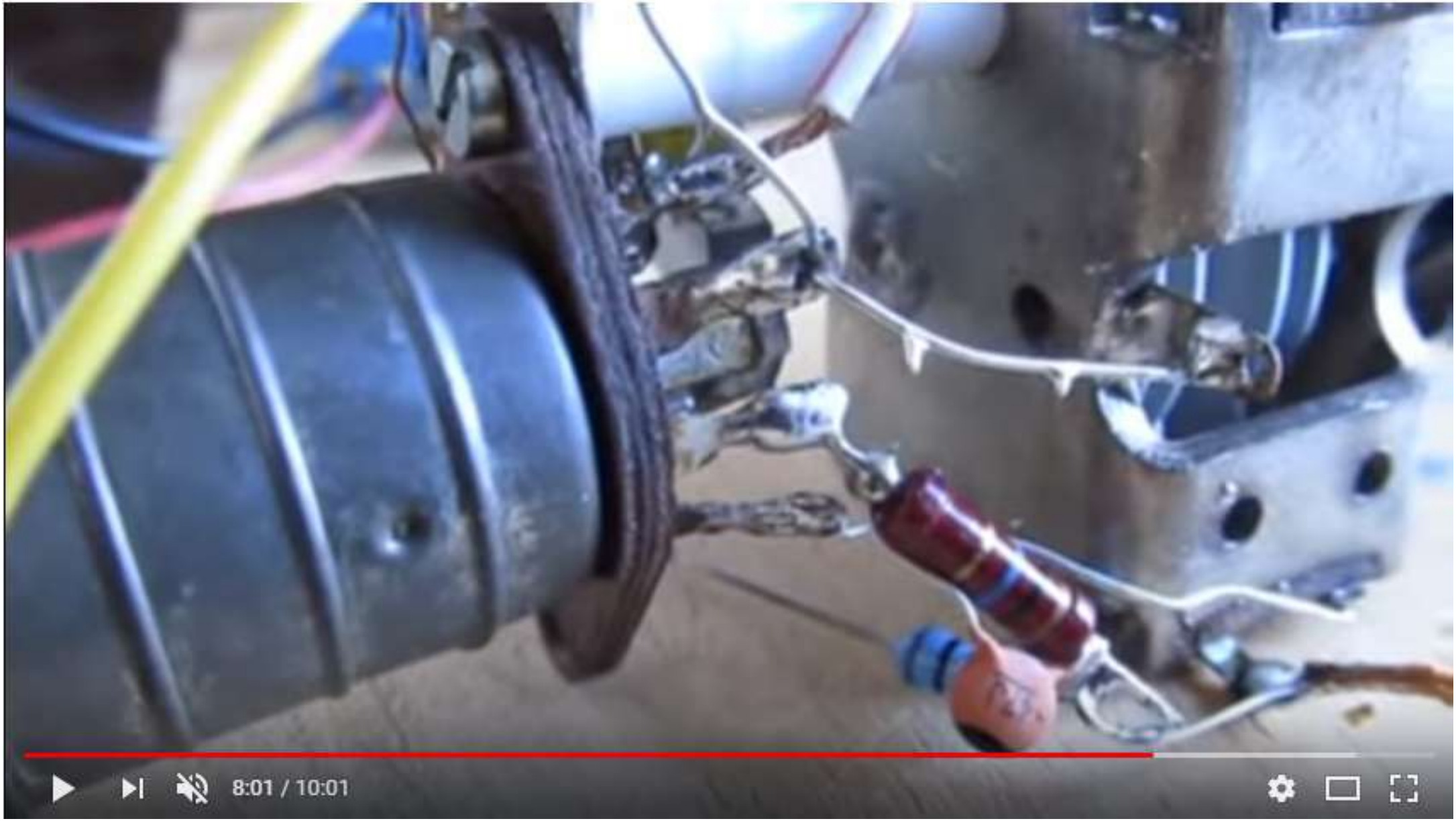
Ricevitore in superreazione con valvola ECC81 12AT7 Primo montaggio.mp4

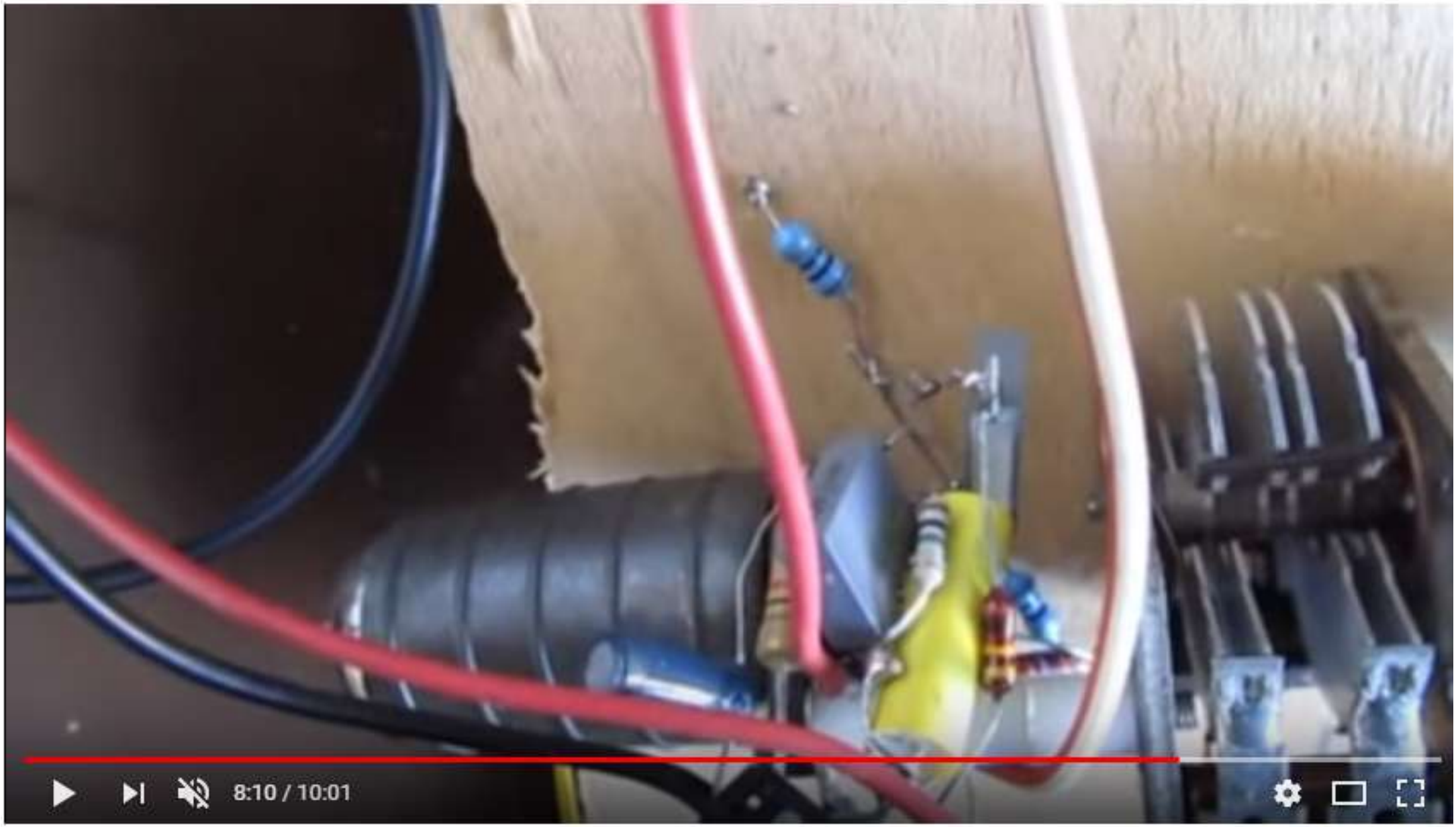

230 V 50-60 Hz
9 V - 3.2 VA
1:27 / 10:01

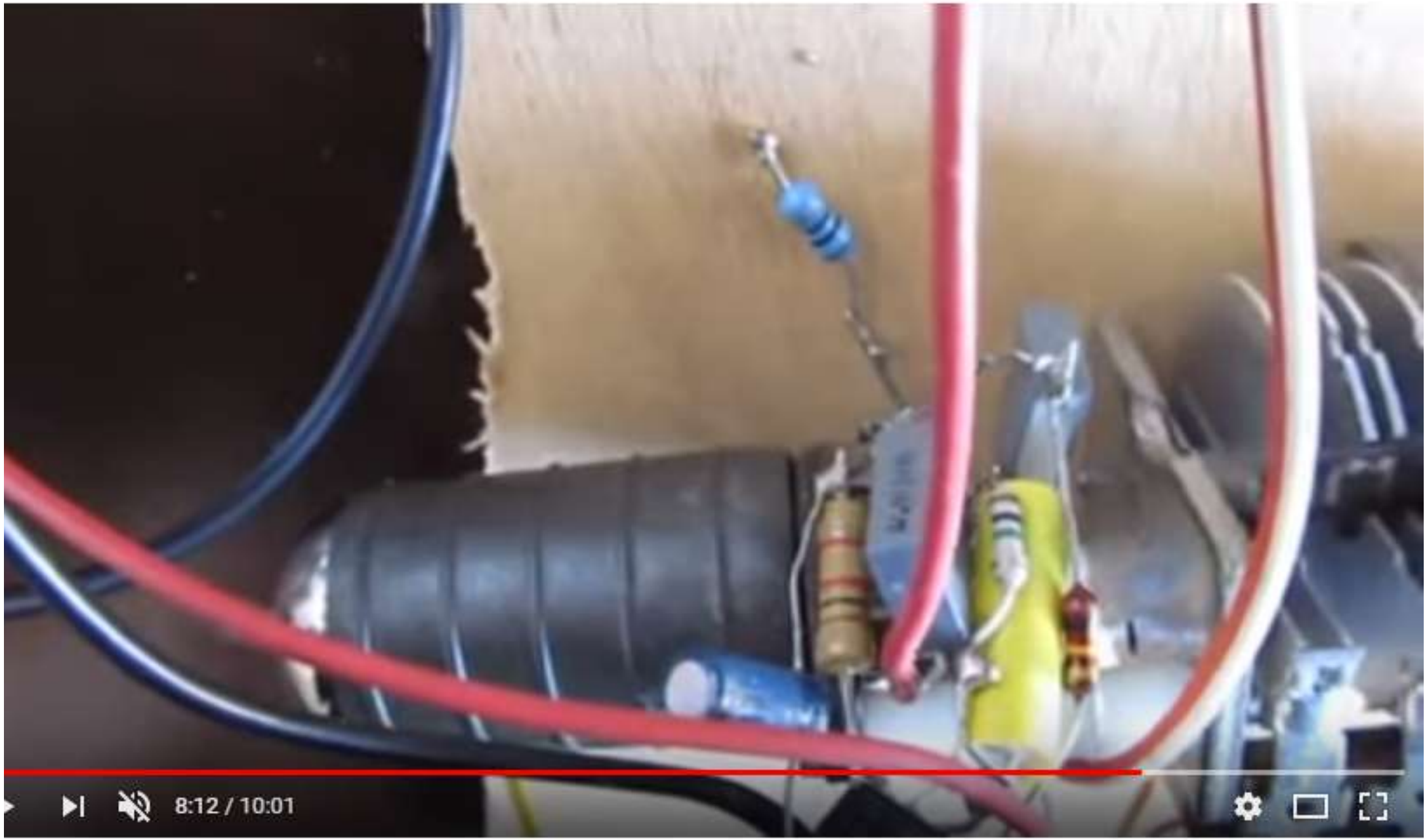

7:51 / 10:01

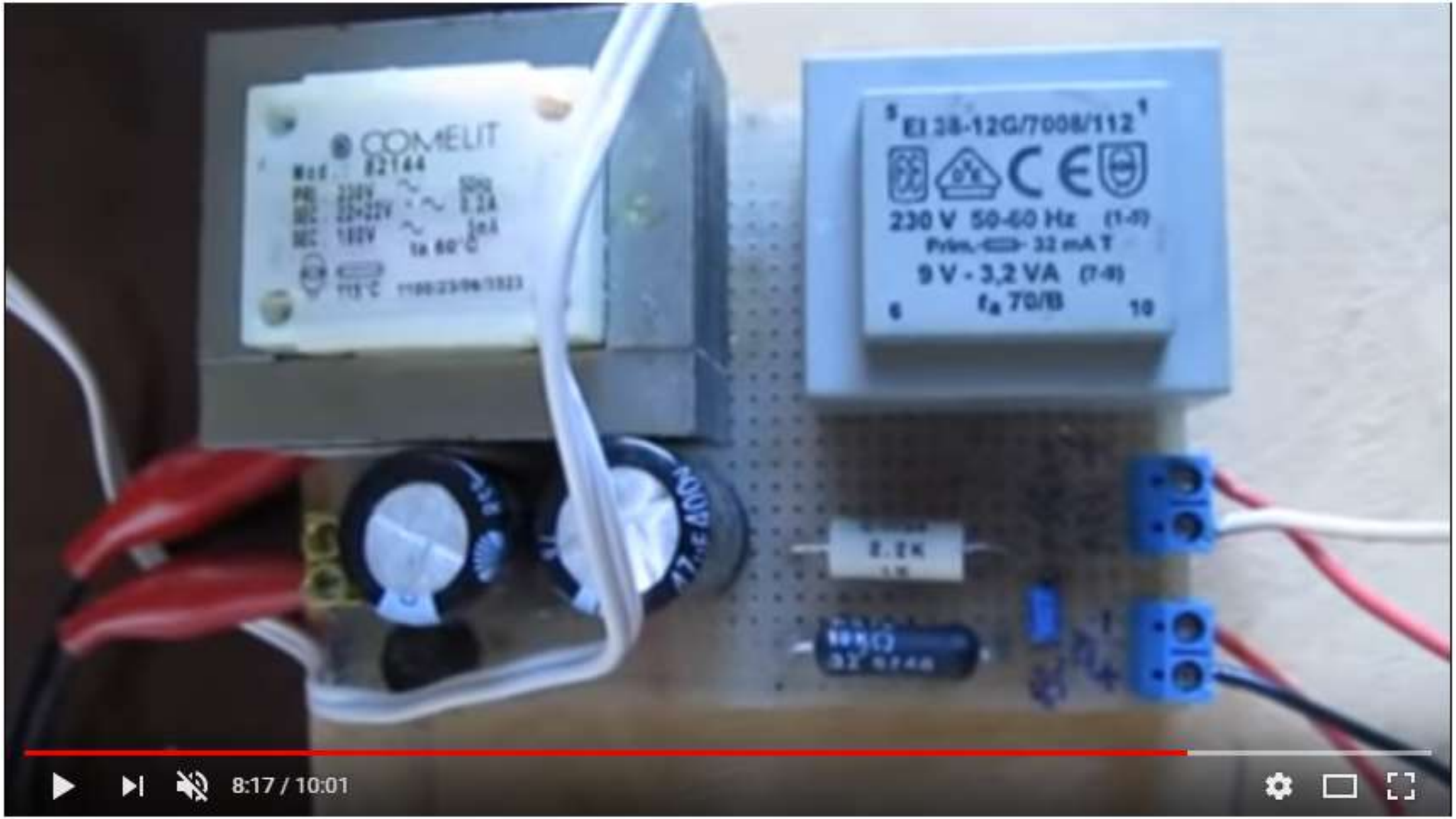

7:55 / 10:01

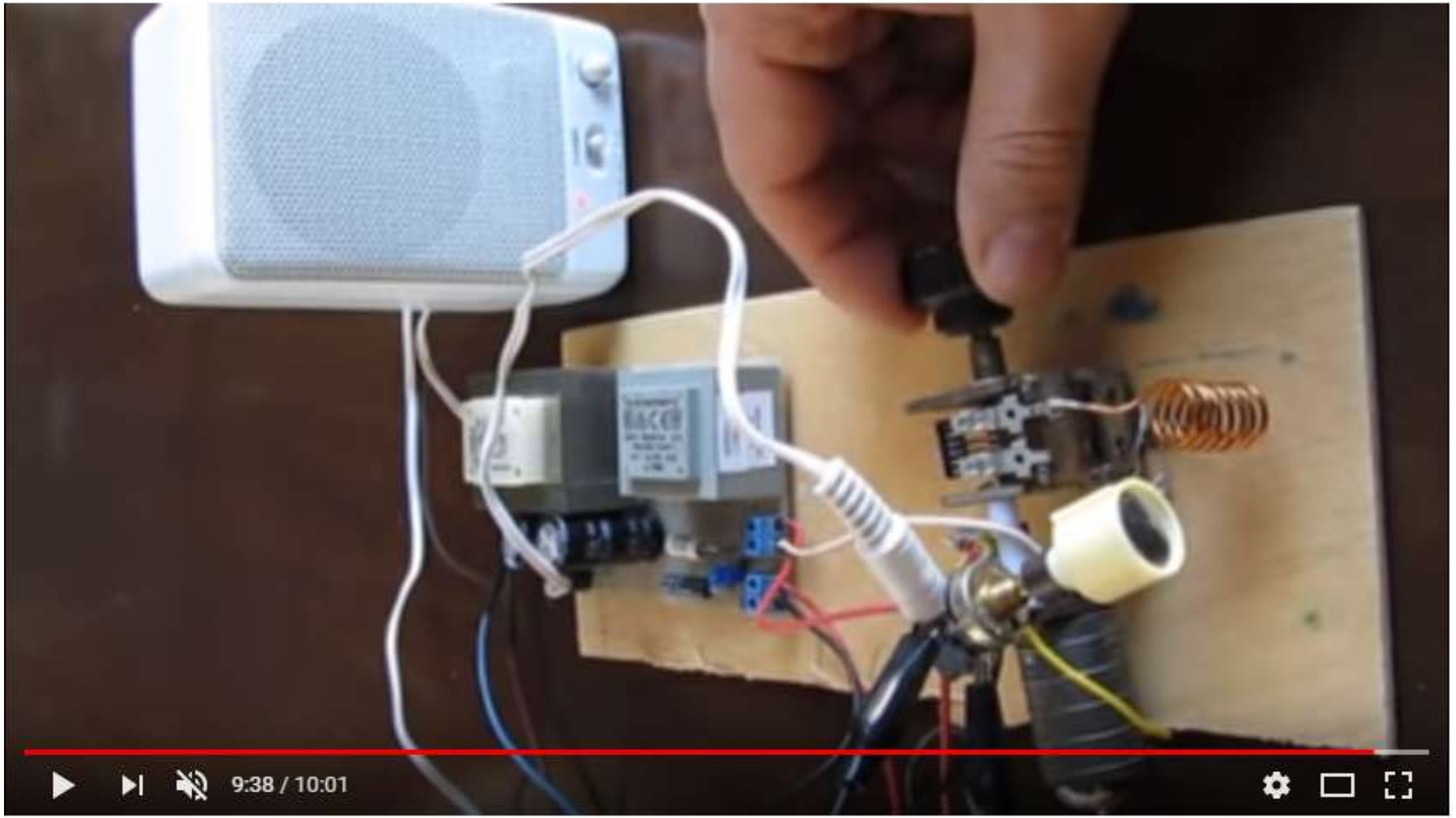

7:58 / 10:01


8:01 / 10:01

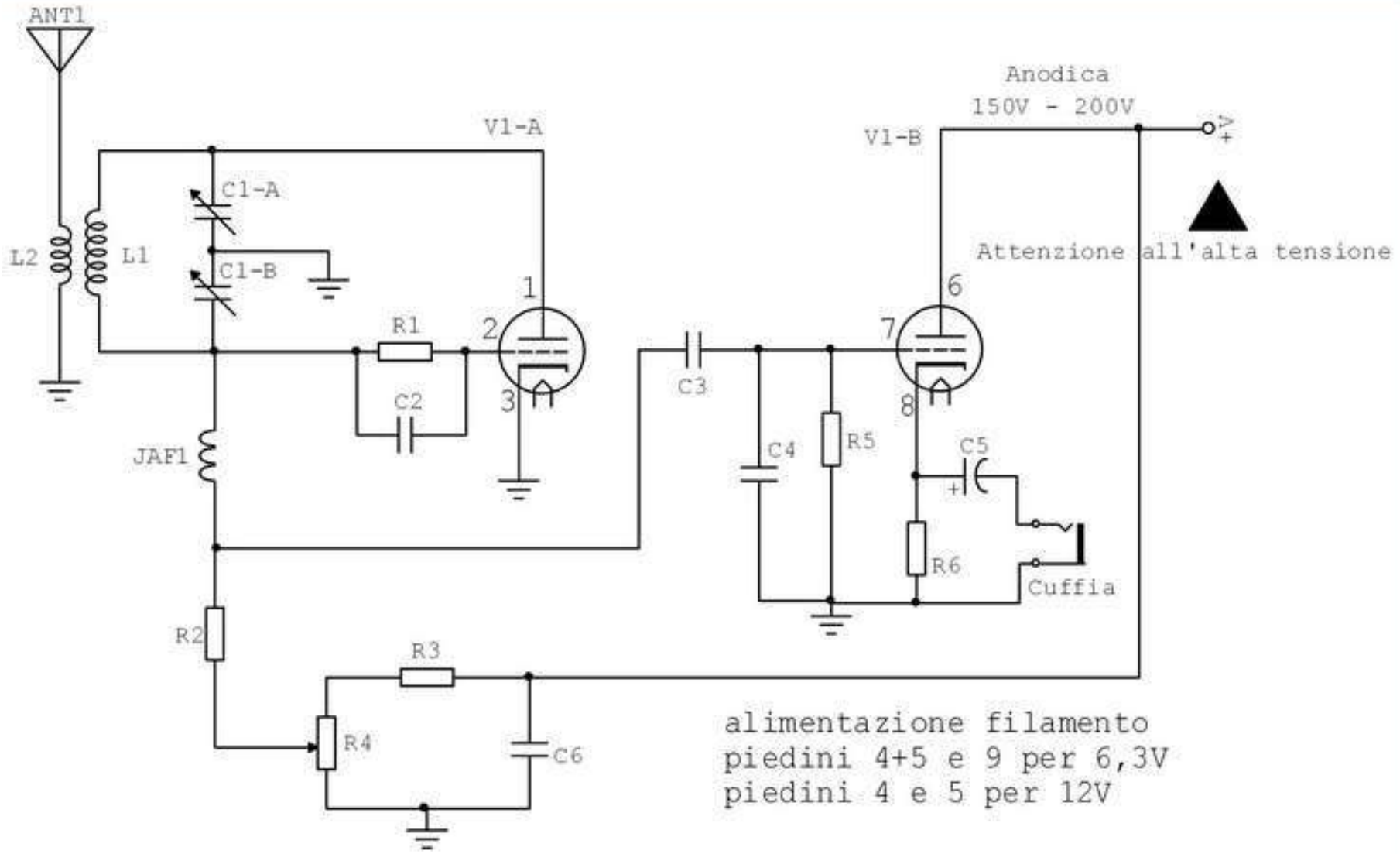

8:10 / 10:01


8:12 / 10:01

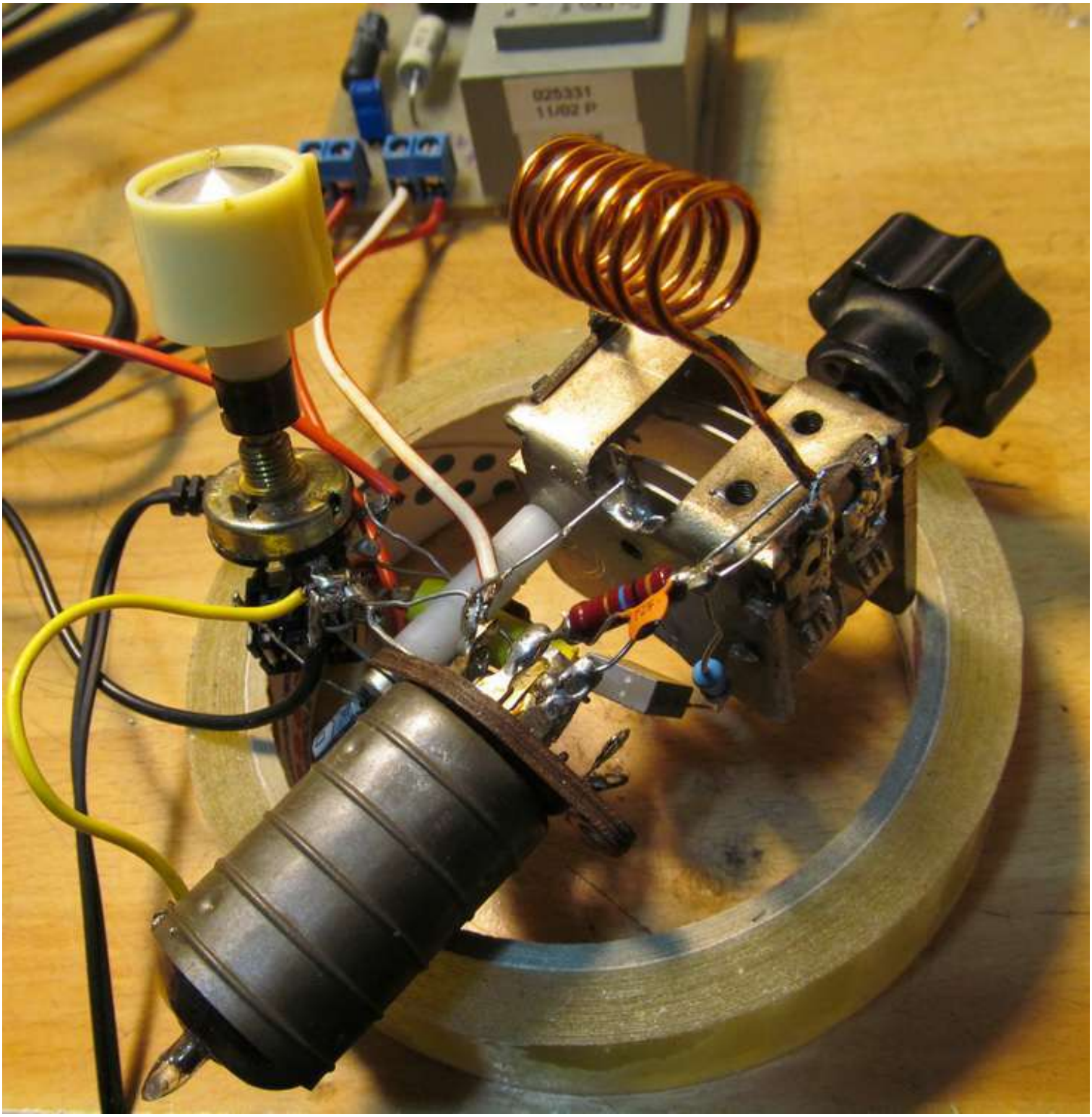

COMELIT
82144
EI 38-12G/7008/112
230 V 50-60 Hz (1-9)
9 V - 3,2 VA (7-9)
8.2K
8:17 / 10:01

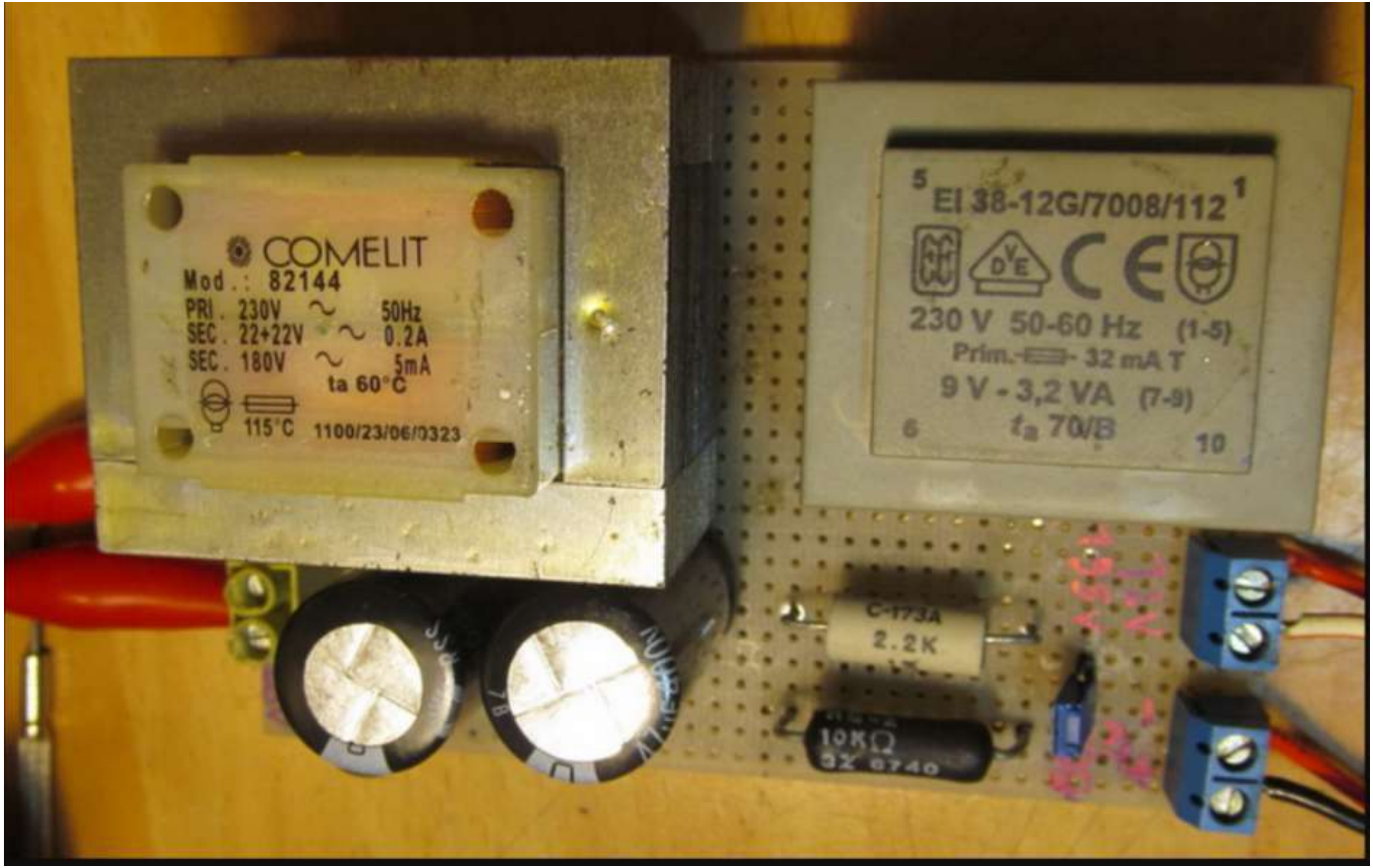

9:38 / 10:01

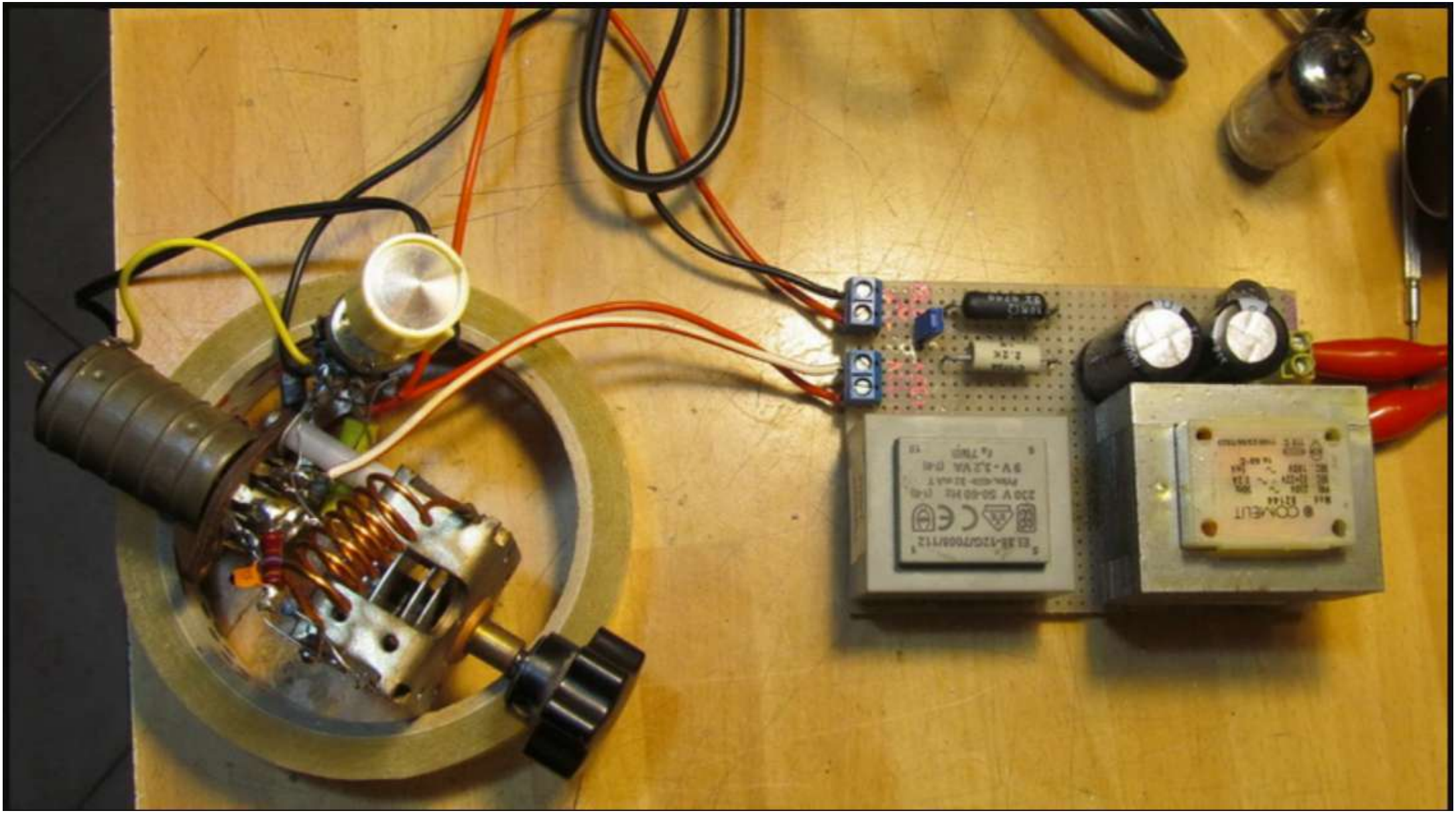
Superreaction receiver with ECC81
Regenerative RX with 12AT7



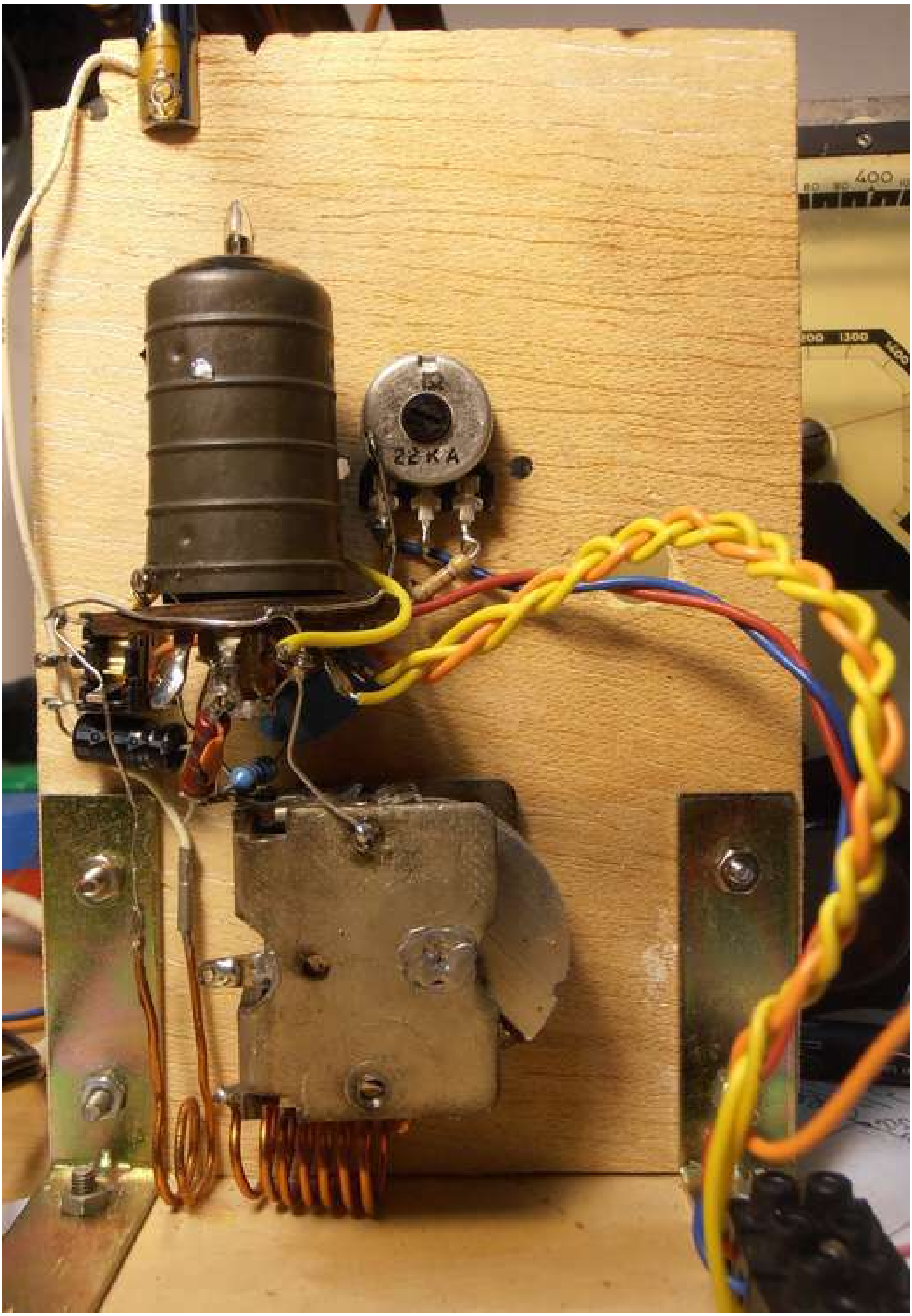
Ricevitore FM in super reazione con ECC81-12AT7

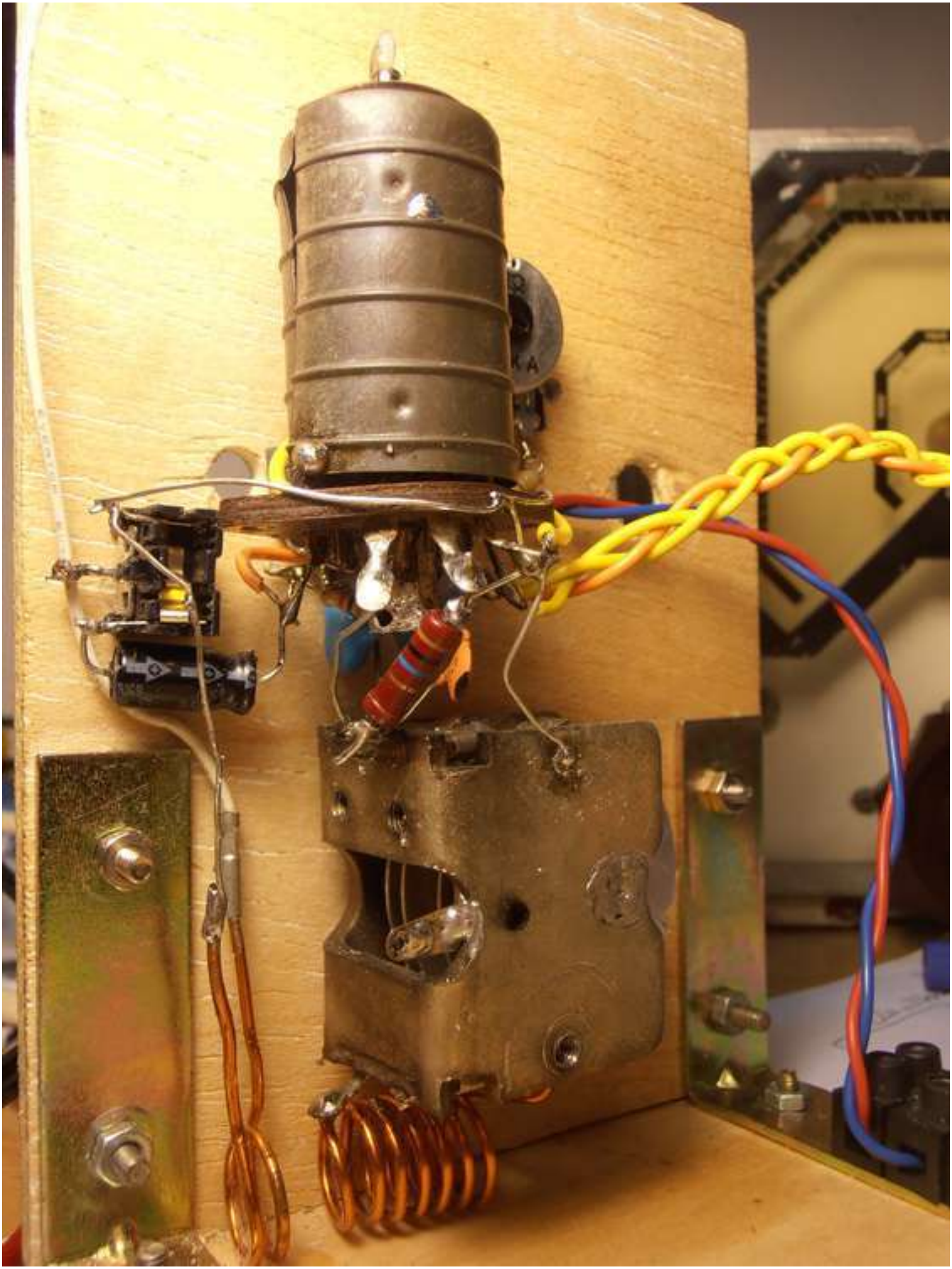

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11/02 P

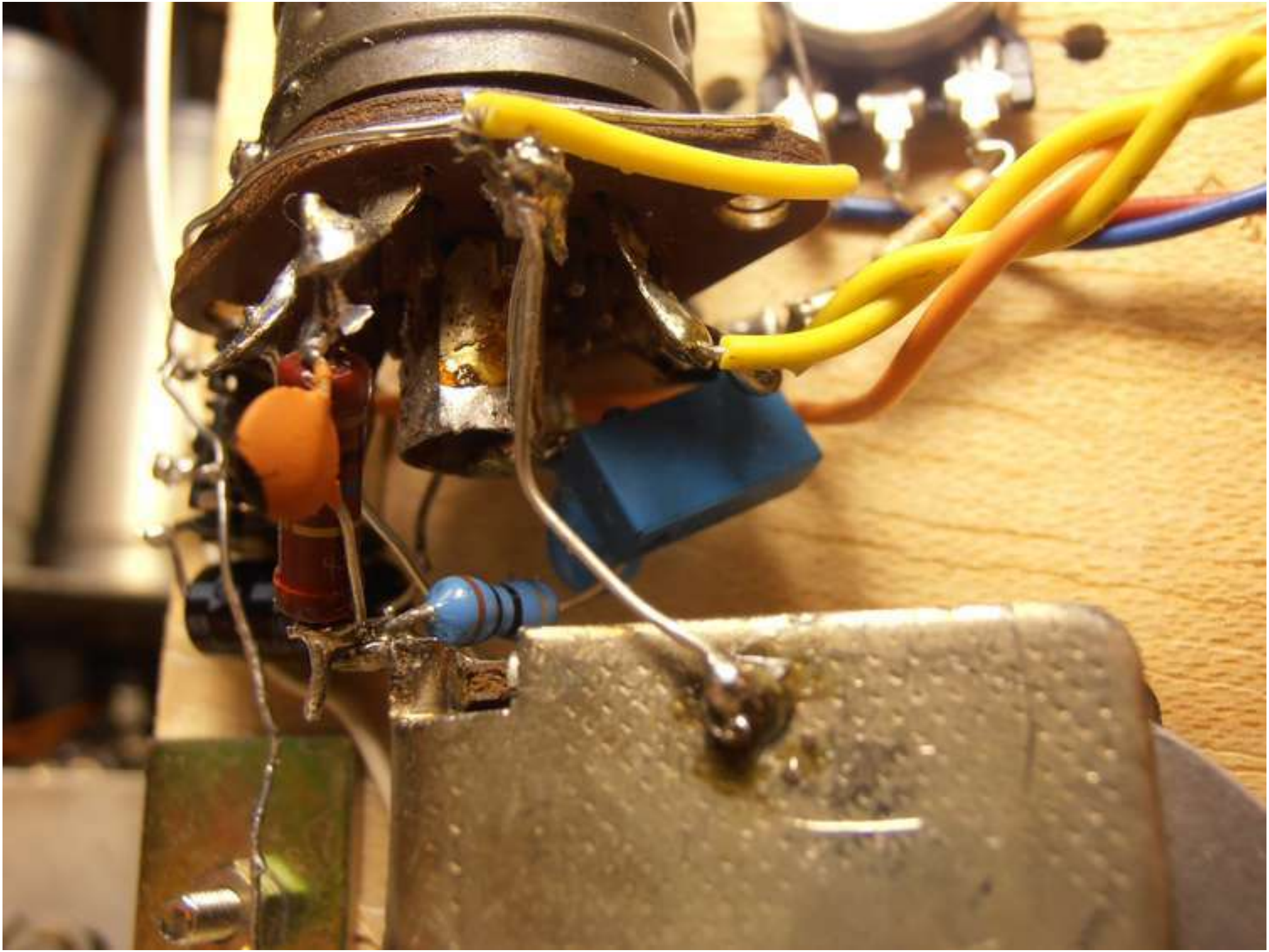

COMELIT
Mod.: 82144
PRI. 230V ~ 50Hz
SEC. 22+22V ~ 0.2A
SEC. 180V ~ 5mA
ta 60°C
115°C
1100/23/06/0323
5 EI 38-12G/7008/112 1
230 V 50-60 Hz (1-5)
Prim. - 32 mA T
9 V - 3,2 VA (7-9)
t_a 70/B
6
10
C-173A
2.2K
10KΩ

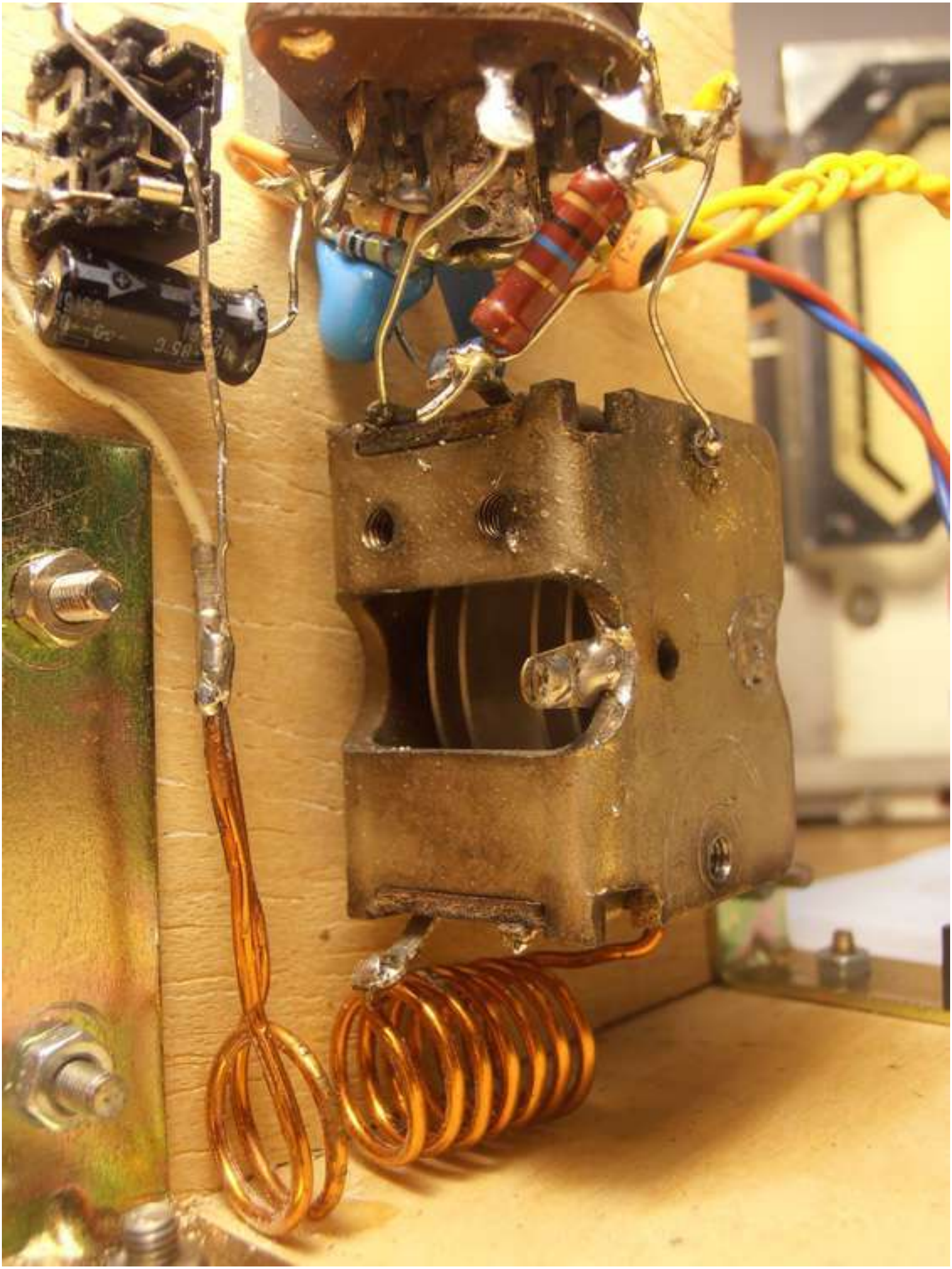


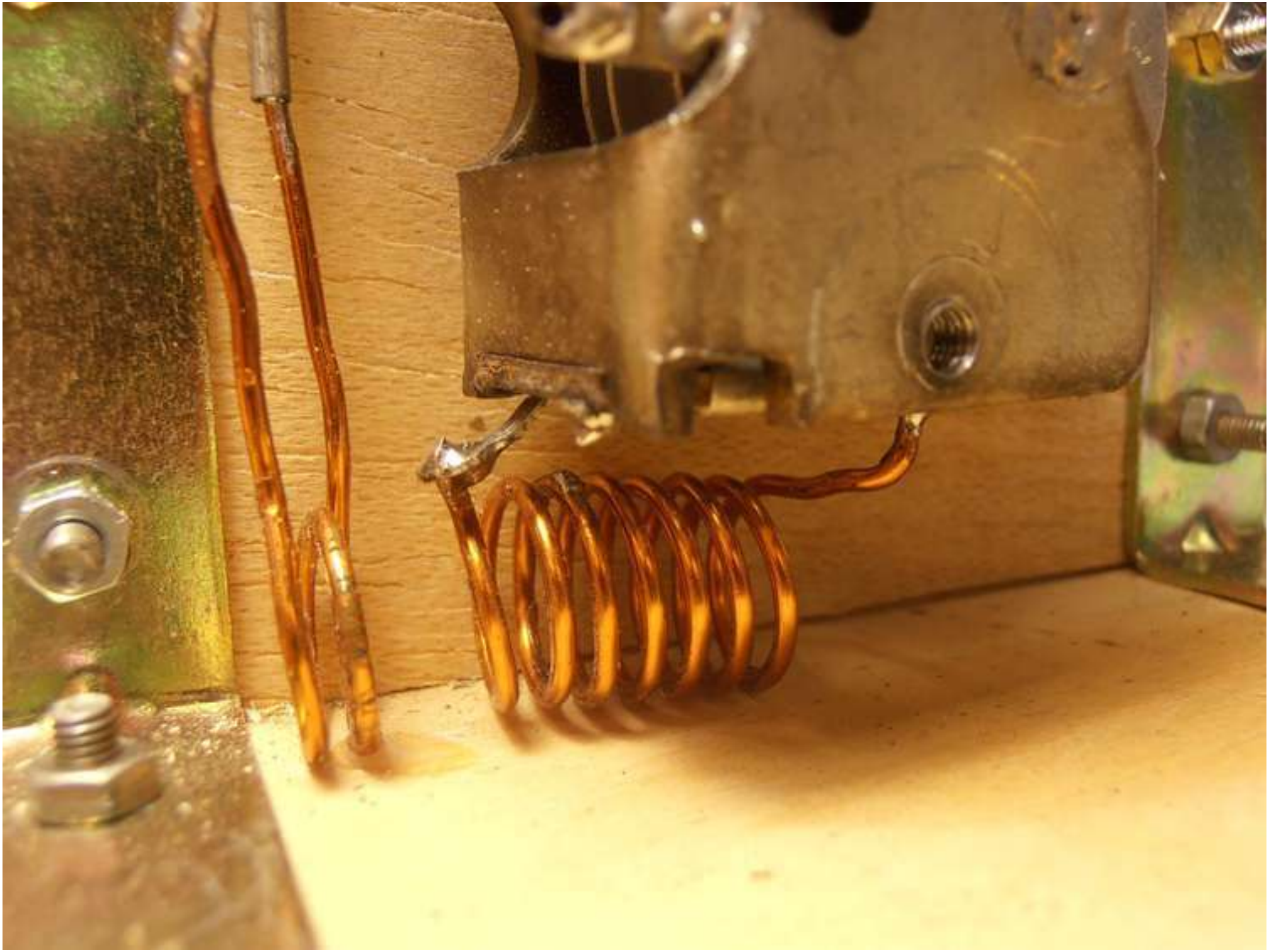

VOLUME

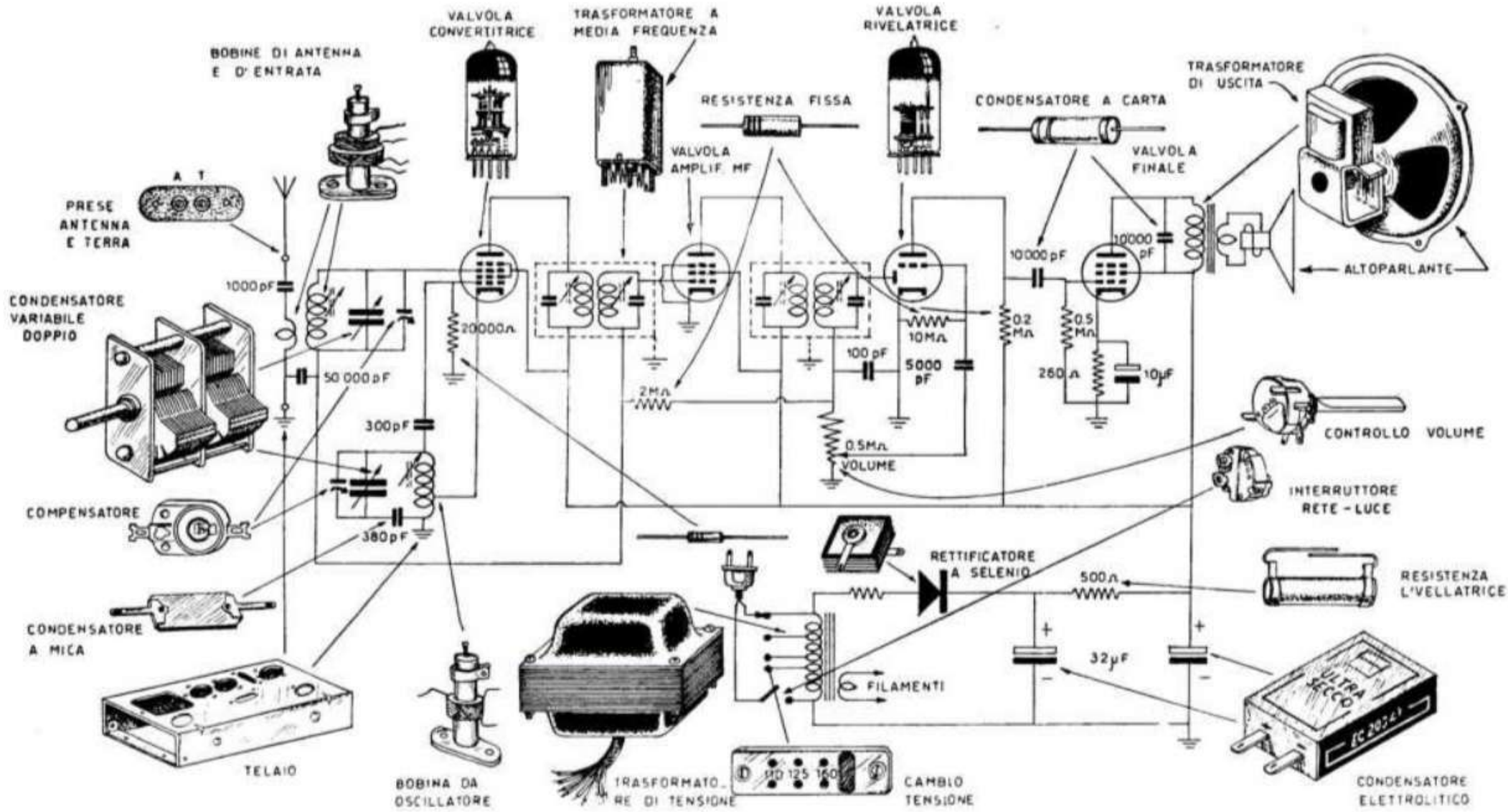

22KA
400










VALVOLA CONVERTITRICE
TRASFORMATORE A MEDIA FREQUENZA
VALVOLA RIVELATRICE
BOBINE DI ANTENNA E D' ENTRATA
RESISTENZA FISSA
CONDENSATORE A CARTA
TRASFORMATORE DI USCITA
VALVOLA AMPLIF. MF
VALVOLA FINALE
A T
PRESE ANTENNA E TERRA
ALTOPARLANTE
1000 pF
10000 pF
10000 pF
CONDENSATORE VARIABILE DOPPIO
20000 Ω
0.2 MΩ
0.5 MΩ
10 MΩ
100 pF
5000 pF
260 Ω
10 μF
50 000 pF
2 MΩ
0.5 MΩ VOLUME
CONTROLLO VOLUME
300 pF
INTERRUTTORE RETE - LUCE
COMPENSATORE
380 pF
RETTIFICATORE A SELENIO
500 Ω
RESISTENZA L'VELLATRICE
CONDENSATORE A MICA
32 μF
FILAMENTI
TELAIO
BOBINA DA OSCILLATORE
TRASFORMATORE DI TENSIONE
110 125 160
CAMBIO TENSIONE
CONDENSATORE ELETTROLITICO

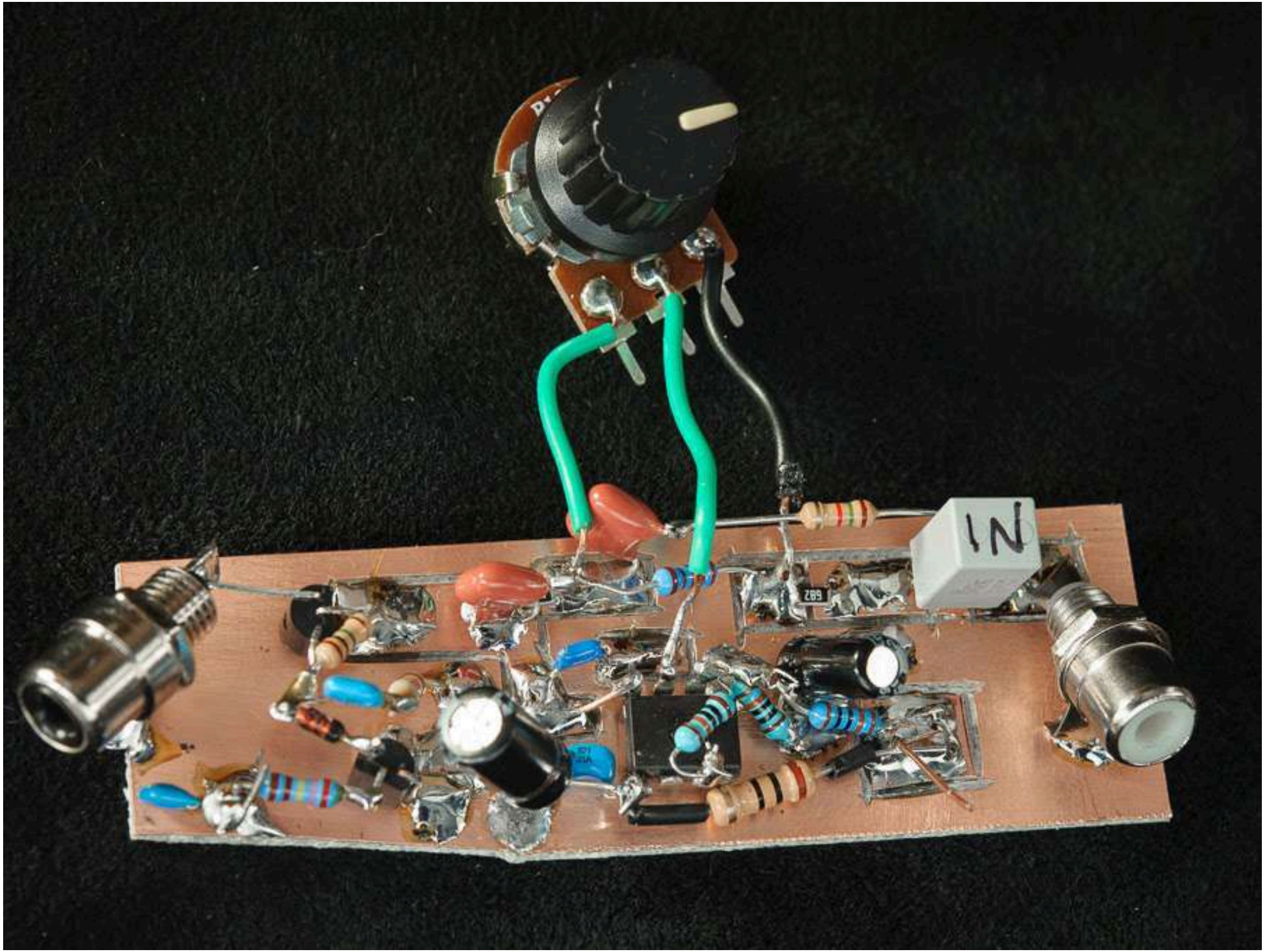


What will happen to a human if he gets a lightning strike? Will Nikita get some extrasensory power?



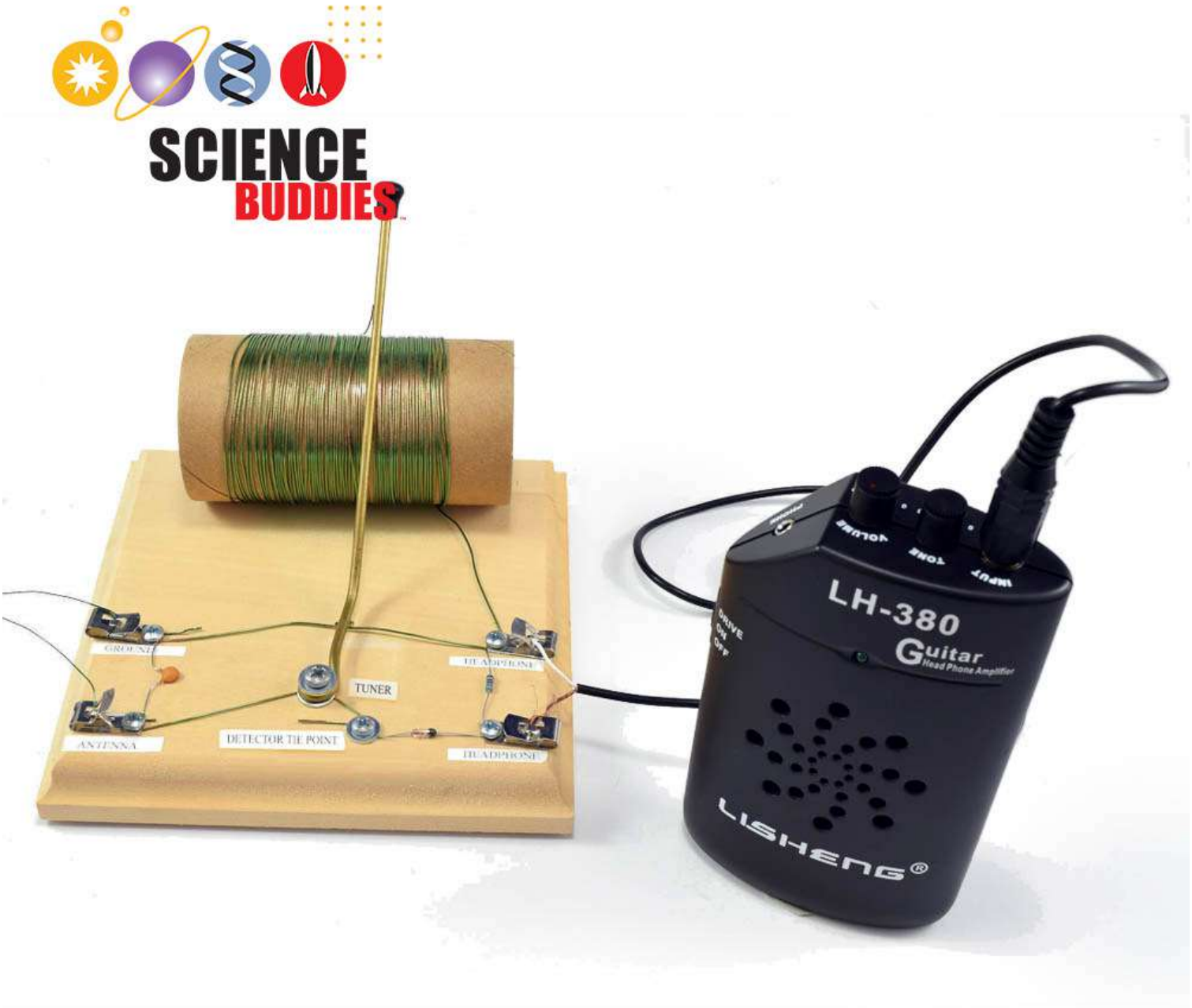
What will happen to a human if he gets a lightning strike? Will Nikita get some extrasensory power?

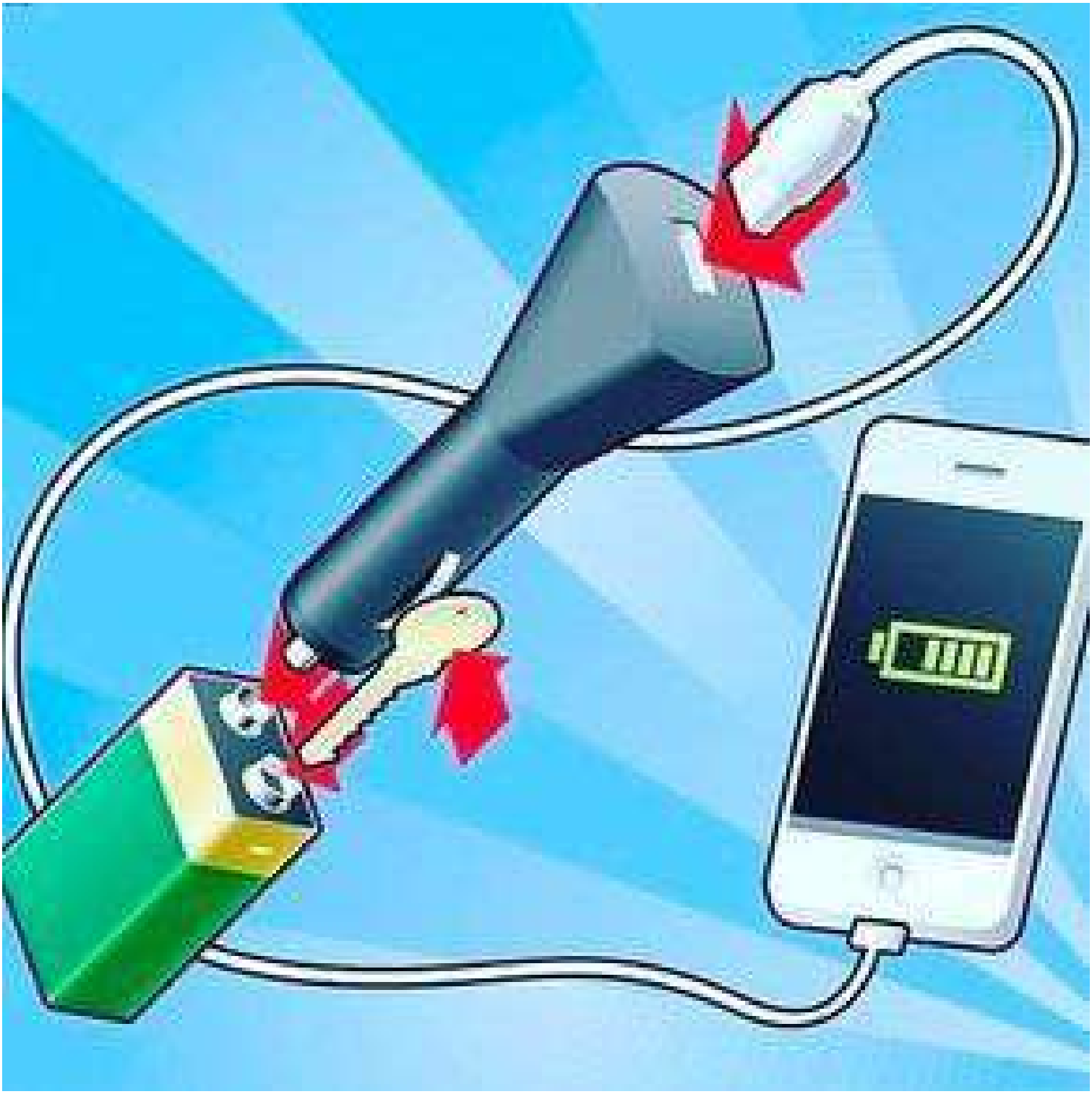


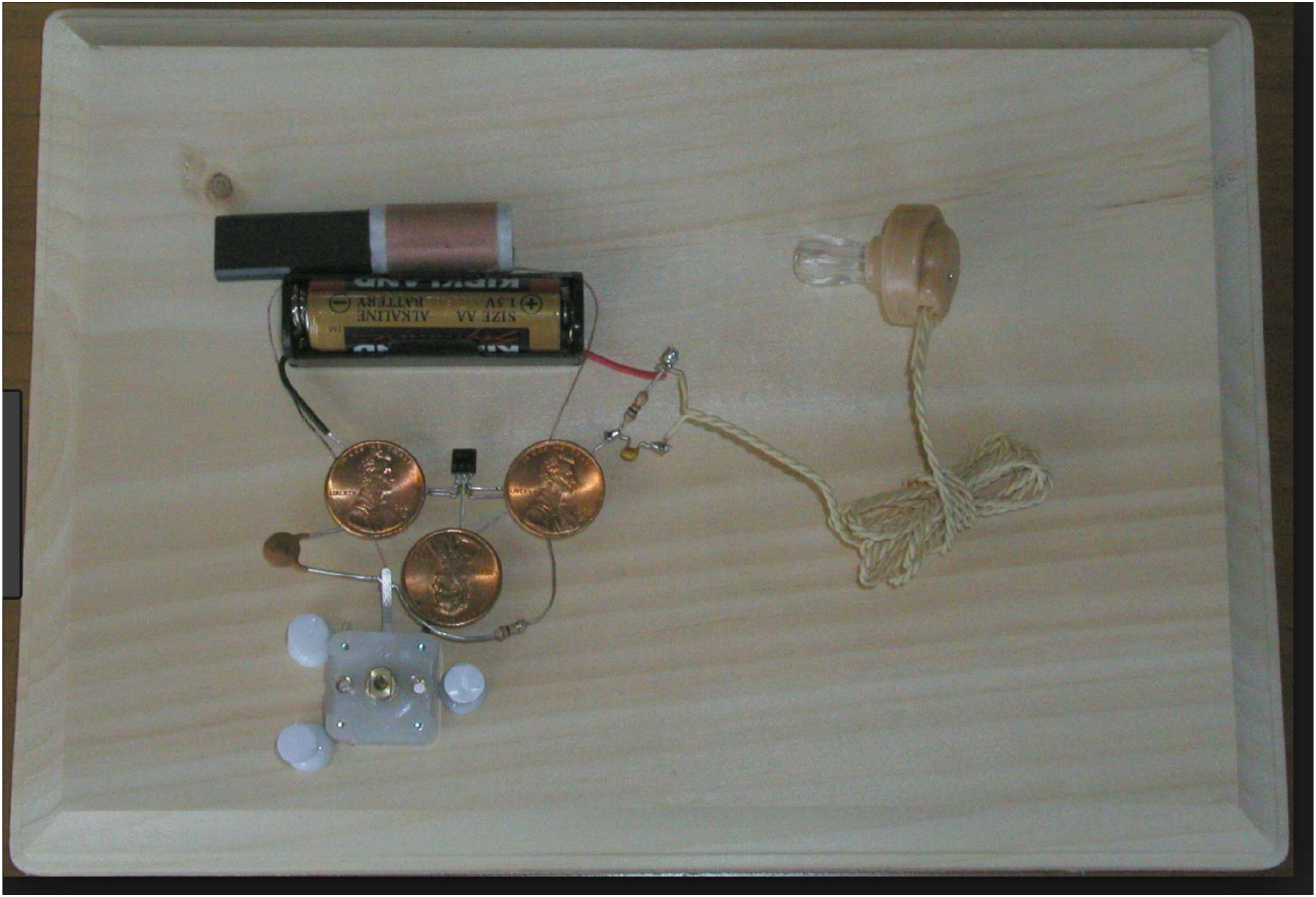

IN

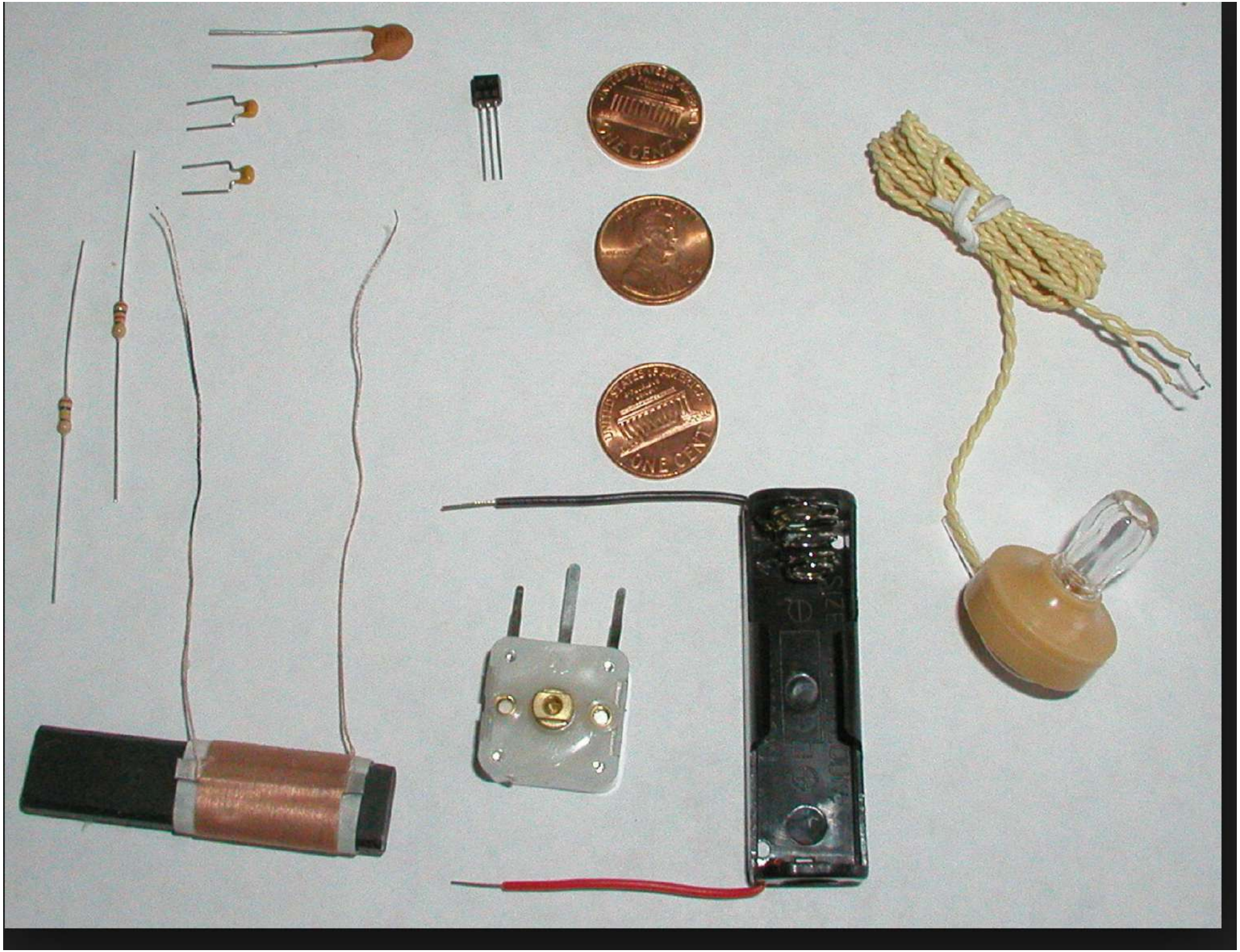


SCIENCE BUDDIES

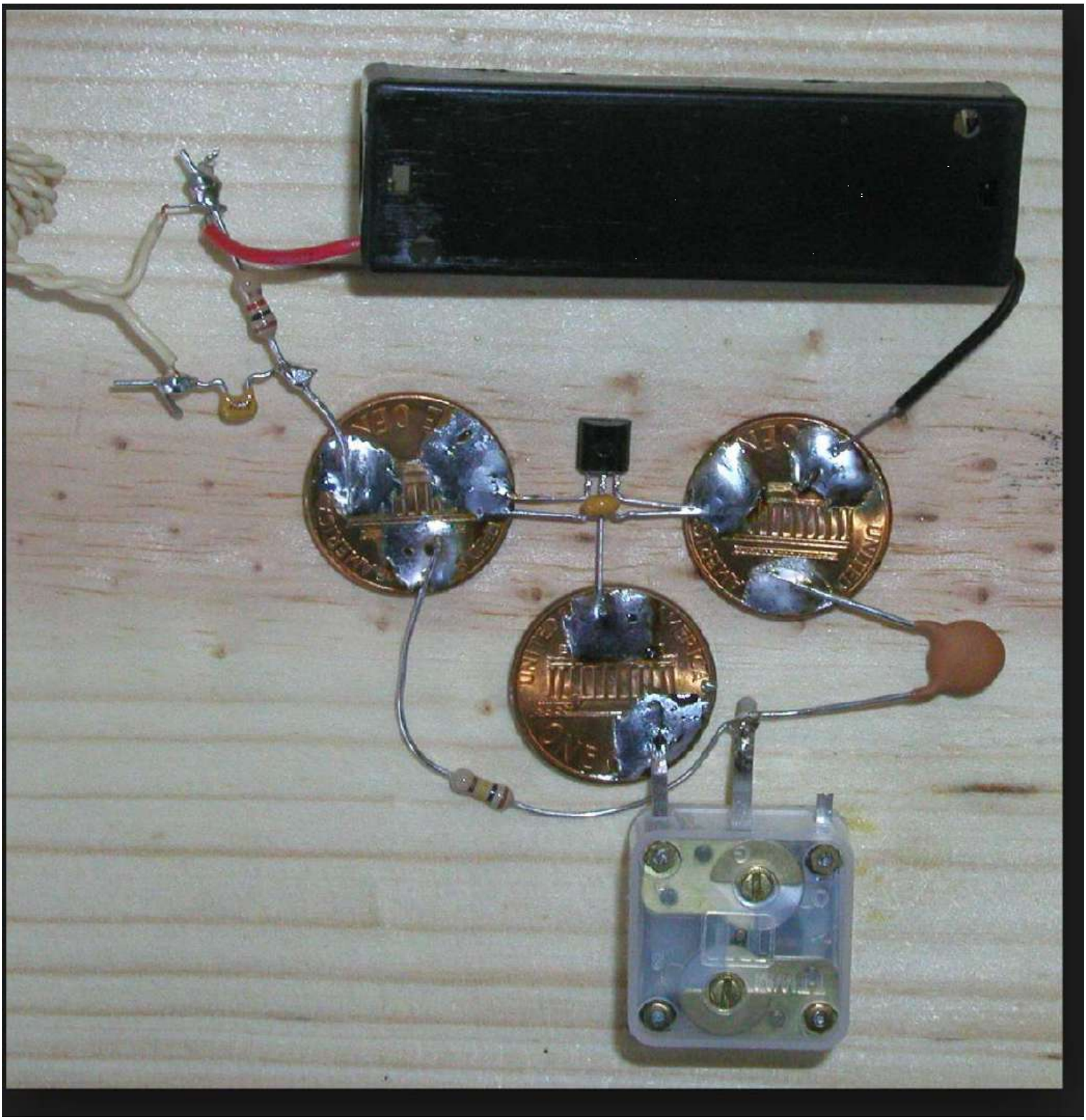




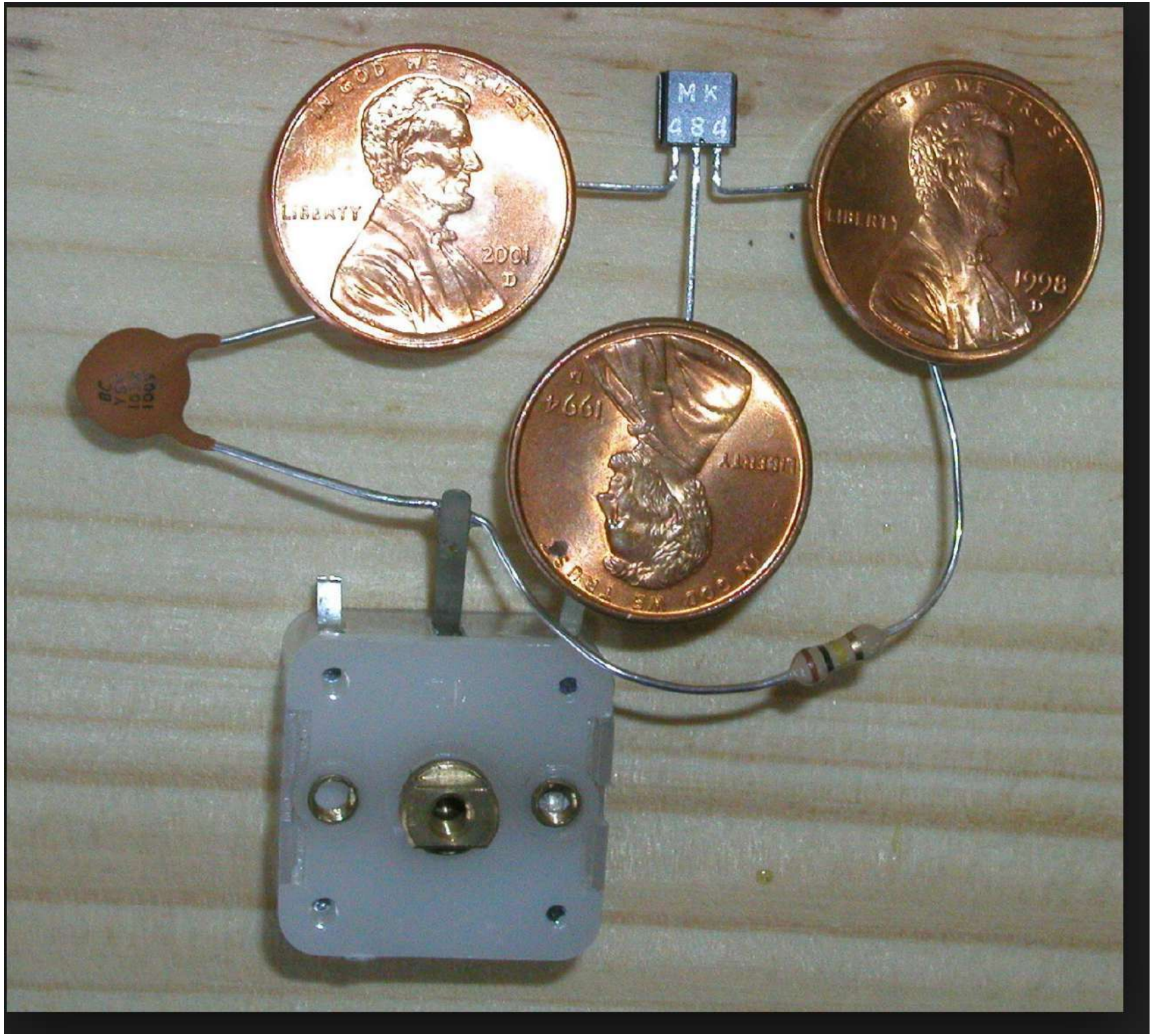

SIZE AA
1.5V
ALKALINE
BATTERY

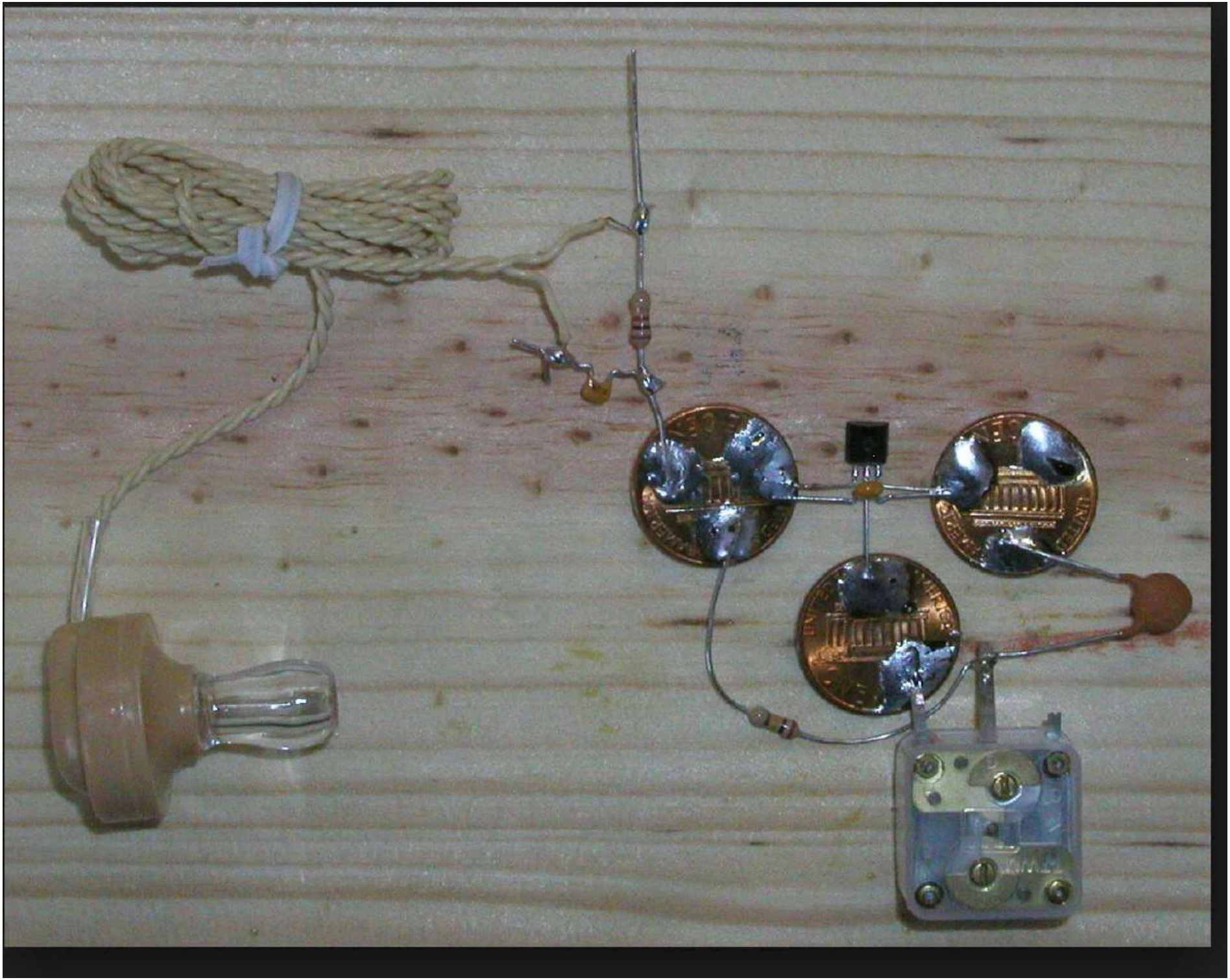

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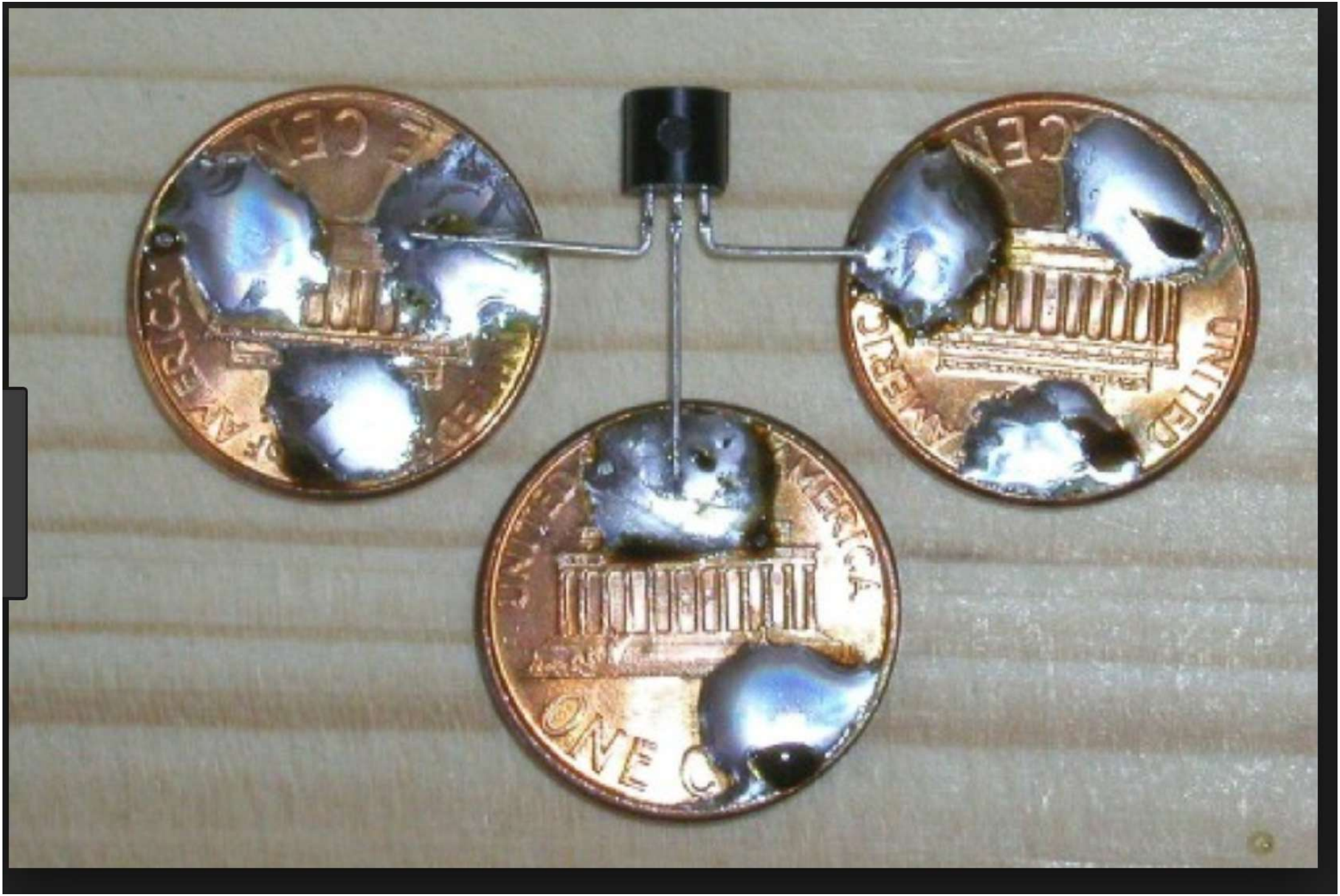


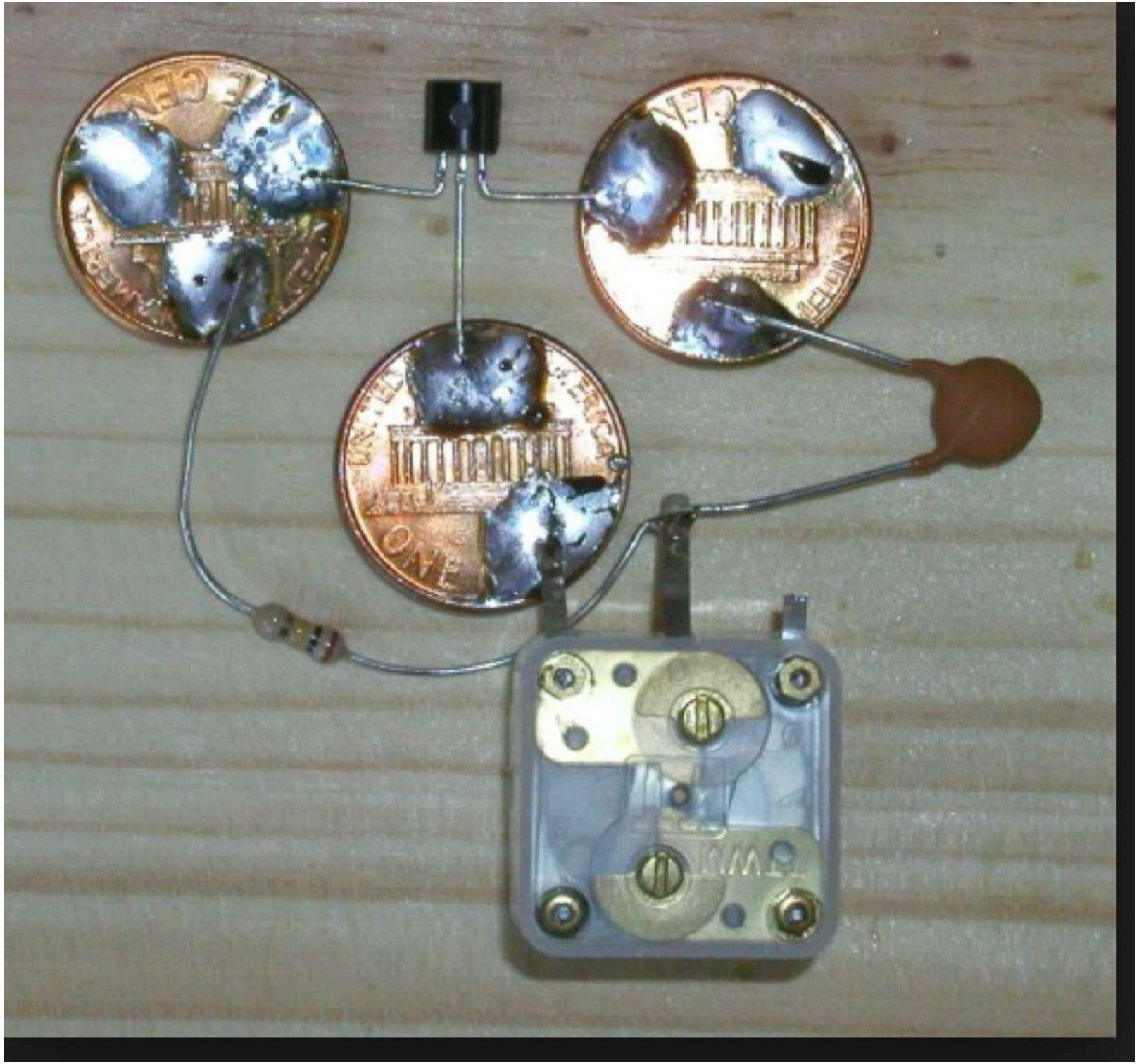


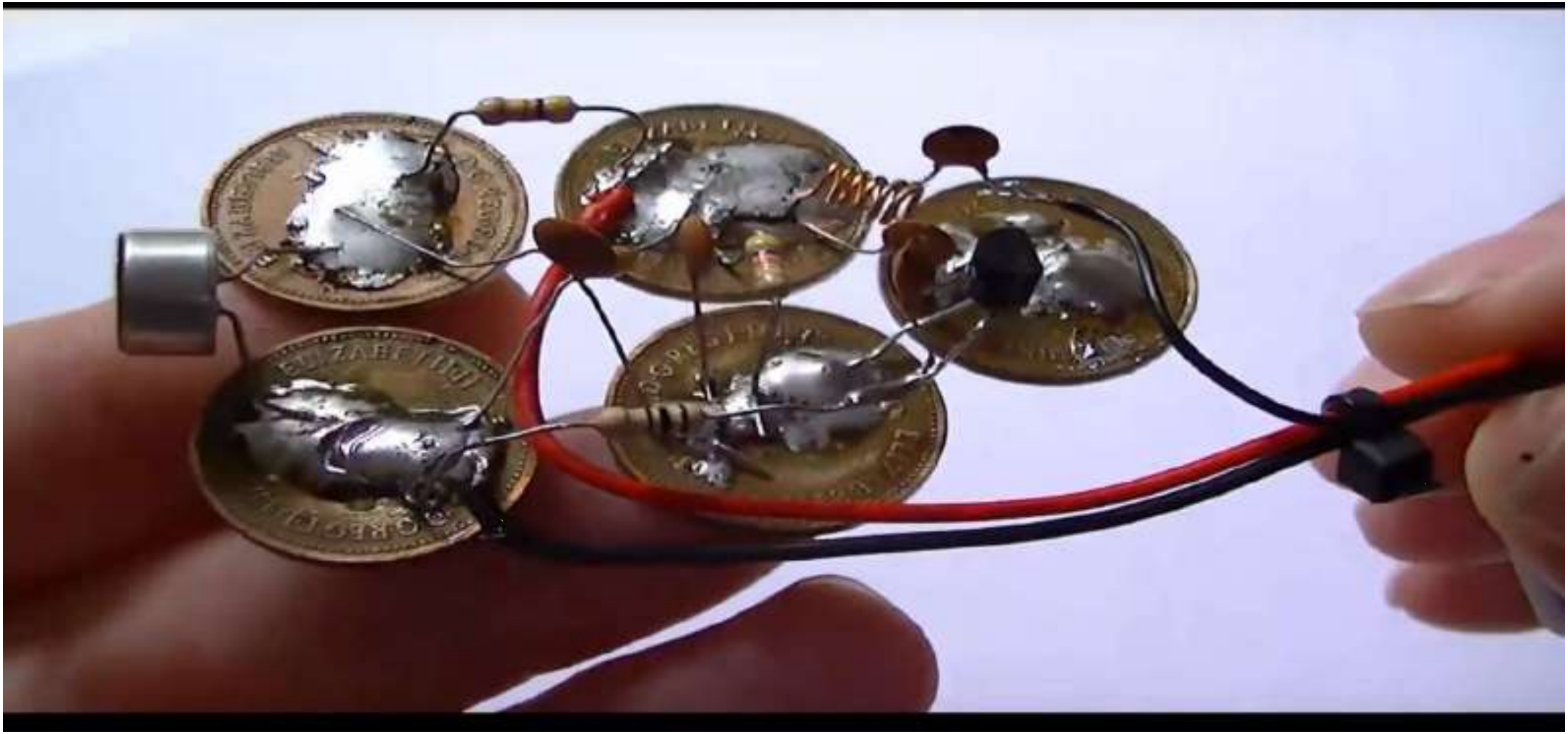

Panasonic

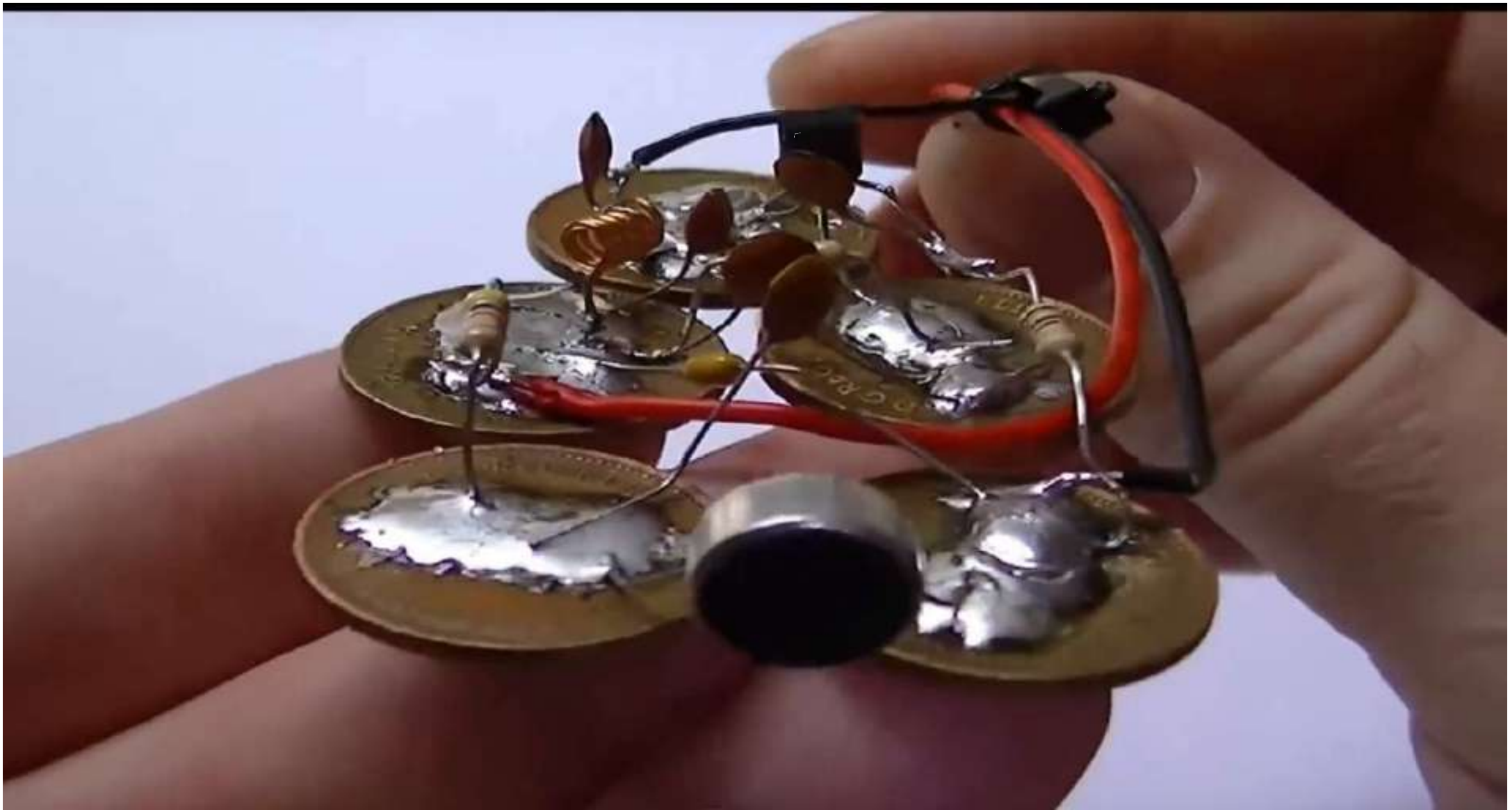

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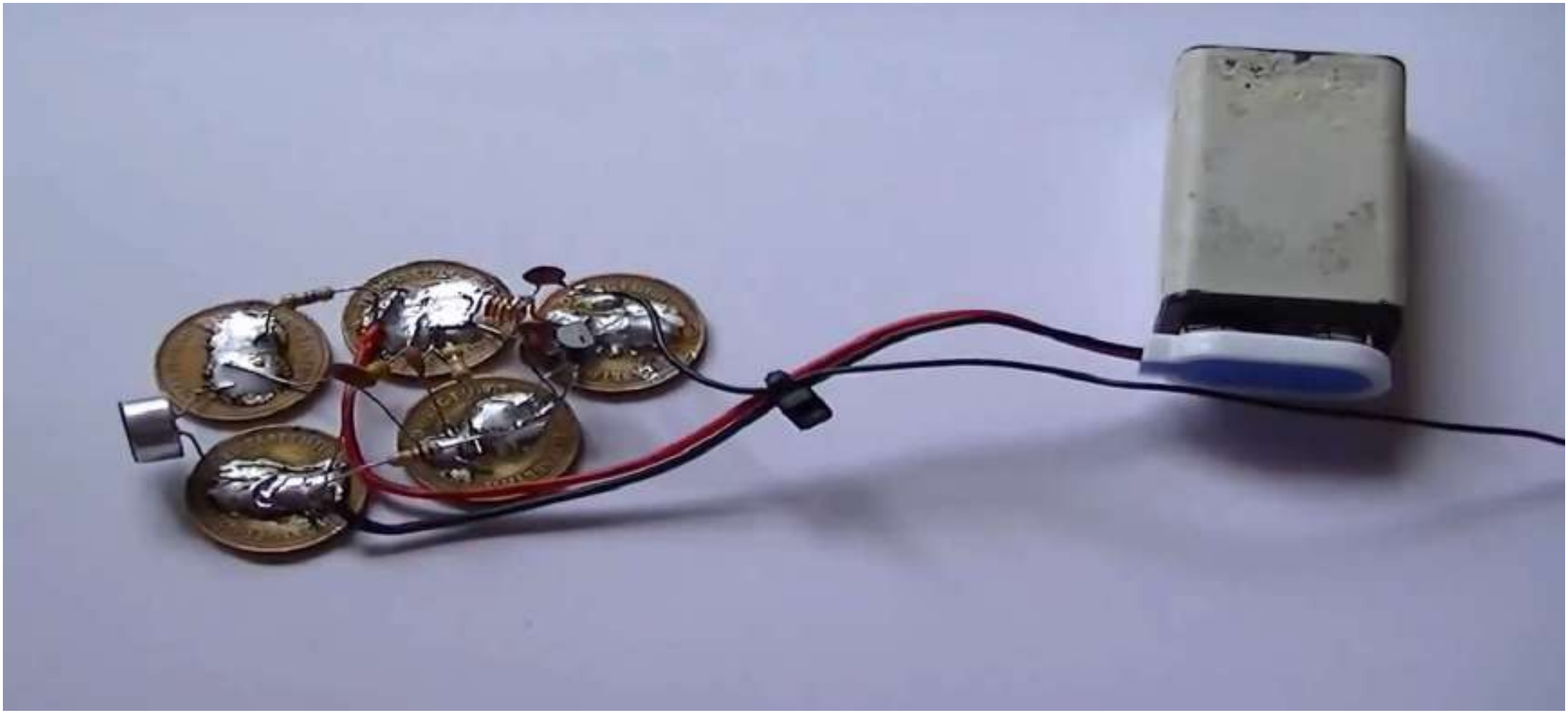



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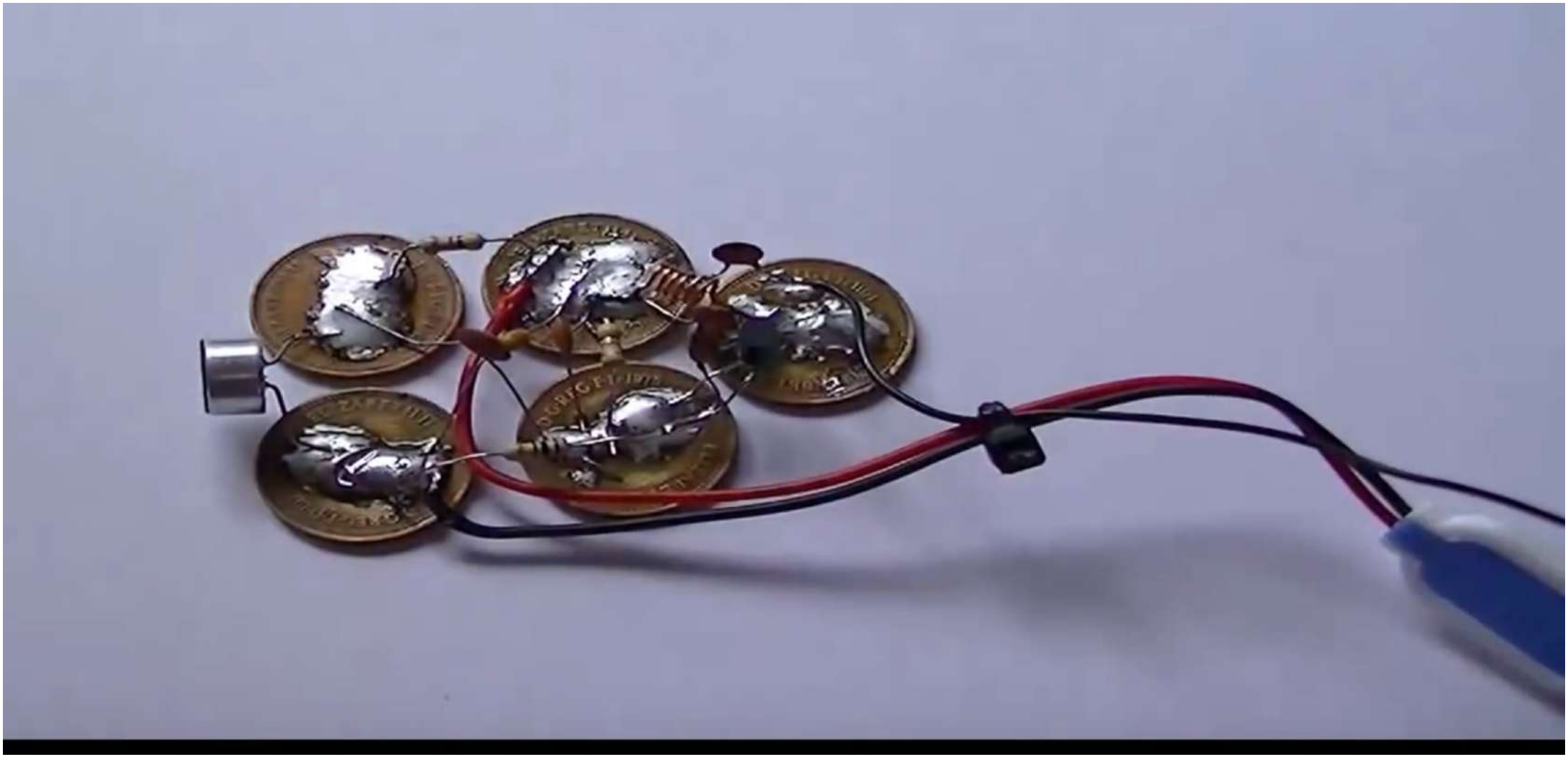

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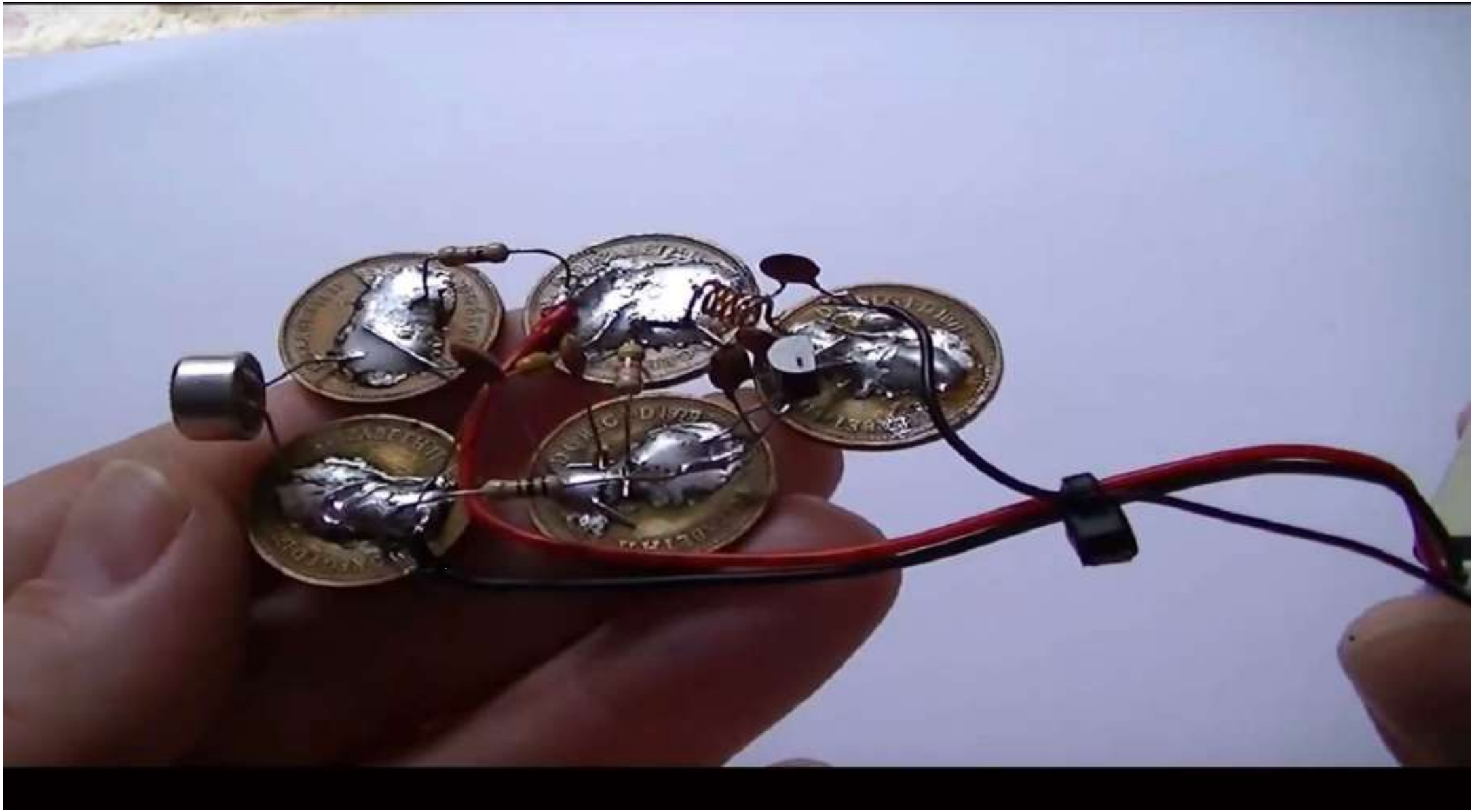




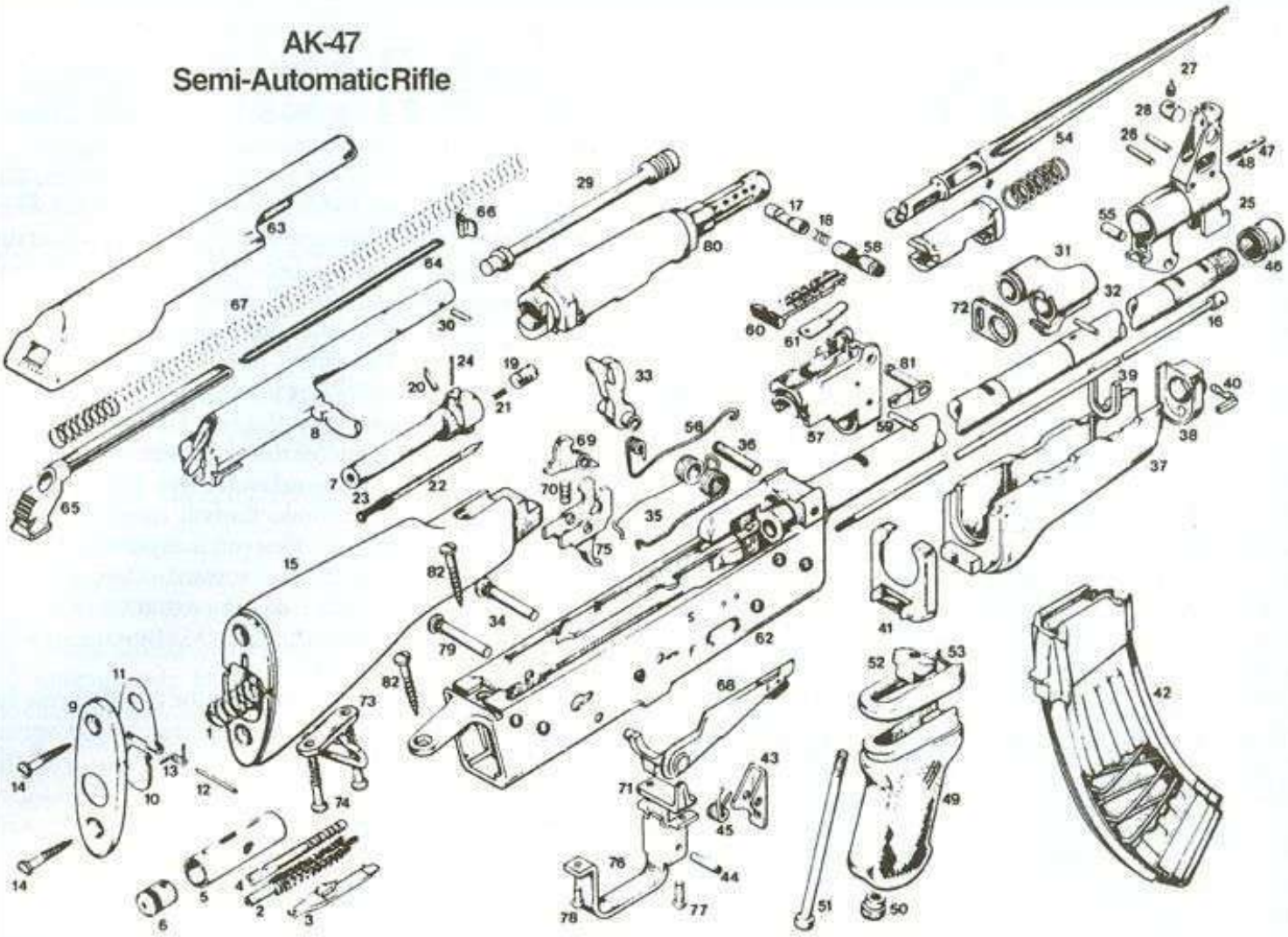



GOOIT
Frequency Counter
Multibey
107.350





AK-47
Semi-Automatic Rifle



1 Accessories Case Spring
2 Bore Brush
3 Combination Tool
4 Jag
5 Accessories Case
6 Accessories Case Cap
7 Bolt
8 Bolt Carrier
9 Buttplate
10 Buttplate Cover
11 Buttplate Cover Base
12 Buttplate Cover Pin
13 Buttplate Cover Spring
14 Buttplate Screws (2)
15 Buttstock
16 Cleaning Rod
17 Rear Sight Elevating Slide Catch
18 Slide Catch Spring
19 Extractor
20 Extractor Pin
21 Extractor Spring
22 Firing Pin
23 Firing Pin Spring
24 Firing Pin Retaining Pin
25 Front Sight Base
26 Front Sight Base Pins (2)
27 Front Sight
28 Front Sight Adjusting Block
29 Gas Piston
30 Gas Piston Pin
31 Gas Port Block
32 Gas Port Block Retaining Pin
33 Hammer
34 Hammer Pin
35 Hammer Spring
36 Barrel Pin
37 Lower Handguard
38 Lower Handguard Band
39 Lower Handguard Clamp
40 Lower Handguard Lock
41 Lower Handguard Ferrule
42 Magazine
43 Magazine Catch
44 Magazine Catch Pin
45 Magazine Catch Spring
46 Barrel Bushing
47 Barrel Bushing Lock
48 Barrel Bushing Lock Spring
49 Pistol Grip
50 Pistol Grip Escutcheon
51 Pistol Grip Screw
52 Pistol Grip Base
53 Pistol Grip Cap
54 Bayonet
55 Bayonet Pivot Pin
56 Receiver Pin Lock Spring
57 Rear Sight Base
58 Rear Sight Elevating Slide
59 Rear Sight Pin
60 Rear Sight Leaf
61 Rear Sight Spring
62 Receiver & Barrel Assembly*
63 Receiver Cover
64 Front Recoil Spring Guide
65 Rear Recoil Spring Guide
66 Front Guide Retainer
67 Recoil Spring
68 Safety Lever
69 Disconnector
70 Disconnector Spring
71 Safety Lever Stop
72 Front Swivel
73 Rear Swivel
74 Rear Swivel Screws (2)
75 Trigger/Sear
76 Trigger Guard
77 Front Trigger Guard Rivets (2)
78 Rear Trigger Guard Rivet
79 Trigger Pin
80 Upper Handgrd. Gas Cylinder
81 Handguard Latch
82 Tang Screws (2)

*Restricted

AKM

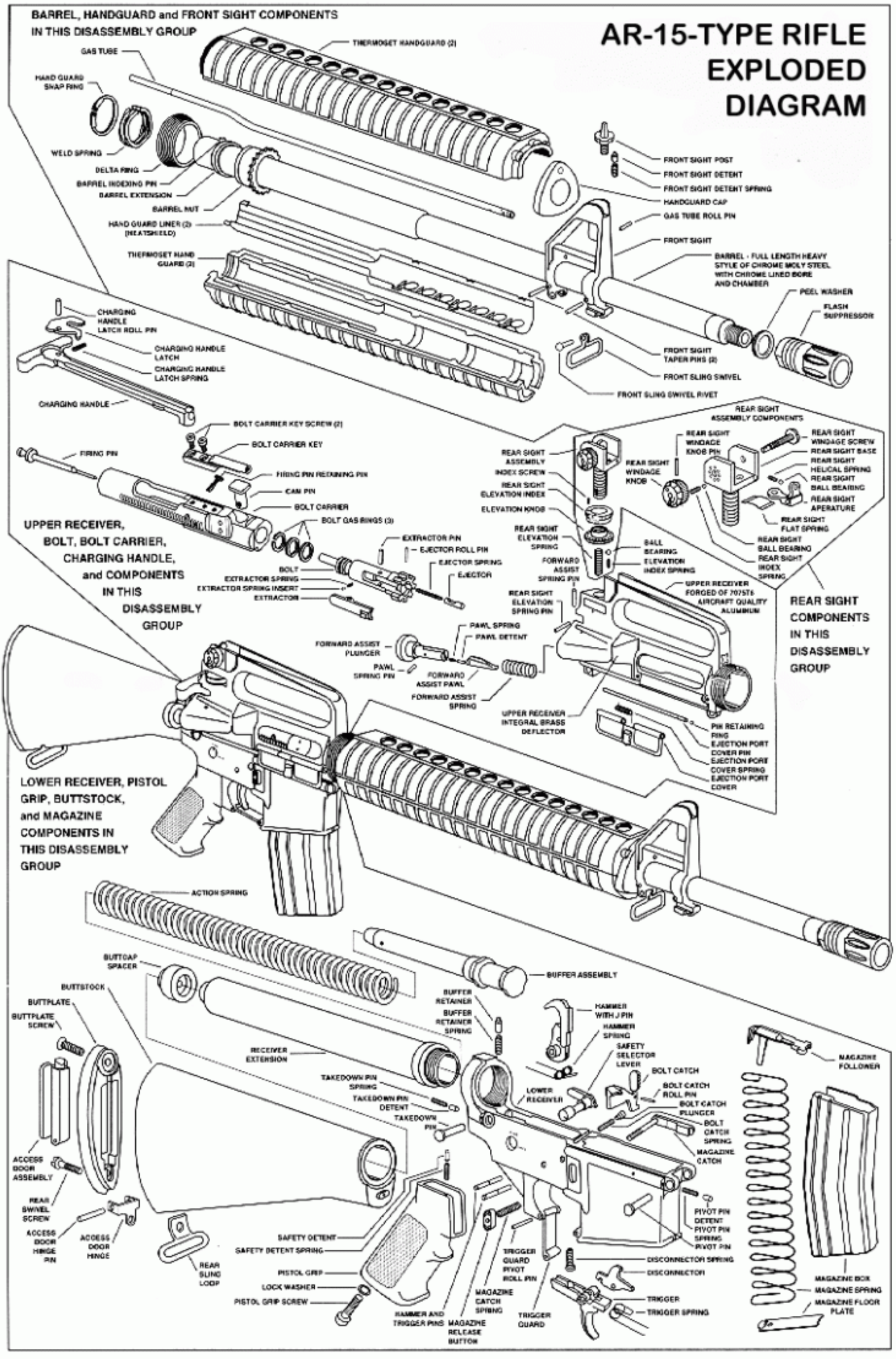


1. Slant Muzzle Brake
2. Detent Plunger
3. Detent Spring
4. Front Sight / Gas Block Retaining Pins
5. Front Sight Post
6. Front Sight Post Adjustment Base
7. Front Sight Block
8. Gas Block
9. Barrel
10. Cleaning Rod
11. Handguard Retainer
12. Upper Handguard
13. Handguard Retainer Spring
14. Gas Tube
15. Lower Handguard Tensioning Spring
16. Lower Handguard
17. Rear Sight Leaf
18. Rear Sight Leaf Spring
19. Rear Sight Block
20. Gas Tube Locking Lever
21. Barrel Retaining Pin
22. Front Trunnion
23. Full Auto Sear Spring
24. Full Auto Rate Reducer Spring
25. Receiver
26. Hammer, Trigger, Sear Axis Pin
27. Hammer
28. Hammer Spring
29. Dust Cover
30. Recoil Spring
31. Recoil Spring Rear Guide
32. Recoil Spring Front Guide
33. Recoil Spring Retainer
34. Bolt Carrier Assembly Rivet
35. Gas Piston
36. Bolt Carrier Body
37. Bolt Body
38. Firing Pin
39. Ejector Spring
40. Extractor
41. Extractor Retaining Pin
42. Firing Pin Retaining Pin
43. Full Auto Disconnector
44. Disconnector Spring
45. Trigger
46. Full Auto Rate Reducer
47. Pistol Grip Nut
48. Stock Screw
49. Fixed Stock Rear Trunnion
50. Fixed Stock
51. Butt Plate Assembly
52. Sling Swivel Assembly
53. Safety Selector Lever
54. Selector Stop
55. Magazine Catch Spring
56. Magazine Catch
57. Magazine Catch Retaining Pin
58. Trigger Guard
59. Magazine Body
60. Magazine Floor Plate
61. Magazine Follower
62. Magazine Spring
63. Magazine Follower Spring Base Plate
64. Pistol Grip
65. Pistol Grip Screw


Dust Cover (receiver cover)
Upper Handguard
Carrier Spring
Gas Tube
Front Sight Block
Gas Block
Bolt Carrier with Piston
Gas Tube Retaining Pin
Bolt
Rear Sight Block
Forend Cap
Pistol Grip
Buttstock
Forend
Receiver
Grip Bolt
Magazine
(30 round 7.62 x 39 shown)
AK Nomenclature
(Milled Receiver Shown)


TYPICAL AK FIELD STRIP
RECEIVER COVER
RETAINER BUTTON
RECOIL SPRING
EJECTOR
BOLT
BOLT FACE
LOCKING TAB
BOLT CARRIER/GAS ROD ASSEMBLY
GAS TUBE
(UNDER HANDGUARD)
GAS BLOCK
REAR TRUNION

AR-15-TYPE RIFLE EXPLODED DIAGRAM



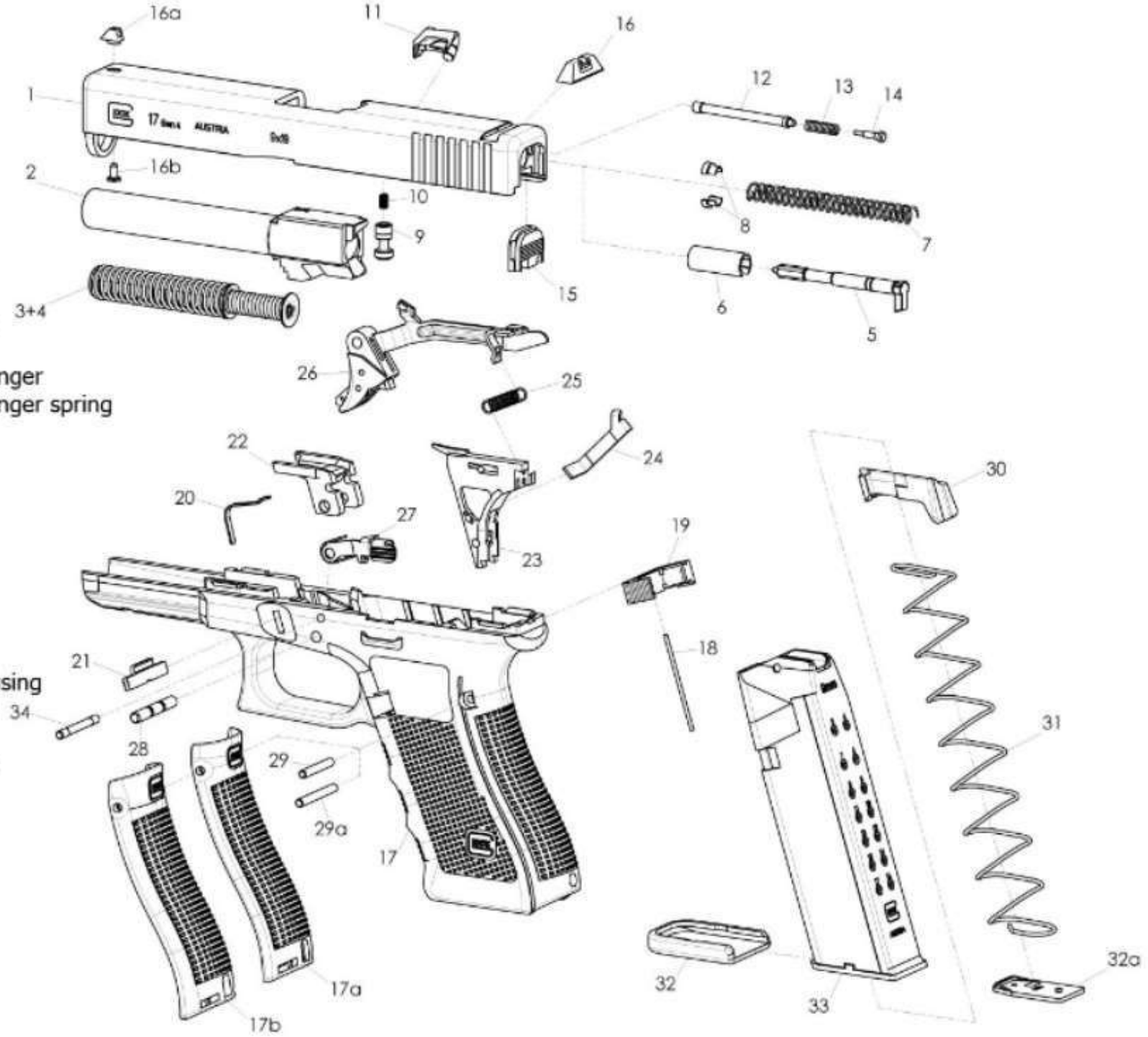

BUFFER SPRING P/N: 9390022 - $3.95
TELESTOCK PLATE P/N: 9390021 $4.95
CARBINE BUFFER P/N: 1005-914-4578 $12.95
DUAL HEATSHIELD HANDGUARDS P/N: DS4-HAND
CARBINE GAS TUBE P/N: 1005-914-350
WELD SPRING P/N: 8448555 $4.50
BARREL EXTENSION P/N: 9349054-W2BE
GAS TUBE SPRING PIN P/N: MS165
BARREL NUT - $7.95 P/N: 9349054BBLN
HANDGUARD P/N: HCAP-
BARREL ASSEMBLY w. M4 CU
TELESTOCK KIT P/N: KIT-TELESTK - $74.95
TELESTOCK LOCKING RING P/N: 9390020 $5.95
SNAP RING P/N: MS16626-1137 $1.50
DELTA RING P/N: 8448712 $6.95
FORWARD ASSIST SPRING PIN P/N: MS16562-121 $.50
FORWARD ASSIST SPRING P/N: 8448540 $.50
BUFFER RETAINER P/N: 8448582 - $1.50
BUFFER RETAINER SPRING P/N: 8448583 - $.50
BOLT CATCH P/N: 8448628 $7.95
BOLT CATCH SPRING PIN P/N: MS16562-119 - $.50
CHARGING HANDLE LATCH P/N: 8448519 $3.50
CHARGING HANDLE SPRING PIN P/N: 8448521 - $.50
BOLT CATCH PLUNGER SPRING P/N: 8448633 - $.50
BOLT CATCH PLUNGER P/N: 8448634 $1.95
EJECTION PORT COVER P/N: 8448525 - $5.95
EJCT. PORT COV P/N: 8448532 -
EJCT. PORT COVER ROD C P/N: MS1663
EJCT. PORT P/N: 8448
FORWARD ASSIST ASSY. ROUND P/N: 9349086 $12.95
CHARGING HANDLE SPRING P/N: 8448520 - $.50
CHARGING HANDLE ASSEMBLY P/N: 8448517 - $24.95
TAKEDOWN PIN P/N: 8448584 $3.95
PIVOT PIN DETENT SPRING P/N: 8448586 - $.50
PIVOT PIN P/N: 8448621 $3.95
PIVOT PIN DETENT P/N: 8448585 $.50
TAKEDOWN PIN DETENT SPRING P/N: 8448586 $.50
TAKEDOWN PIN DETENT P/N: 8448585 $.50
ALUMINUM TRIGGER GUARD ASSY. P/N: 8448587 $6.95
SAFETY SELECTOR AR P/N: 9381367-AR $9.95
MAGAZINE CATCH P/N: 8448638 $4.95
MAGAZINE CATCH BUTTON P/N: 8448636 $3.50
SAFETY DETENT P/N: 8448631 $.95
SAFETY DETENT SPRING
TRIGGER GUARD SPRING PIN P/N: MS16562-129
DISCONNECTOR AR P/N: 8448635-AR
MAGAZINES 30 / 20 / 10 / 5 ROUND
MAGAZINE CATCH SPRING



1. Forward Assist Plunger
2. Pawl Retaining Pin
3. Forward Assist Retaining Pin
4. Plunger Spring
5. Detent Spring
6. Pawl Detent
7. Forward Assist Pawl
8. Upper Receiver
9. Ejection Port Cover Spring
10. Hinge Pin
11. Ejection Port Cover
12. Hinge Pin Retaining Ring
13. Firing Pin
14. Bolt Carrier
15. Firing Pin Retaining Pin
16. Bolt Carrier Key Screw (2)
17. Bolt Carrier Key
18. Cam Pin
19. Gas Rings (3)
20. Bolt
21. Extractor Retaining Pin
22. Ejector Retaining Pin
23. Ejector Spring
24. Ejector
25. Extractor Insert
26. Extractor Spring
27. Extractor
28. Flash Suppressor
29. Crush Washer
30. Front Sight Post
31. Front Sight Detent
32. Front Sight Detent Spring
33. Sling Swivel Rivet
34. Sling Swivel
35. Front Sight Base
36. Sight Base Pins (2)
37. Hand Guard Cap
38. Gas Tube Pin
39. Gas Tube
40. Charging Handle
41. Charging Handle Latch
42. Charging Handle Latch Spring
43. Charging Handle Latch Pin
44. Barrel
45. Barrel Extension
46. Hand Guard Snap Ring
47. Weld Spring
48. Delta Ring
49. Barrel Nut
50. Hand Guard (2)
51. Butt Stock Assembly
52. Buffer Tip
53. Buffer Weight (3)
54. Buffer Spacer (3)
55. Buffer Tip Pin
56. Buffer Body
57. Buffer Spring
58. Receiver Extension
59. Castle Nut
60. Receiver End Plate
61. Pistol Grip Screw & Washer
62. Pistol Grip
63. Takedown Pin
64. Safety Selector Detent
65. Safety Selector Detent Spring
66. Trigger Pin
67. Hammer Pin
68. Trigger Guard Pin
69. Magazine Release Button
70. Magazine Catch Spring
71. Trigger Guard
72. Pivot Pin
73. Pivot Pin Detent
74. Pivot Pin Detent Spring
75. Lower Receiver
76. Magazine Catch
77. Bolt Catch Pin
78. Bolt Catch Plunger
79. Bolt Catch Spring
80. Bolt Catch
81. J Spring
82. Hammer Spring
83. Hammer
84. Trigger Spring
85. Disconnector
86. Disconnector Spring
87. Trigger
88. Safety Selector Switch
89. Buffer Retainer
90. Buffer Retainer Spring
91. Takedown Pin Detent
92. Takedown Pin Detent Spring


GEN4 PARTS
34 LOCKING BLOCK PIN
29a TRIGGER HOUSING PIN (LONG)
17a/b BACK STRAPS
33 MAGAZINE TUBE
32a MAGAZINE INSERT
30 FOLLOWER
32 MAGAZINE FLOOR PLATE
16 REAR SIGHT
15 SLIDE COVER PLATE
25 TRIGGER SPRING
01 SLIDE
02 BARREL
05 FIRING PIN
06 SPACER SLEEVE
07 FIRING PIN SPRING
22 LOCKING BLOCK
24 CONNECTOR
03+04 RECOIL SPRING ASSEMBLY
09 FIRING PIN SAFETY
10 FIRING PIN SAFETY SPRING
11 EXTRACTOR
26 TRIGGER WITH TRIGGER BAR
08 SPRING CUPS
14 SPRINGLOADED BEARING
12 EXTRACTOR DEPRESSOR PLUNGER
13 EXTRACTOR DEPRESSOR PLUNGER SPRING
28 TRIGGER PIN
21 SLIDE LOCK
27 SLIDE STOP LEVER
19 MAGAZINE CATCH
29 TRIGGER HOUSING PIN (SHORT)
17 FRAME
20 SLIDE LOCK SPRING
23 TRIGGER MECHANISM HOUSING W/EJECTOR
31 MAGAZINE SPRING
18 MAGAZINE CATCH SPRING

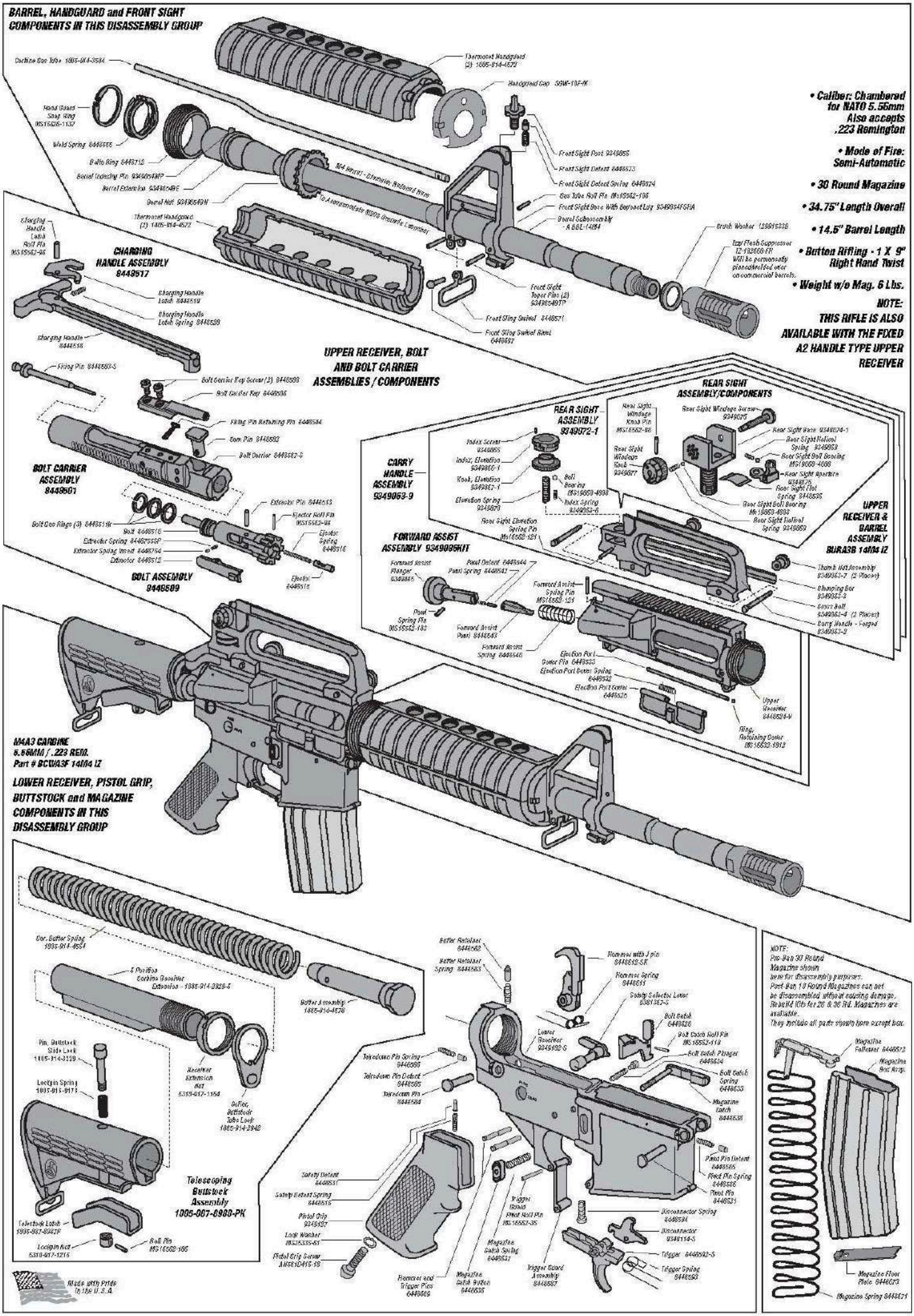
1. Slide
2. Barrel
3. Recoil spring guide rod
4. Recoil spring assembly
5. Firing pin
6. Spacer sleeve
7. Firing pin spring
8. Spring cups
9. Firing pin safety
10. Firing pin safety spring
11. Extractor
12. Extractor depressor plunger
13. Extractor depressor plunger spring
14. Spring-loaded bearing
15. Slide cover plate
16. Sights
17. Frame
18. Magazine catch spring
19. Magazine catch
20. Slide lock spring
21. Slide lock
22. Locking block
23. Trigger mechanism housing
24. Connector
25. Trigger spring
26. Trigger with trigger bar
27. Slide stop lever
28. Trigger pin
29. Trigger housing pin
30. Follower
31. Magazine spring
32. Magazine floorplate
32a. Magazine insert
33. Magazine tube
34. Locking block pin



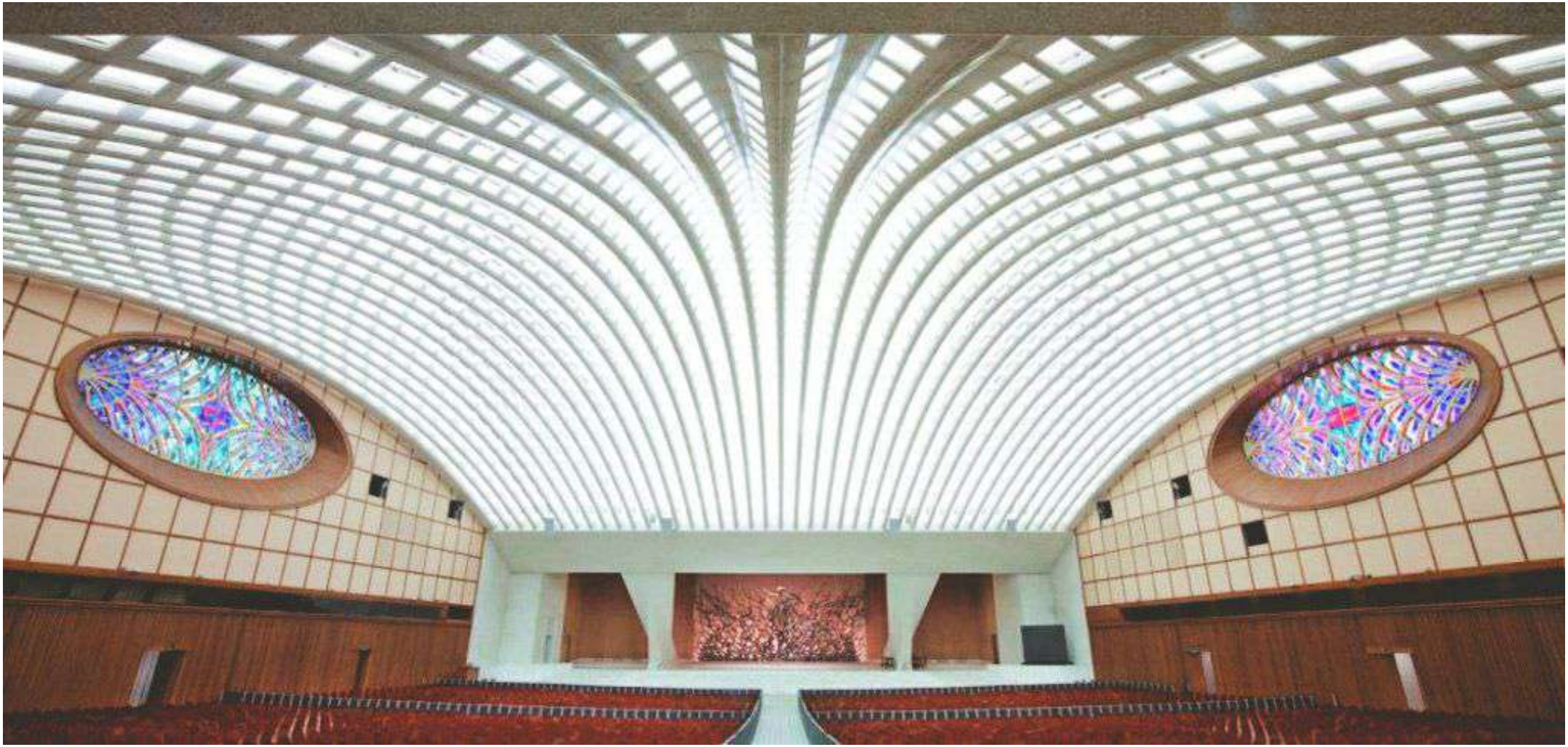
Semiautomatic 9mm Pistol

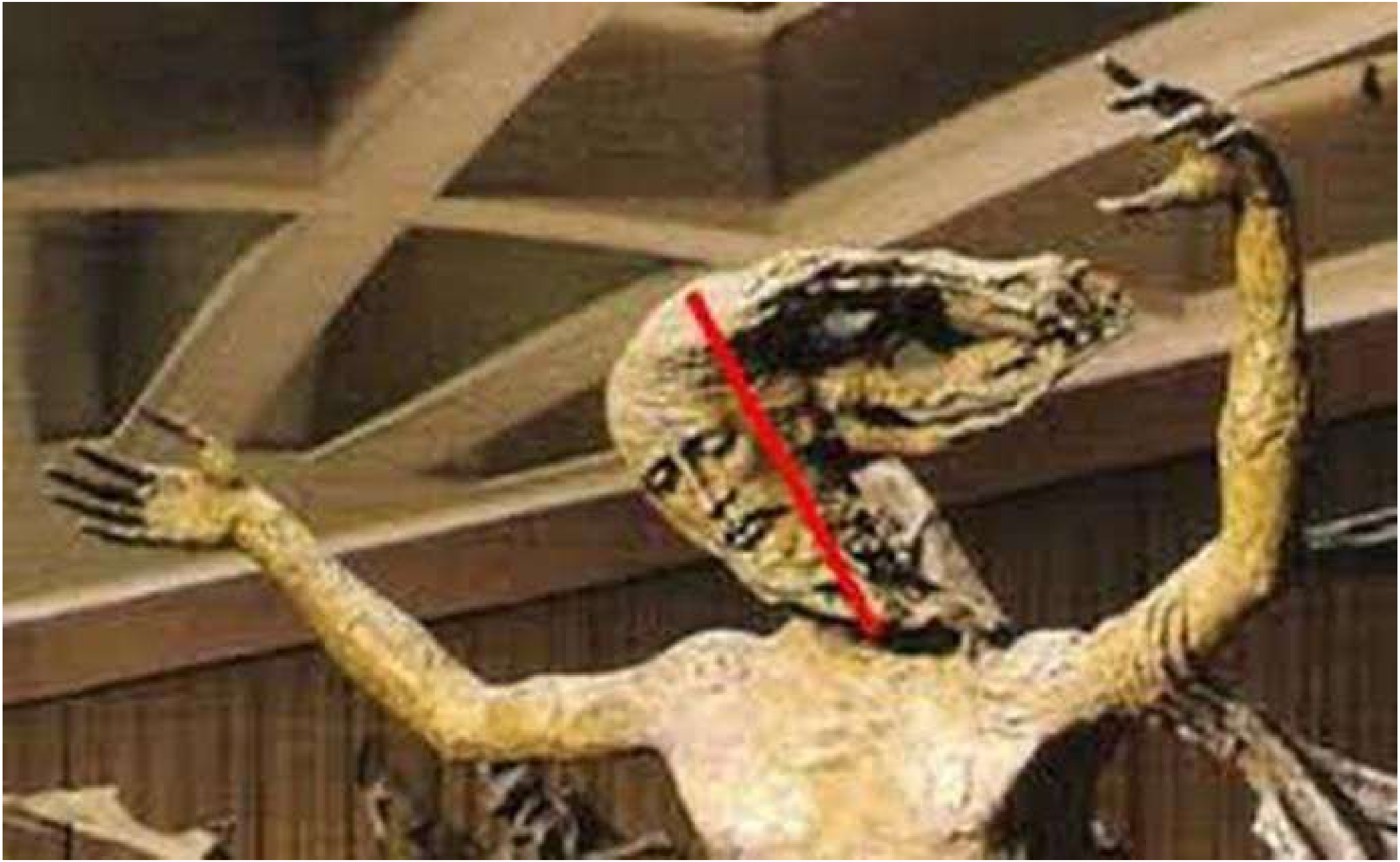


Illustrated by
firearmsID.com


BARREL, HANDGUARD and FRONT SIGHT COMPONENTS IN THIS DISASSEMBLY GROUP
Gas Tube 1005-014-3584
Thermoset Handguard (2) 1005-014-4572
Handguard Cap SGM-10F-M
Hand Guard Snap Ring MS15525-1137
Weld Spring 6448555
Bolt Ring 6448512
Barrel Indexing Pin 9349054MP
Barrel Extension 9349054E
Barrel Nut 9349054N
M4 Barrel - Elevation Reduced 14mm
To Accommodate M203 Grenade Launcher
Front Sight Post 9349053
Front Sight Detent 6448573
Front Sight Detent Spring 6448574
Gas Tube Roll Pin MS15562-106
Front Sight Base With Bayonet Lug 9349054FSBA
Barrel Subassembly - A BBL-14M4
Flash Hider 1299015338
Izzy Flash Suppressor 12-102000-FH Will be permanently pinned-welded when on commercial barrels.
Front Sight Taper Pins (2) 9349054PP
Front Sling Swivel 6448571
Front Sling Swivel Rivet 6448697
• Caliber: Chambered for NATO 5.56mm Also accepts .223 Remington
• Mode of Fire: Semi-Automatic
• 30 Round Magazine
• 34.75" Length Overall
• 14.5" Barrel Length
• Button Rifling - 1 X 9" Right Hand Twist
• Weight w/o Mag. 6 Lbs.
NOTE: THIS RIFLE IS ALSO AVAILABLE WITH THE FIXED A2 HANDLE TYPE UPPER RECEIVER
CHARGING HANDLE ASSEMBLY 9449517
Charging Handle Latch Roll Pin MS15562-96
Charging Handle Latch 6448519
Charging Handle Latch Spring 6448539
Charging Handle 6448518
UPPER RECEIVER, BOLT AND BOLT CARRIER ASSEMBLIES / COMPONENTS
Firing Pin 6448503-S
Bolt Carrier Key Screw (2) 6448598
Bolt Carrier Key 6448506
Firing Pin Retaining Pin 6448504
Cam Pin 6448502
Bolt Carrier 6448562-S
BOLT CARRIER ASSEMBLY 6449561
Extractor Pin 6448513
Ejector Roll Pin MS15562-98
Bolt Gas Rings (3) 6448511K
Bolt 6448510
Ejector Spring 6448516
Extractor Spring 6448555P
Extractor Spring Insert 6448754
Extractor 6448512
Ejector 6448514
BOLT ASSEMBLY 6448589
REAR SIGHT ASSEMBLY/COMPONENTS
REAR SIGHT ASSEMBLY 9349072-1
Rear Sight Windage Knob Pin MS15562-98
Rear Sight Windage Screw 9349075
Index Screw 9349055
Index, Elevation 9349066-1
Knob, Elevation 9349067-1
Elevation Spring 9349070
Rear Sight Windage Knob 9349077
Rear Sight Base 9349074-1
Rear Sight Detent Spring 9349053
Rear Sight Ball Bearing MS19060-4808
Rear Sight Aperture 9349075
Rear Sight Flat Spring 6448535
Ball Bearing MS19060-4808
Index Spring 9349068-6
Rear Sight Elevation Spring Pin MS16562-121
CARRY HANDLE ASSEMBLY 9349063-9
FORWARD ASSIST ASSEMBLY 9349096KIT
Forward Assist Plunger 9349065
Pawl Detent 6448544
Pawl Spring 6448543
Pawl Spring Pin MS15562-133
Forward Assist Pawl 6448542
Forward Assist Spring 6448540
Forward Assist Spring Pin MS15562-121
Ejection Port Cover Pin 6449530
Ejection Port Cover Spring 6448532
Ejection Port Cover 6448525
UPPER RECEIVER & BARREL ASSEMBLY BUR43B 14M4 IZ
Thumb Nut Assembly 9349063-7 (2 Places)
Charging Bar 9349063-3
Cross Bolt 9349063-4 (2 Places)
Carry Handle - Forged 9349063-2
Upper Receiver 6448524-V
Ring, Retaining Cover MS16632-1912
M4A3 CARBINE 5.56MM / .223 REM. Part # BCWA3F 14M4 IZ
LOWER RECEIVER, PISTOL GRIP, BUTTSTOCK and MAGAZINE COMPONENTS IN THIS DISASSEMBLY GROUP
Buffer Retainer 6448562
Buffer Retainer Spring 6448563
Hammer with J pin 6448612-SK
Hammer Spring 6448611
Safety Selector Lever 9381362-S
Lower Receiver 9345102-S
Bolt Catch 6448626
Bolt Catch Roll Pin MS16562-119
Bolt Catch Plunger 6448634
Bolt Catch Spring 6448633
Magazine Catch 6448638
Takedown Pin Spring 6448586
Takedown Pin Detent 6448585
Takedown Pin 6448584
Pivot Pin Detent 6448585
Pivot Pin Spring 6448586
Pivot Pin 6448631
Disconnector Spring 6448594
Disconnector 9348114-S
Trigger 6448592-S
Trigger Spring 6448593
Trigger Guard Assembly 6448587
Trigger Guard Roll Pin MS16562-35
Magazine Catch Spring 6448637
Magazine Catch Button 6448636
Hammer and Trigger Pins 6449669
Safety Detent 6448583
Safety Detent Spring 6448515
Pistol Grip 9349057
Lock Washer MS35335-61
Pistol Grip Screw AN581D416-16
Buffer, Buttstock Tube Lock 1005-014-2942
Receiver Extension 6448628
5310-017-1354
Pin, Buttstock Slide Lock 1005-014-3129
Lockpin Spring 1005-015-9173
Lockpin Nut 5310-017-1215
Roll Pin MS16562-105
Telescoping Buttstock Assembly 1005-067-8988-PK
Made with Pride in the U.S.A.
Buffer Assembly 1005-014-4578
Rec. Buffer Spring 1005-014-4554
5 Position Locking Receiver Extension - 1005-014-3929-5
NOTE:
Pre-Ban 30 Round Magazine shown here for disassembly purposes.
Post-Ban 10 Round Magazines can not be disassembled without causing damage.
Rebuild Kits for 20 & 30 Rd. Magazines are available.
They include all parts shown here except box.
Magazine Follower 6448573
Magazine Body Assy.
Magazine Floor Plate 6448573
Magazine Spring 6448571


ZEROSEVENONE










Francisco en Brasil 2013 OANNES



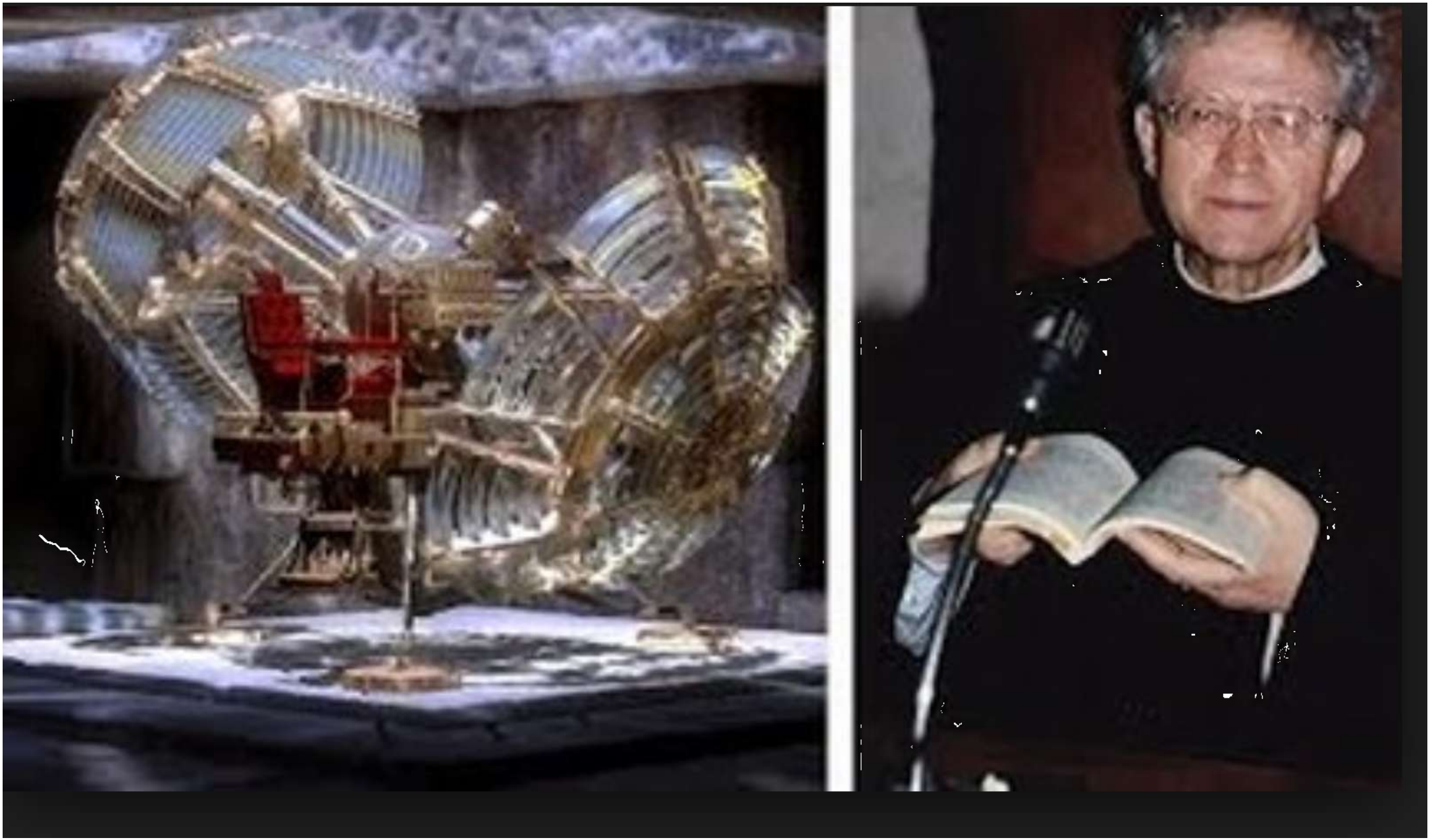






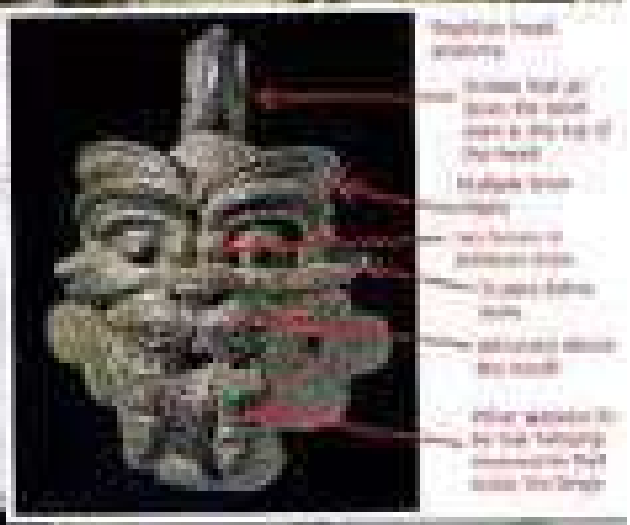
FIG.14C-3. - WARD HILL LAMON SITS IMMEDIATELY TO ABE'S RIGHT IN THE MOMENTS AFTER THE GETTYSBURG ADDRESS, NERVOUSLY SCANNING THE CROWD FOR VAMPIRE ASSASSINS. A CLOSER LOOK AT THE EDGE OF THE PHOTO SUGGESTS THAT HIS FEARS MAY HAVE BEEN JUSTIFIED.



Open your eyes people the truth is right in front of you



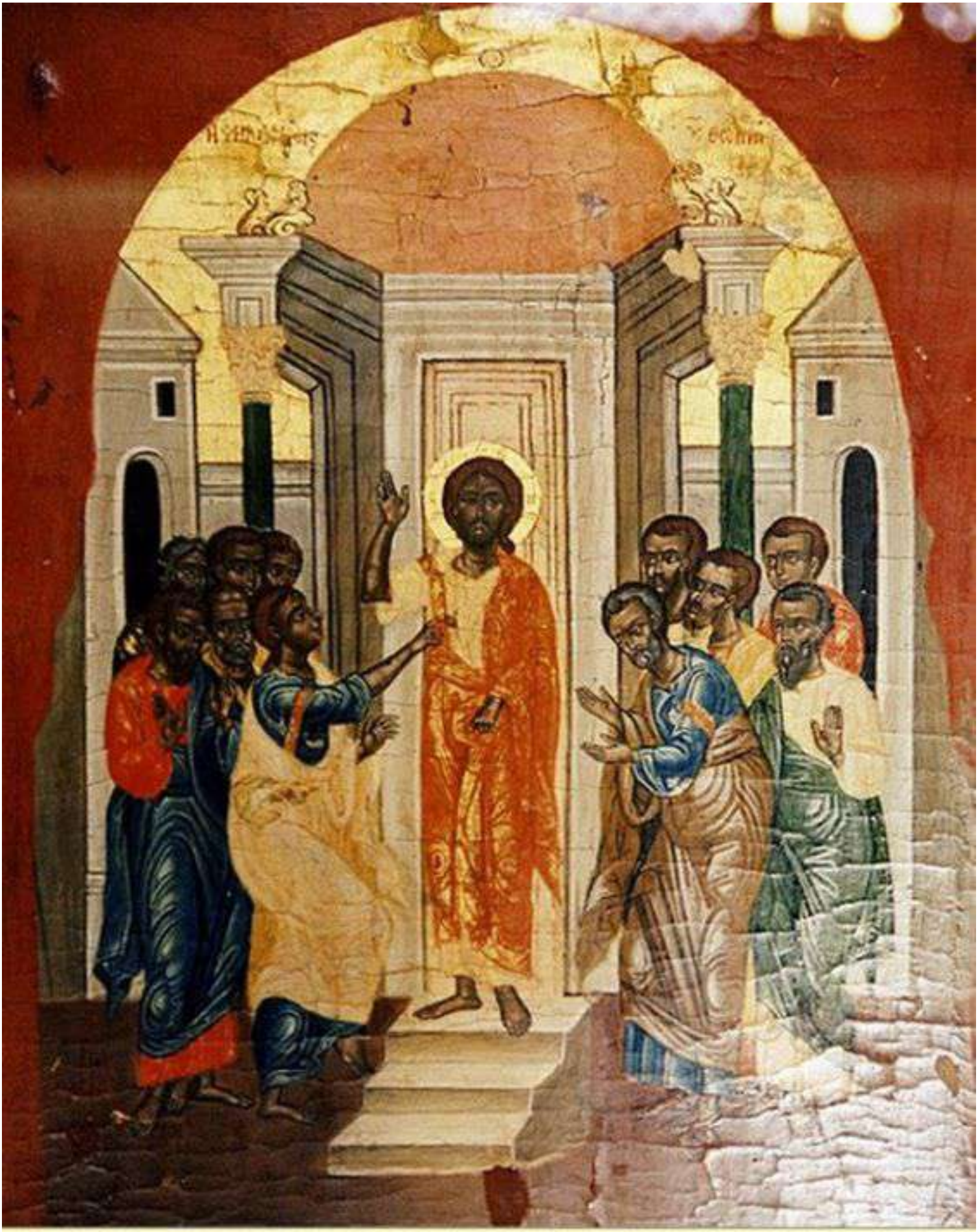




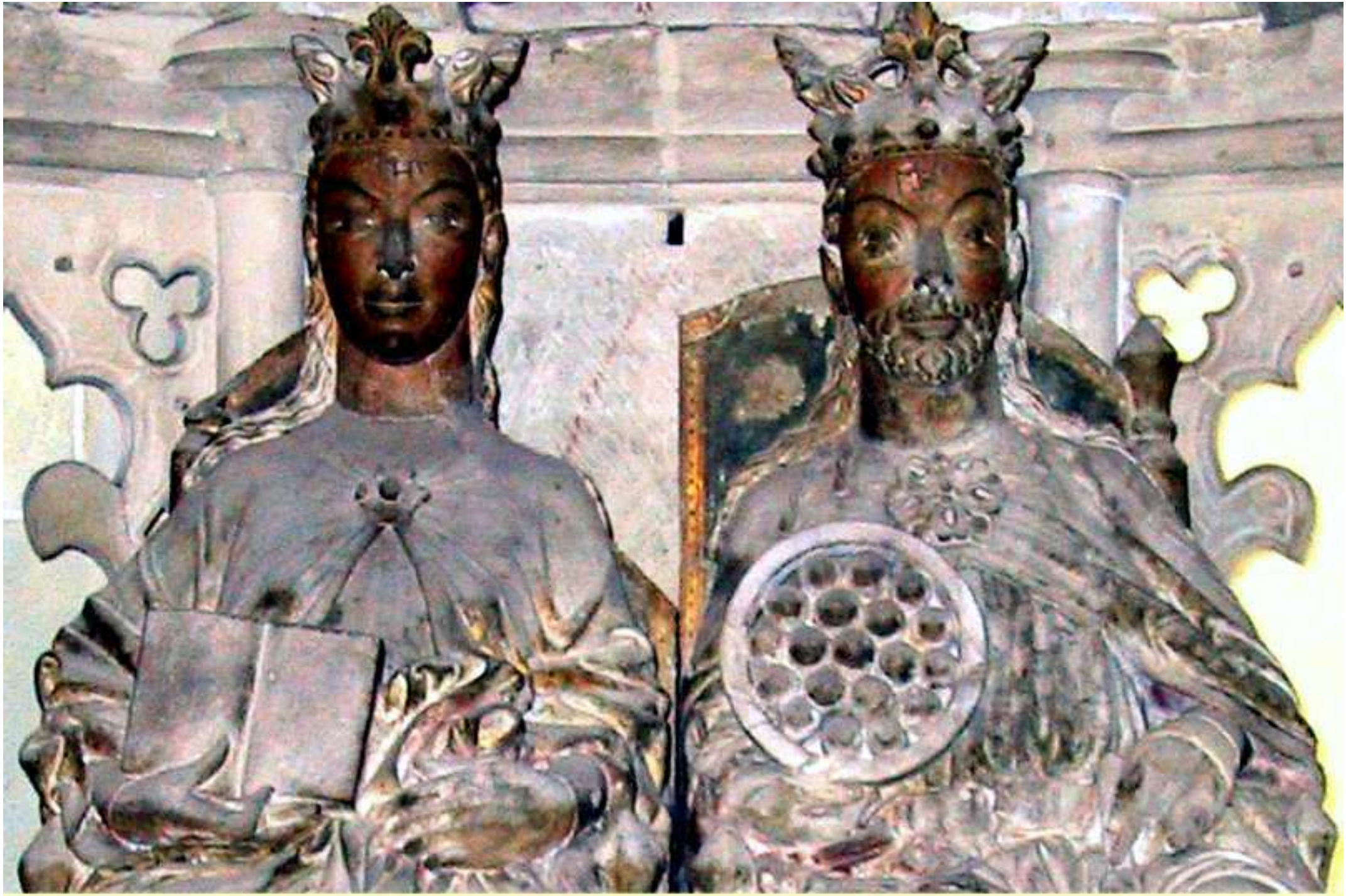





Reptilian Types



Christ and his disciples.
Painted wooden panel in the Coptic Museum, Cairo.



Edith of England and Otto I, Holy Roman Emperor - Married in 929 A.D.



Before

After

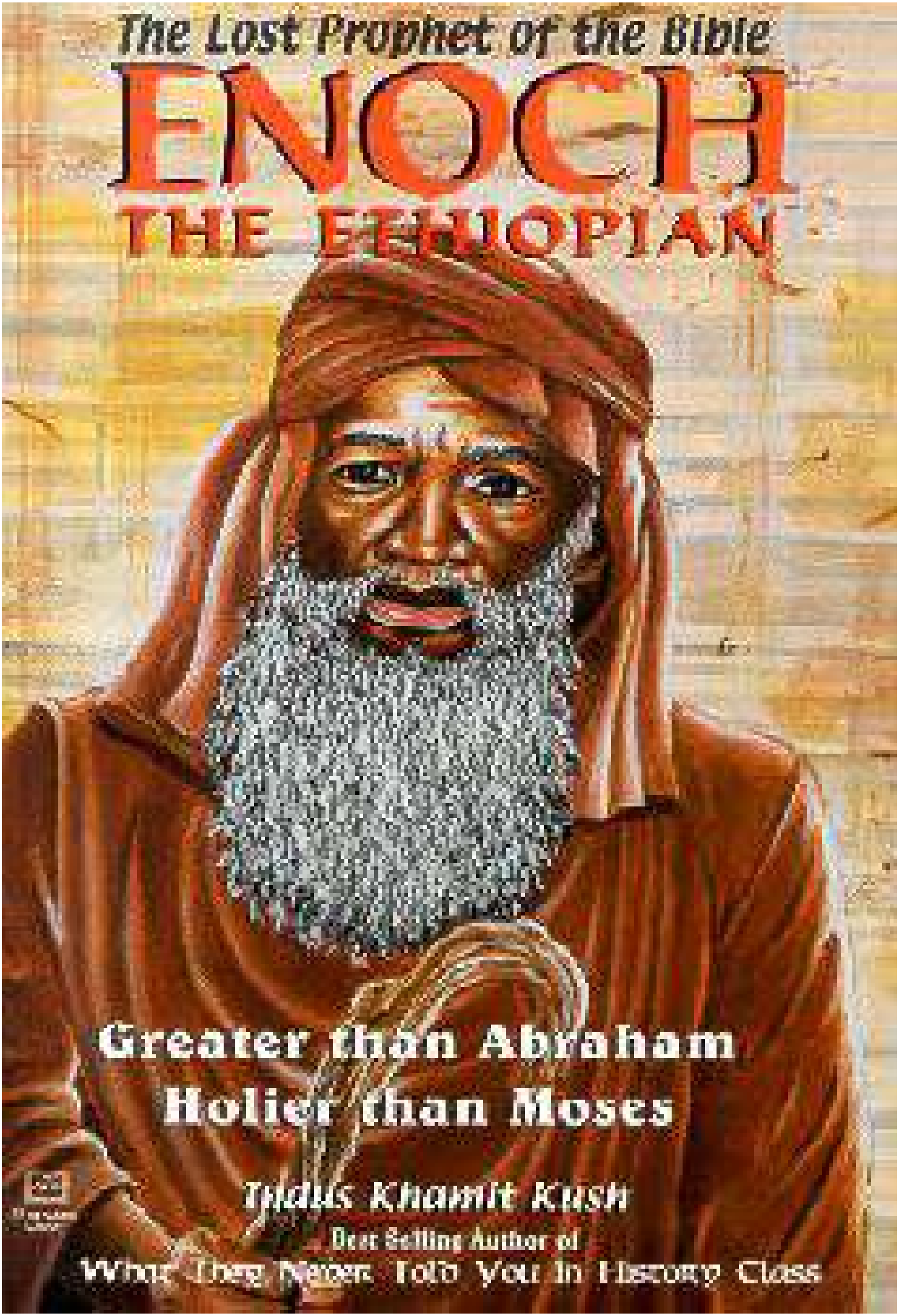



WINNIPEG JACK BLACKFOOT INDIANS

The Lost Prophet of the Bible

ENOCH

THE ETHIOPIAN



Greater than Abraham

Holier than Moses

Tidus Khamit Kush

Best Selling Author of

What They Never Told You In History Class

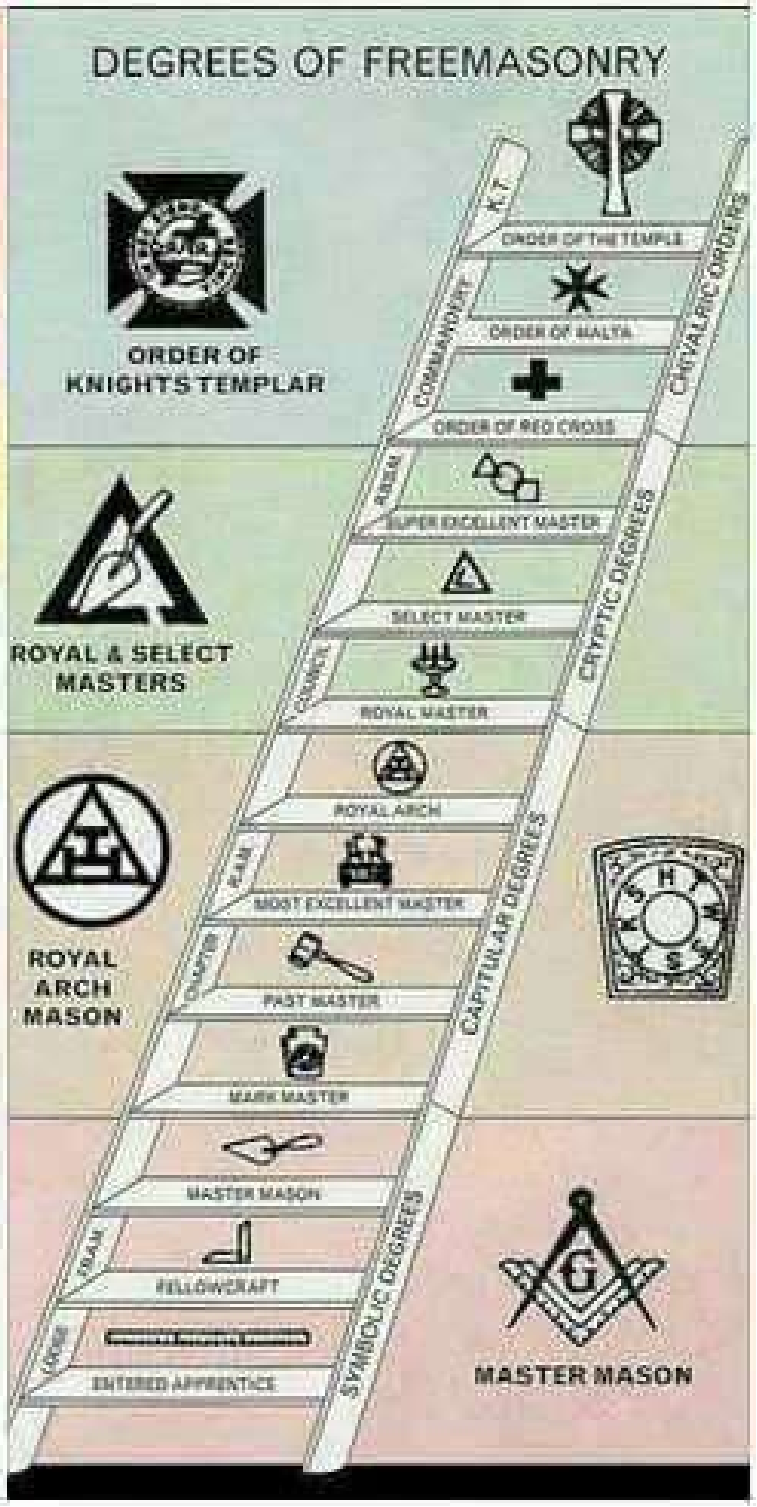




THE GREATEST OPERATIVE MASON MEETS THE GREATEST SPECTULATIVE MASON is Ben Bey Emmanuel Mu Ali, historically known as Benjamin Banneker really Prince Hall? Benjamin Banneker (November 9, 1731 – October 9, 1806) was a free African American astronomer, mathematician, surveyor, almanac author and farmer. Prince Hall (c.1735 – December 4, 1807), Hall formed the African Grand Lodge of North America.



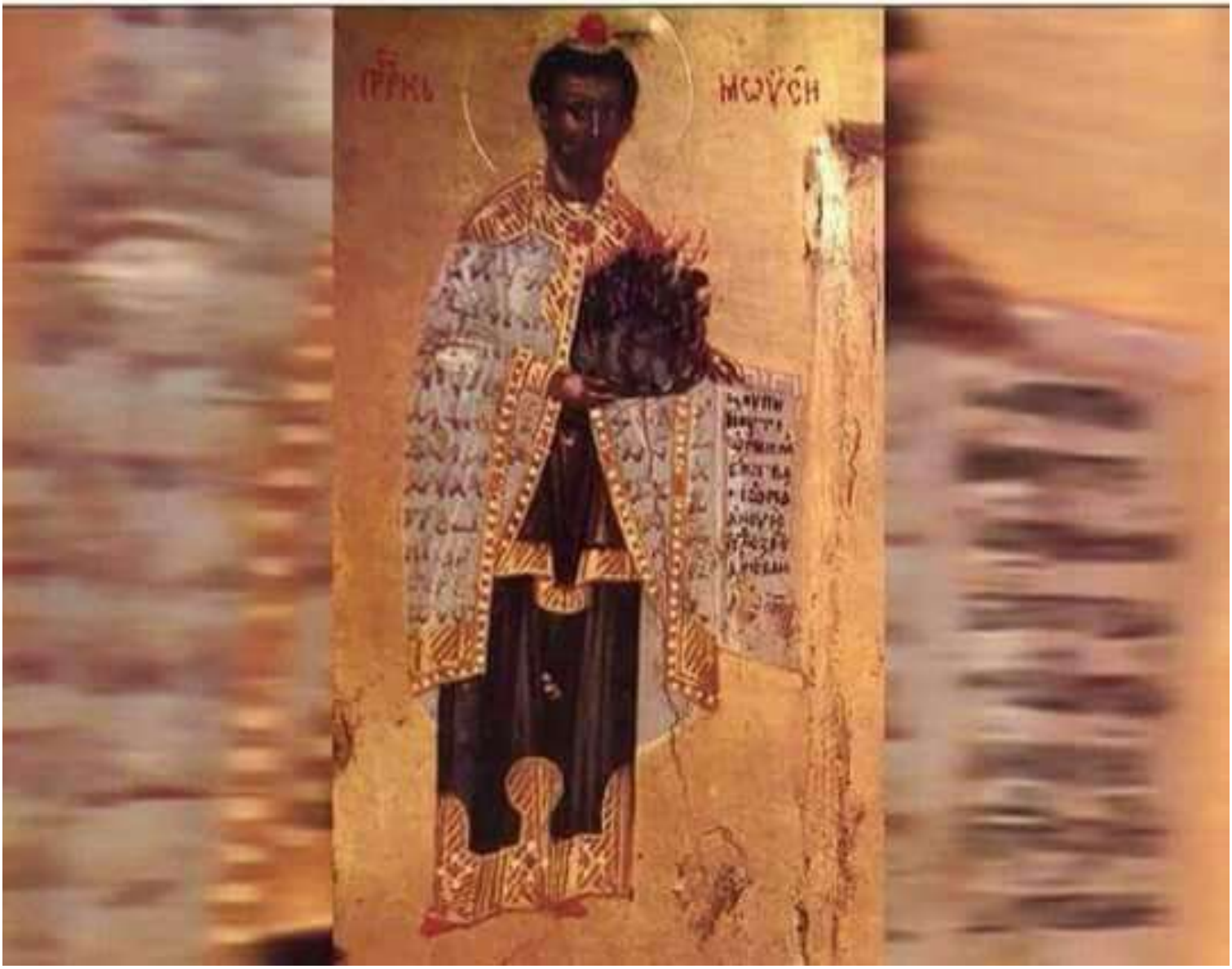



DEGREES OF FREEMASONRY
ORDER OF KNIGHTS TEMPLAR
ROYAL & SELECT MASTERS
ROYAL ARCH MASON
MASTER MASON
K.T.
COMMANDERY
A.&A.S.R.
COUNCIL
R.A.M.
CHAPTER
C.H.
SYMBOLIC DEGREES
CAPITULAR DEGREES
CRYPTIC DEGREES
CHIVALRIC ORDERS
ORDER OF THE TEMPLE
ORDER OF MALTA
ORDER OF RED CROSS
SUPER EXCELLENT MASTER
SELECT MASTER
ROYAL MASTER
ROYAL ARCH
MOST EXCELLENT MASTER
PAST MASTER
MARK MASTER
MASTER MASON
FELLOWCRAFT
ENTERED APPRENTICE

A CHURCH WALL IN RUSSIA.



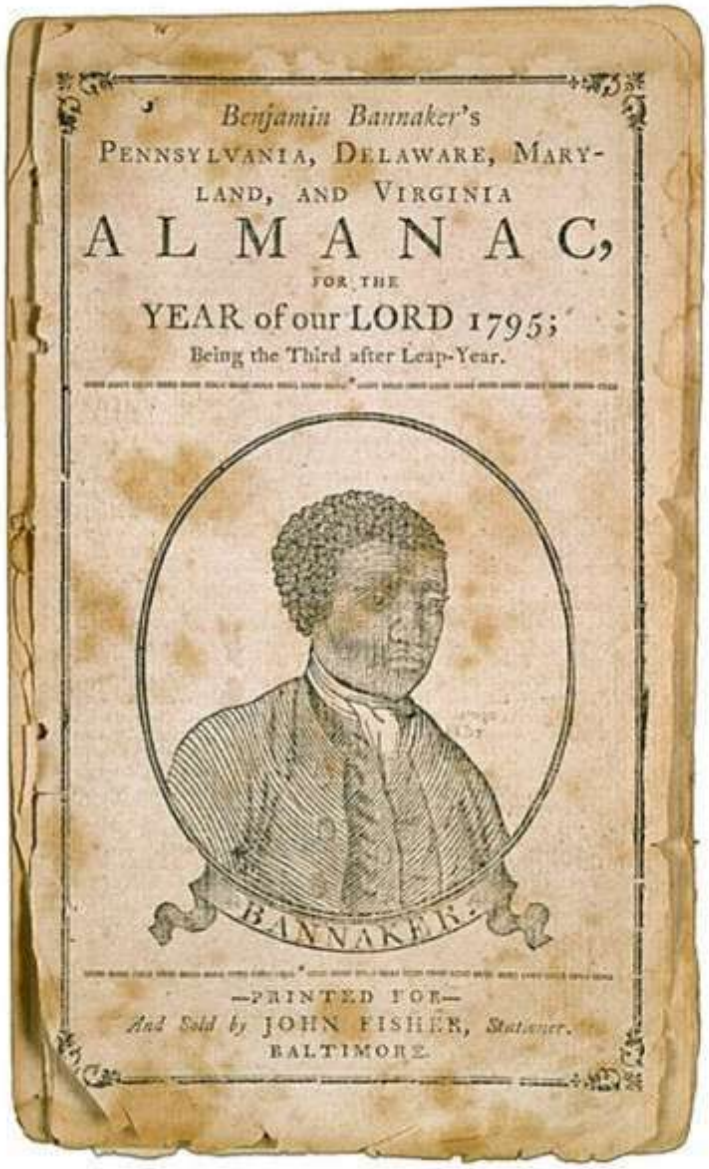
MOSES THEY COULDNT WHITE WASH FOUND IN THE CATACOMBS IN RUSSIA

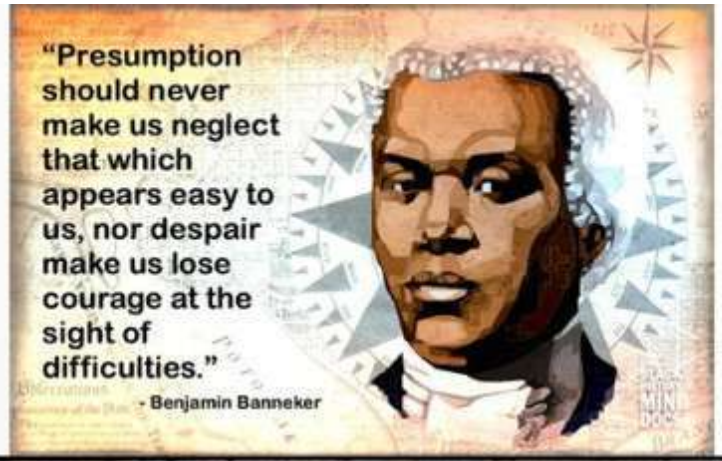




Meet Nong Youhui from Dahua, China. As you can see, this little boy's eyes are a bit different from the normal blue. His eyes reflect neon green when light is shined on them, similar to the reaction of a cat's eyes. Aren't they pretty? Oh, and one other thing:

Nong can see perfectly well in pure darkness


Benjamin Bannaker's
PENNSYLVANIA, DELAWARE, MARYLAND, AND VIRGINIA
ALMANAC,
FOR THE
YEAR of our LORD 1795;
Being the Third after Leap-Year.
BANNAKER.
—PRINTED FOR—
And Sold by JOHN FISHER, Stationer.
BALTIMORE.


"Presumption should never make us neglect that which appears easy to us, nor despair make us lose courage at the sight of difficulties."
- Benjamin Banneker


BENJAMIN
BANNEKER
ASTRONOMER-CITY PLANNER
AT 22, USING A BORROWED WATCH AS A MODEL, A POCKET KNIFE AS HIS ONLY TOOL, HE CONSTRUCTED THE FIRST CLOCK MADE IN AMERICA.—IT KEPT ACCURATE TIME FOR OVER 20 YEARS!
ON THE ADVICE OF THOMAS JEFFERSON, HE WAS PLACED ON THE COMMISSION WHICH SURVEYED AND LAID OUT THE CITY OF WASHINGTON, D.C.!
PLANNING FOR PEACE IN TIME OF WAR WAS ADVOCATED BY BANNEKER IN HIS FAMOUS ALMANAC IN 1793!




Benjamin Banneker
Black Heritage USA 15c

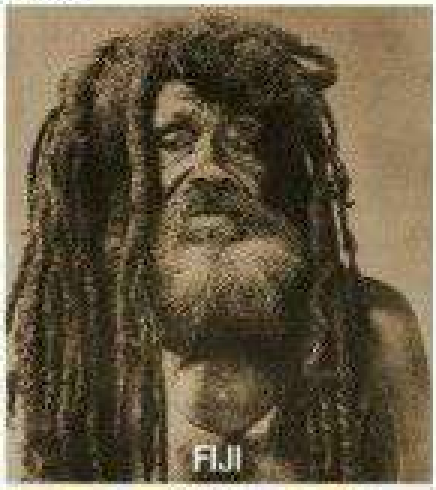


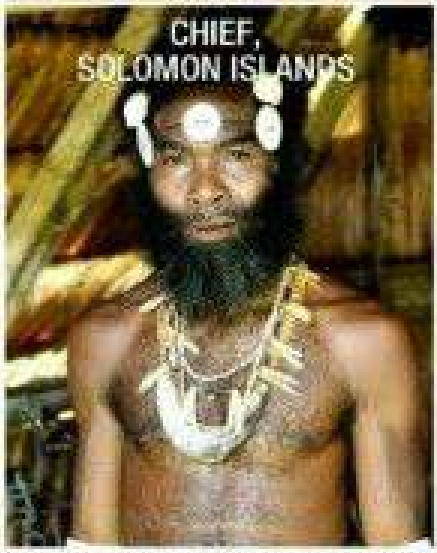
Edward Mordrake was born with an extra face at the back of his head which could only laugh and cry! He begged the doctors to remove it as he claimed it whispered horrific things to him at night. He committed suicide at the age of 23

MELANESIAN DIVERSITY

Melanesia consists of the "Black Islands" of Oceania. Most of these people are related to the Aboriginal Australians, but Melanesians are a diverse population. You will find almost as many different "types" of Black people across the islands of Melanesia as you will in Africa. The page below comes from a 1914 Encyclopedia entry on the people of the Pacific Islands.



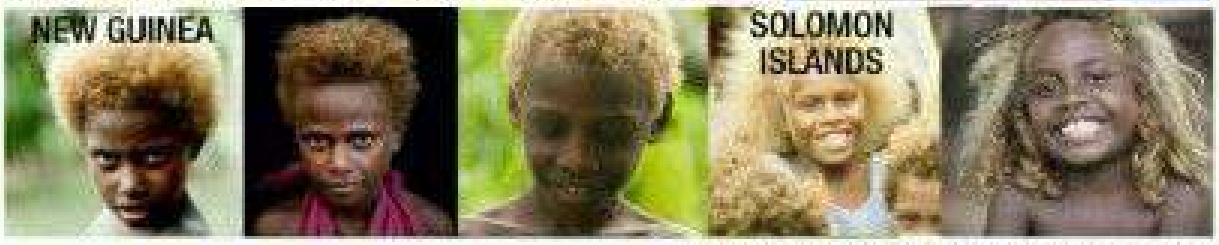




As a testament to their diversity, 5-10% of Melanesian people have natural blonde hair, totally unrelated to the blonde hair found among Europeans.







WWW.THESCIENCEOFSELF.COM


King James I of England
King James VI & I

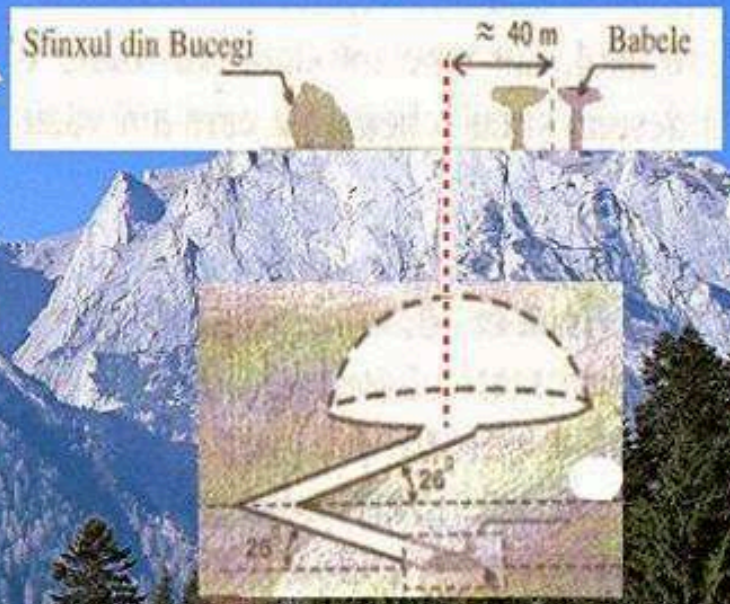

PRELUDE
© AFP/Getty Images


BosnianPyramid.com
2
4
5
3
1
6
8
BOSANSKA DOLINA PIRAMIDA
BOSNIAN VALLEY OF THE PYRAMIDS
1 Bosanska piramida Sunca
Bosnian Pyramid of the Sun
2 Bosanska piramida Mjeseca
Bosnian Pyramid of the Moon
3 Bosanska piramida Ljubavi
Bosnian Pyramid of the Love
4 Hram majke Zemlje
Temple of Mother Earth
5 Piramida bosanskog Zmaja
Pyramid of the Bosnian Dragon
6 Tunel KTK
Tunnel KTK
7 Tunel "Ravne"
Tunnel "Ravne"
8 Tumulus "Kameni hram", Gornja Vratnica
Tumulus "Stone Temple", Gornja Vratnica
7


DEPARTAMENTUL ZERO
DZR
ROMÂNIA
Corespondența dintre Sfinxul din Bucegi,
Babele și structura din interior
aprox. 40 m
Babele
Sfinx
Barajul energetic
semisferic
26°
Intrare tunel
26°
Primul baraj energetic
Marea Descoperire din Munții Bucegi,
din august 2003 - cea mai mare descoperire de pe Planetă
și cea mai mare descoperire a tuturor timpurilor!
Romania, Bucegi Mountains Facility - Eyes Only
www.departamentul-zero.ro

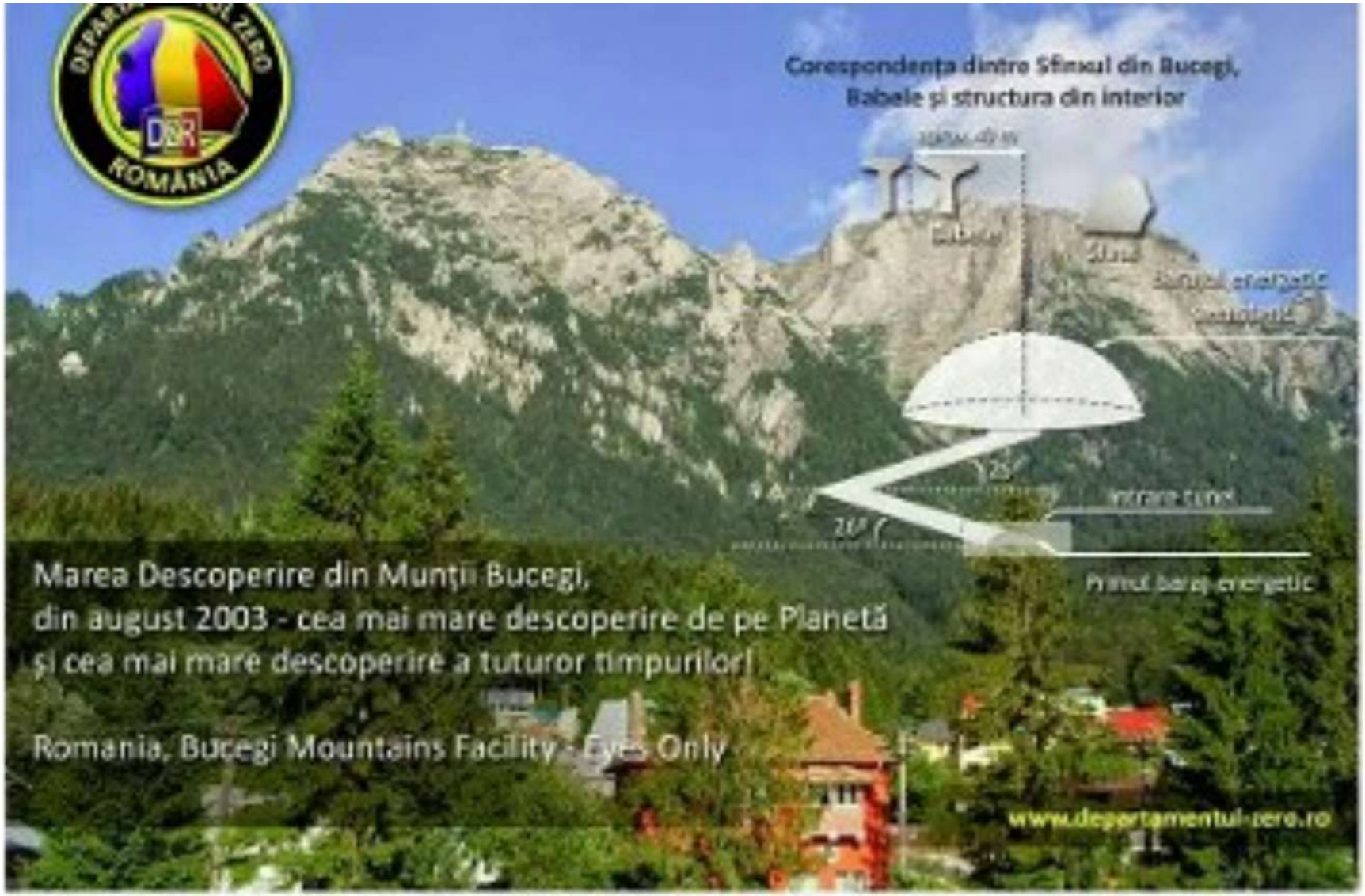
Descoperirea din Masivul Bucegi, din August 2003 - cea mai mare descoperire de pe Planeta si cea mai mare descoperire din toate timpurile!

Corespondenta intre Sfinxul din Bucegi, Babele si structura tunelului din interior

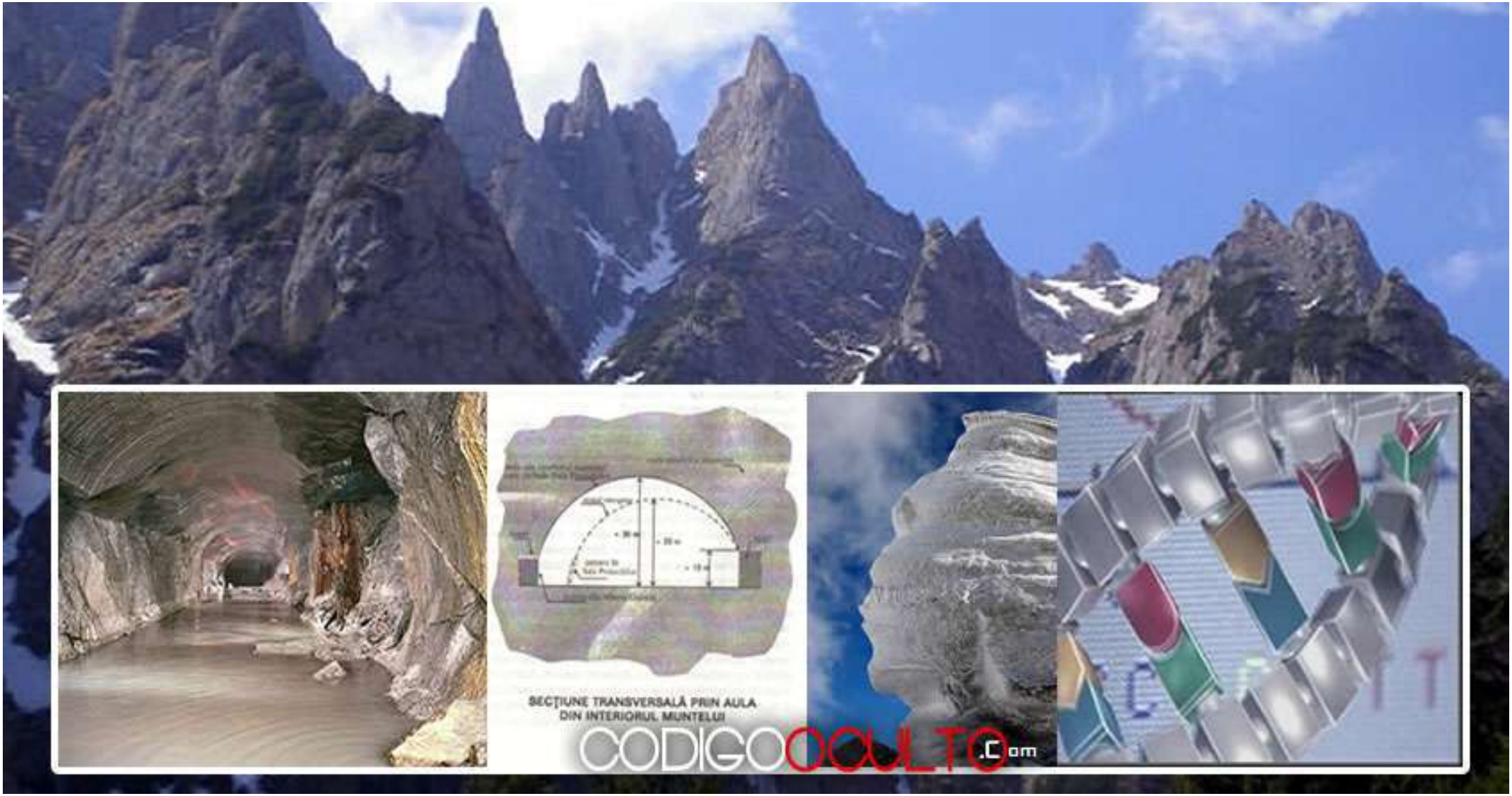


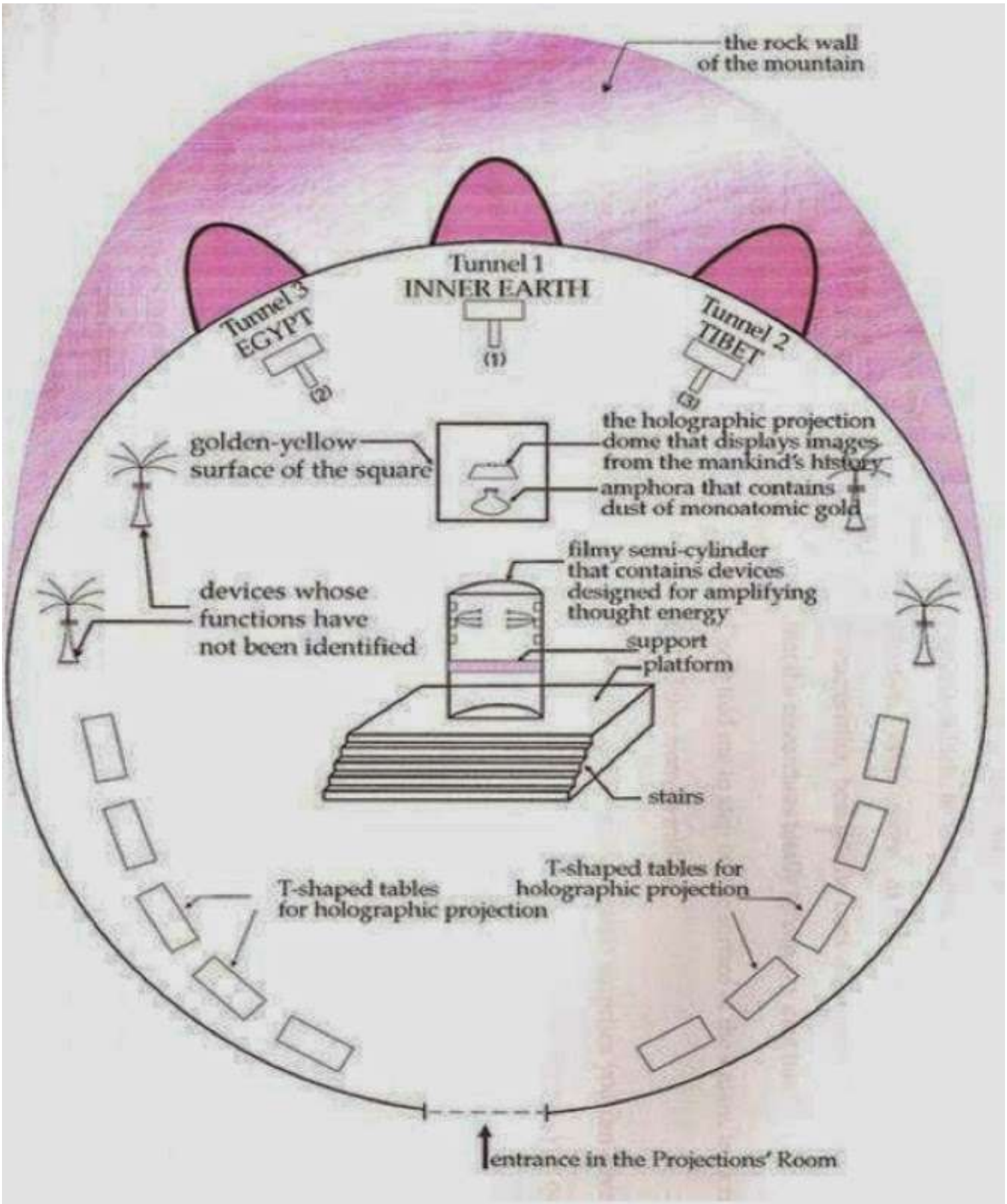
www.Fara-Secrete.ro


FONDACIJA ARHEOLOŠKI PARK
BOSANSKA PIRAMIDA SUNCA
SARAJEVO, BOSNA I HERCEGOVINA
THE ARCHAEOLOGICAL PARK
BOSNIAN PYRAMID OF THE SUN FOUNDATION
SARAJEVO, BOSNIA AND HERZEGOVINA
WWW.PIRAMIDASUNCA.BA
BOSANSKA DOLINA PIRAMIDA
BOSNIAN VALLEY OF THE PYRAMIDS
Piramida bosanskog Zmaja
Pyiramid of the Bosnian Dragon
Hram majke Zemlje
Temple of Mother Earth
Bosanska piramida Mjeseca
Bosnian Pyramid of the Moon
Bosanska piramida Ljubavi
Bosnian Pyiramid of Love
Bosanska piramida Sunca
Bosnian Pyramid of the Sun
Tunel „Ravne"
Tunnel „Ravne"
Tunel KTK
Tunnel KTK
Grad Visoko, BiH
Visoko City, B&H
Tumulus „Kameni hram", Gornja Vratnica
Tumulus „Stone Temple", Gornja Vratnica



The location of the alien base inside the 'Masivul Bucegi' mountain, Romania. Also, notice the locations of the Sphinx of Bucegi and the Babele monoliths above the alien base. – See


SECŢIUNE TRANSVERSALĂ PRIN AULA
DIN INTERIORUL MUNTELUI
CODIGOOCULTO.com


the rock wall
of the mountain
Tunnel 1
INNER EARTH
(1)
Tunnel 3
EGYPT
(2)
Tunnel 2
TIBET
(3)
golden-yellow
surface of the square
the holographic projection
dome that displays images
from the mankind's history
amphora that contains
dust of monoatomic gold
filmy semi-cylinder
that contains devices
designed for amplifying
thought energy
devices whose
functions have
not been identified
support
platform
stairs
T-shaped tables for
holographic projection
T-shaped tables
for holographic projection
entrance in the Projections' Room


www.piramidasunca.ba









WE ARE SPRAYING YOU WITH

ALUMINUM OXIDE, BARIUM, STRONTIUM,

COPPER SULFATE POTASSIUM IODIDE



AND ALL YOU WANT TO DO IS PARTY... DUMB SHEEP!



'CHEMTRAIL LAW' PASSED IN 1997

PUBLIC LAW 105—85—NOV. 18, 1997: USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS



"(1) any test or experiment involving the use of a chemical agent or biological agent on a civilian population; or
(2) any other testing of a chemical agent or biological agent on human subjects.
(e) BIOLOGICAL AGENT DEFINED.—In this section, the term "biological agent" means any micro-organism (including bacteria, viruses, fungi, rickettsiae, or protozoa), pathogen, or infectious substance, and any naturally occurring, bioengineered, or synthesized component of any such micro-organism, pathogen, or infectious substance, whatever its origin or method of production, that is capable of causing—
(1) death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism;
(2) deterioration of food, water, equipment, supplies, or materials of any kind; or
(3) deleterious alteration of the environment." - quote from the law.

This "law" is publicly available for everyone to read, you have been "informed". Because you have not contested it (that's what the courts are for), you have provided your "consent". This law is part of a contract between you and the government. When the terms of a contract are known and uncontested, it's called "acquiescence."


US PATENT
WARNING!
RUPTURE DISK
AREA
Does this internet photo show
the interior of a chemtrail plane?
Patent number: 7413145 - 'Systems and Methods For Aerial Dispersion of Materials' (filed by none other than the CIA's EVERGREEN AIR)
image - DDees.com

BEAUTIFUL ENERGY

QUARTZ = HEALING
METALS = STIMULATES ENERGY
GEMSTONES = ADDS ENERGY
RESIN = TRANSFORMATION

Copper Wire
copper is good for the blood
it also stimulates
THE LARGE QUARTZ

Gold Leaf Inside The Orgone
100 % PERCENT REAL!!!

20 Different types of
gemstone's
all listing below

Our orgone
are made
out of best
suited resin.

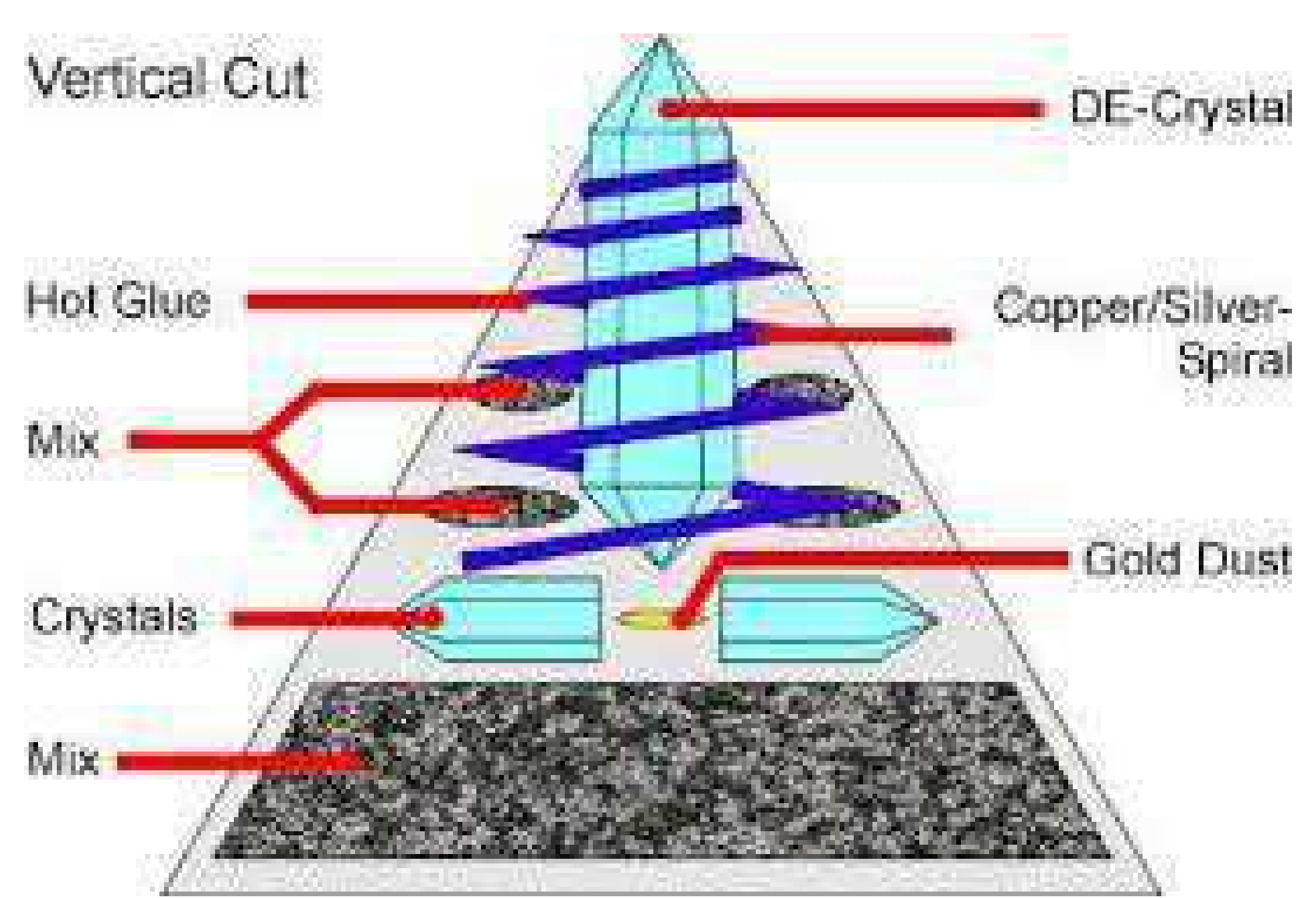


magnesium & steel metal shaving's,
& small bits of copper
the smaller the better
as you can see !!!

large QUARTZ
enhances energy by absorbing,
storing, amplifying, balancing,
focusing and transmitting.
It channels universal energy.
Quartz also enhances thoughts,
as they are a form of energy.
Because it directs and amplifies energy,
it is extremely beneficial for manifesting,
healing, meditation, protection,
and channeling.

LARGE PYRAMID

ORGONE-ENERGY.COM


Vertical Cut
DE-Crystal
Hot Glue
Copper/Silver-
Spiral
Mix
Gold Dust
Crystals
Mix










© Eddie Gowan

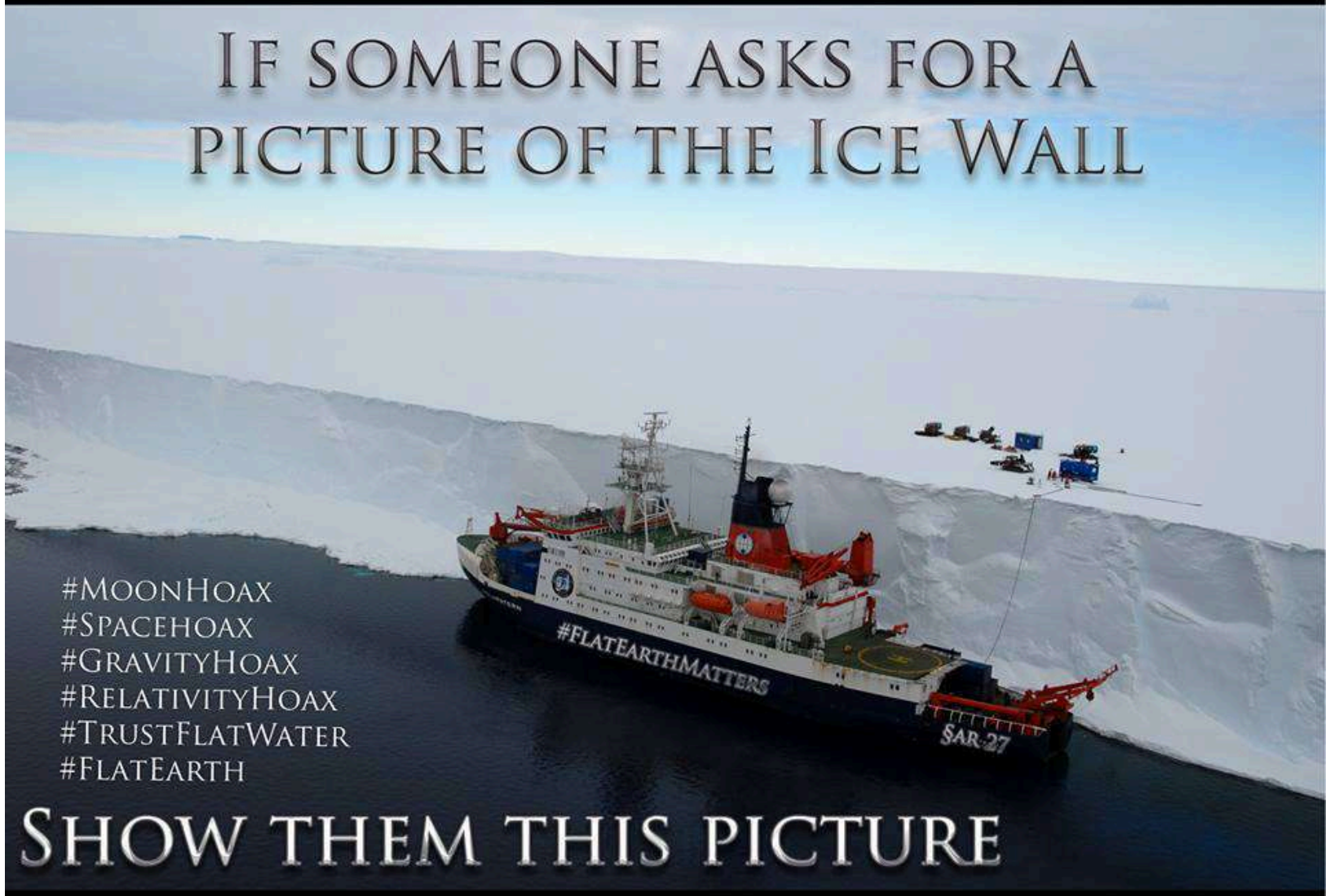

Join us on
Facebook
facebook.com/UFOatSection51
SECTION 51
0:44 / 2:08
HD




SECTION
51
0:05 / 2:08
HD

THE COAST OF ANTARCTICA, AND THE ANTARCTIC SHELF.
THIS IS THE ICE WALL, THE CONTAINER OF THE EARTH,
A GIANT LAND MASS SURROUNDING THE EARTH.
WATER ALWAYS LEVELS OUT AND ALWAYS TAKES
THE SHAPE OF ITS CONTAINER. THERE IS NO EDGE.

IF SOMEONE ASKS FOR A PICTURE OF THE ICE WALL



#MOONHOAX
#SPACEHOAX
#GRAVITYHOAX
#RELATIVITYHOAX
#TRUSTFLATWATER
#FLATEARTH

SHOW THEM THIS PICTURE

FISH TANKS, TUBS, POOLS & LAKES OF WATER ARE FLAT AND LEVEL.





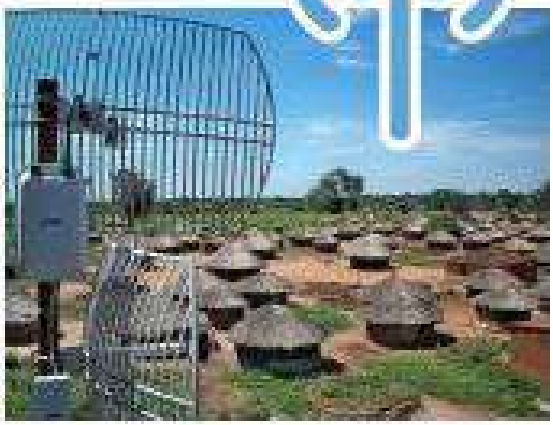
TUESDAY, AUGUST 24th at 7:30 P.M.

HISTORY OF MICROWAVES

From Weapons to Your WiFi







FREE LECTURE AT THE UNIVERSITY OF TORONTO WITH

BARRIE TROWER

Physicist & Former British Secret Service Microwave Weapon Specialist

During the Cold War, Barrie Trower's job for the British Secret Service was to debrief spies who were using stealth microwave weapons. Most notably, the Russians pulsed microwaves at the American Embassy where staff developed leukemia and other sicknesses.

Today, Barrie Trower is shocked to see the proliferation of microwave technologies – WIFI, cell phones, cell towers, and more. THE HISTORY OF MICROWAVES: FROM WEAPONS TO WIFI will give you an understanding of microwave radiation from an insider who now speaks openly to governments, police, and the public.



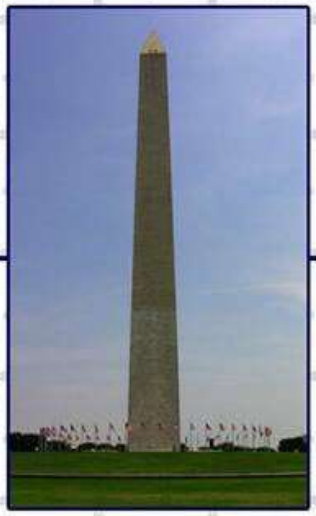
EVENT LOCATION

HEALTH SCIENCES BLDG AUDITORIUM
155 College Street, Room 610
University of Toronto

what do these 3 cities have in common?



City of London



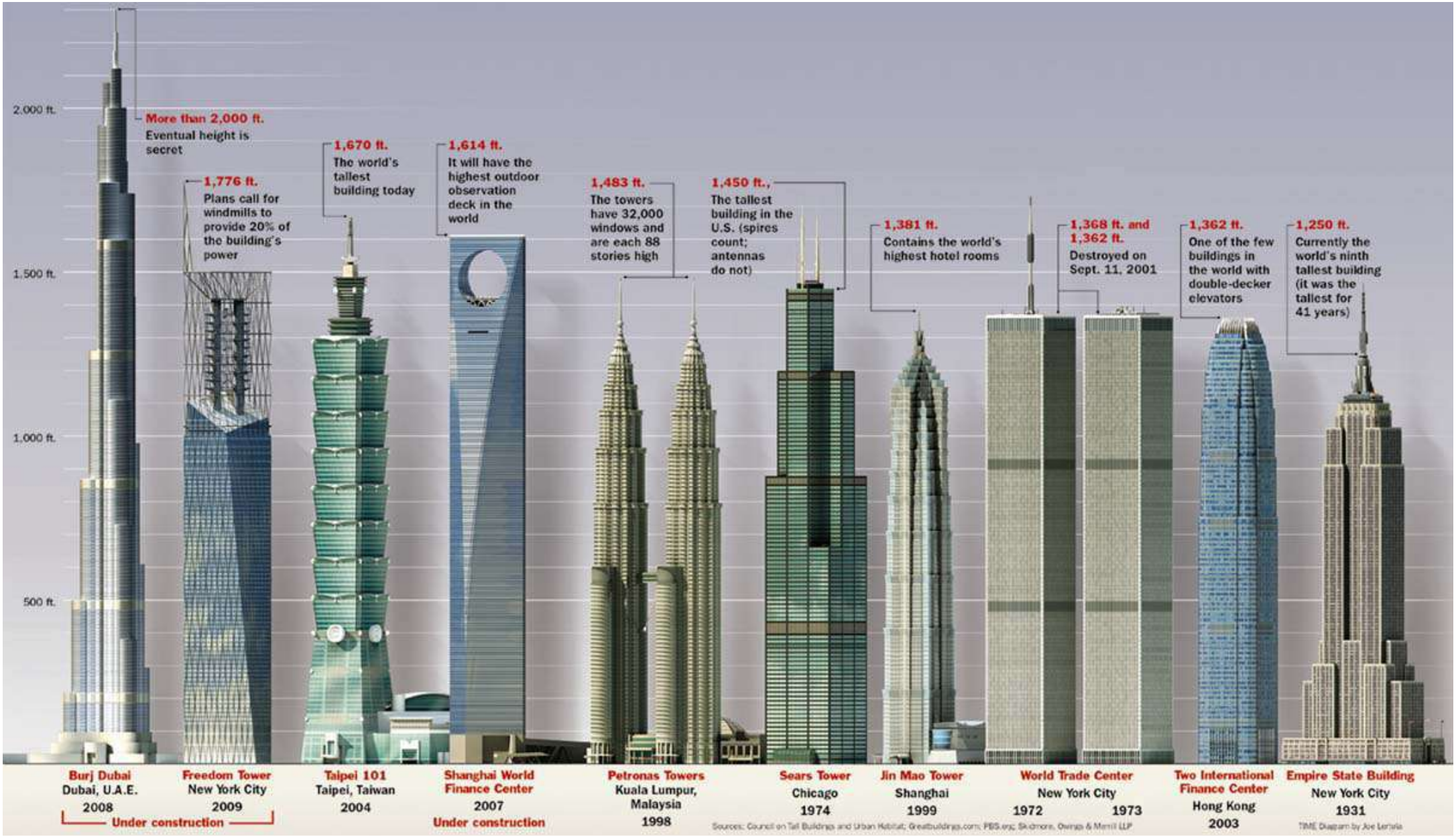
Washington
District of Columbia



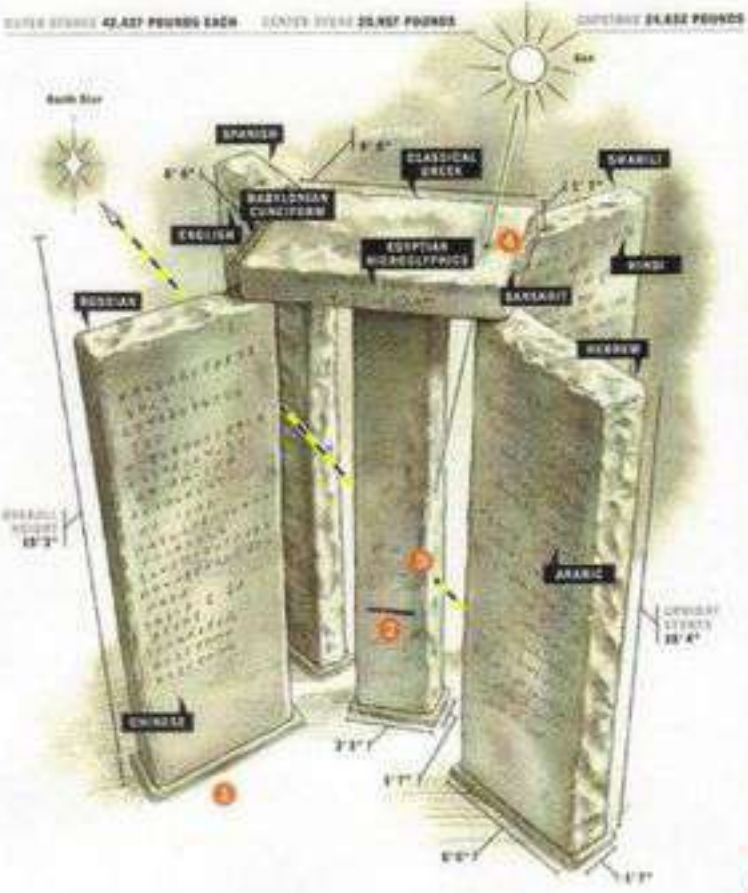
Vatican City

- they pay no taxes
- they are under no national authority
- they have totally Independent Identities from the rest of the world

SPEAK FOR YOURSELF


2,000 ft.
1,500 ft.
1,000 ft.
500 ft.
More than 2,000 ft.
Eventual height is secret
1,776 ft.
Plans call for windmills to provide 20% of the building's power
1,670 ft.
The world's tallest building today
1,614 ft.
It will have the highest outdoor observation deck in the world
1,483 ft.
The towers have 32,000 windows and are each 88 stories high
1,450 ft.,
The tallest building in the U.S. (spires count; antennas do not)
1,381 ft.
Contains the world's highest hotel rooms
1,368 ft. and 1,362 ft.
Destroyed on Sept. 11, 2001
1,362 ft.
One of the few buildings in the world with double-decker elevators
1,250 ft.
Currently the world's ninth tallest building (it was the tallest for 41 years)
Burj Dubai
Dubai, U.A.E.
2008
Under construction
Freedom Tower
New York City
2009
Under construction
Taipei 101
Taipei, Taiwan
2004
Shanghai World Finance Center
2007
Under construction
Petronas Towers
Kuala Lumpur, Malaysia
1998
Sears Tower
Chicago
1974
Jin Mao Tower
Shanghai
1999
World Trade Center
New York City
1972
1973
Two International Finance Center
Hong Kong
2003
Empire State Building
New York City
1931
Sources: Council on Tall Buildings and Urban Habitat; Greatbuildings.com; PBS.org; Skidmore, Owings & Merrill LLP
TIME Diagram by Joe Lertola

Who Are the Authors of the The Georgia Guidestones:



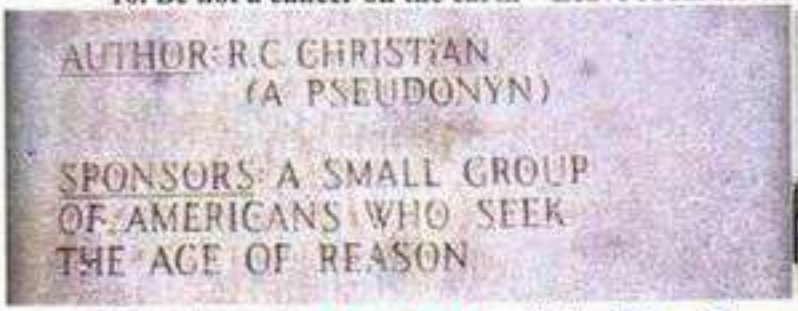


The English version of the Guidelines---The ten guides for a new Age of Reason are as follows:

1. Maintain humanity under 500,000,000 in perpetual balance with nature.

2. Guide reproduction wisely – improving fitness and diversity. **3. Unite humanity with a living new language.** 4. Rule passion – faith – tradition – and all things with tempered reason. 5. Protect people and nations with fair laws and just courts. 6. Let all nations rule internally resolving external disputes **in a world court.** 7. Avoid petty laws and useless officials. 8. Balance personal rights with **social duties.** 9. Prize truth – beauty – love – **seeking harmony with the infinite.**

10. Be not a cancer on the earth – Leave room for nature – Leave room for nature.





Who Are the Authors of the The Georgia Guidestones:

(Roman Catholic Rosicrucian Order) **Seeking entry into the Rosicrucian mysteries. (B) Notice the candidate is showing the hand sign of secrecy. Also notice the letters "RC", as in R.C. Christian.** Well, it is. R.C. Christian is a clear reference to Christian Rosenkreuz whose English name is **Christian Rose Cross**, the legendary founder of the Rosicrucian Order… http://vigilantcitizen.com/?p=5496

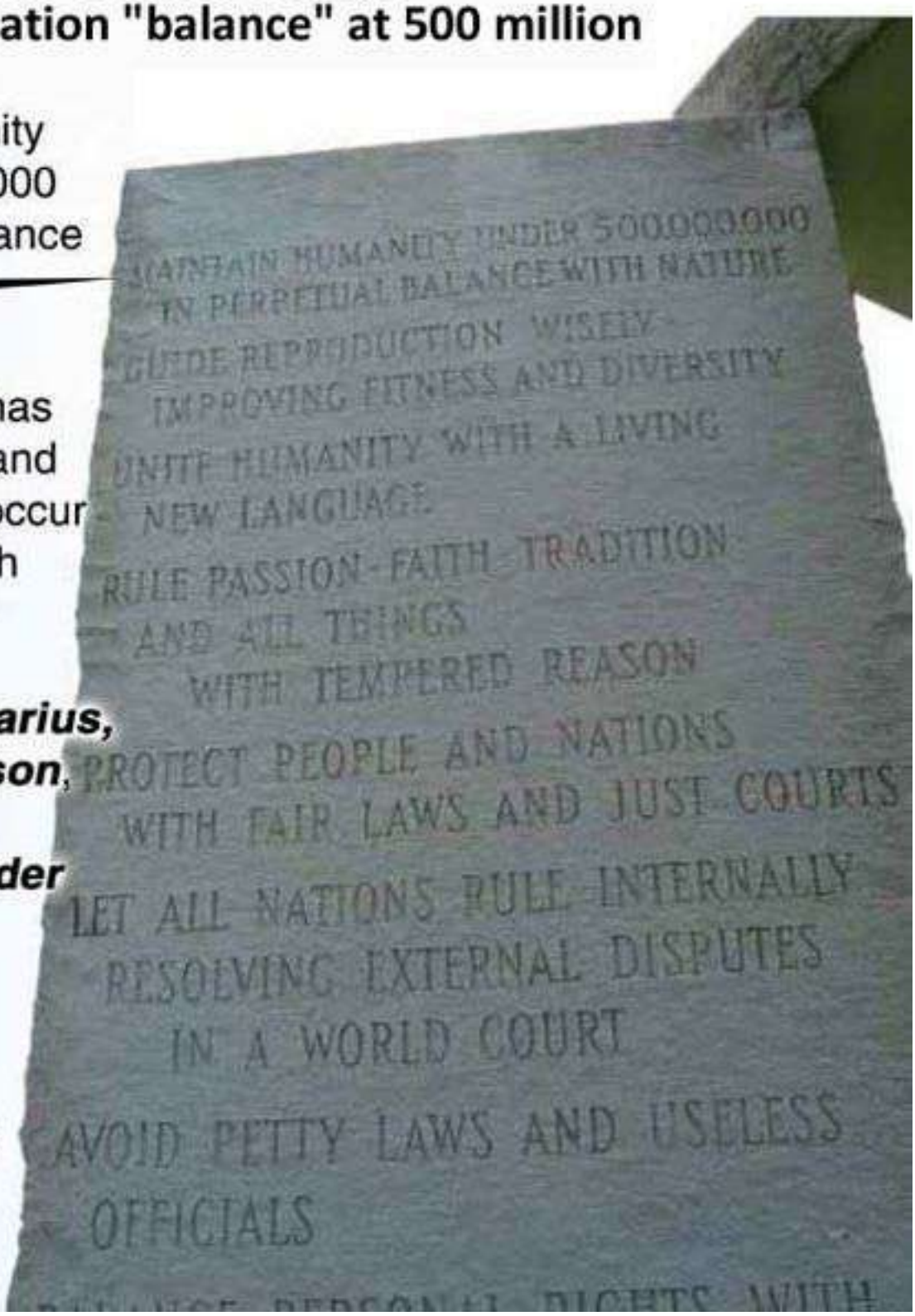
GEORGIA GUIDESTONES
NEW WORLD ORDER
Human population "balance" at 500 million

maintain humanity
under 500,000,000
in perpetual balance
with nature

the human cull has
been designed and
pre-planned to occur
in conjuction with
the ***day of the***
lord's wrath,
the ***age of aquarius,***
the ***age of reason***,
the
New World Order

located in
Elberton, Georgia

6 granite slabs
weighing more than
100 tons - almost
20 feet in height



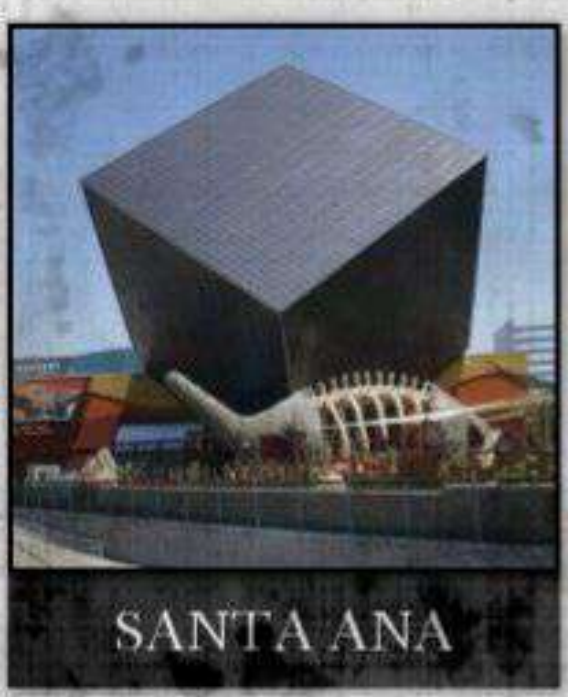


The Georgia Guidestones, sometimes referred to as the "American Stonehenge," is a granite monument erected in Elbert County, Ga., in 1979. The stones are engraved in eight languages — English, Spanish, Swahili, Hindi, Hebrew, Arabic, Chinese and Russian — each relaying 10 "new" commandments for "an Age of Reason." The stones also line up with certain astronomical features. @conspiracystory

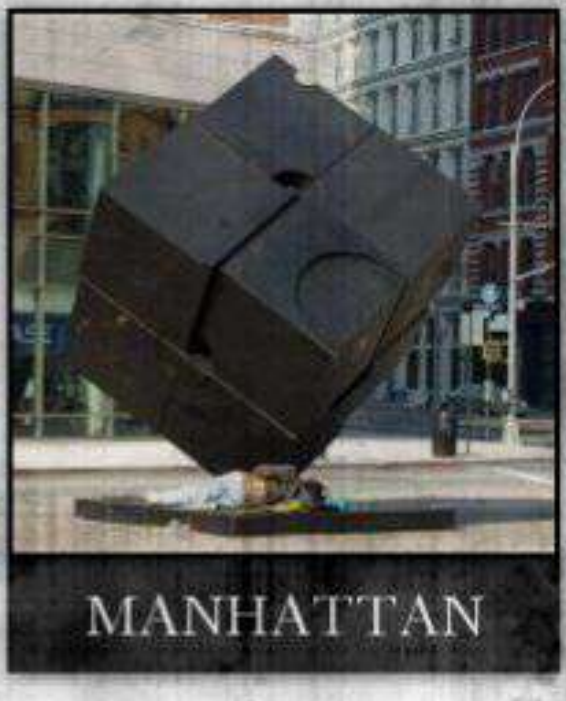
Though the monument contains no encrypted messages, its purpose and origin remain shrouded in mystery. They were commissioned by a man who has yet to be properly identified, who went by the pseudonym of R.C. Christian.

Of the 10 commandments, the first one is perhaps the most controversial: "Maintain humanity under 500,000,000 in perpetual balance with nature." Many have taken it to be a license to cull the human population down to the specified number, and critics of the stones have called for them to be destroyed. Some conspiracy theorists even believe they may have been designed by a "Luciferian secret society" calling for a new world order.

BLACK CUBE OF SATURN



SANTA ANA



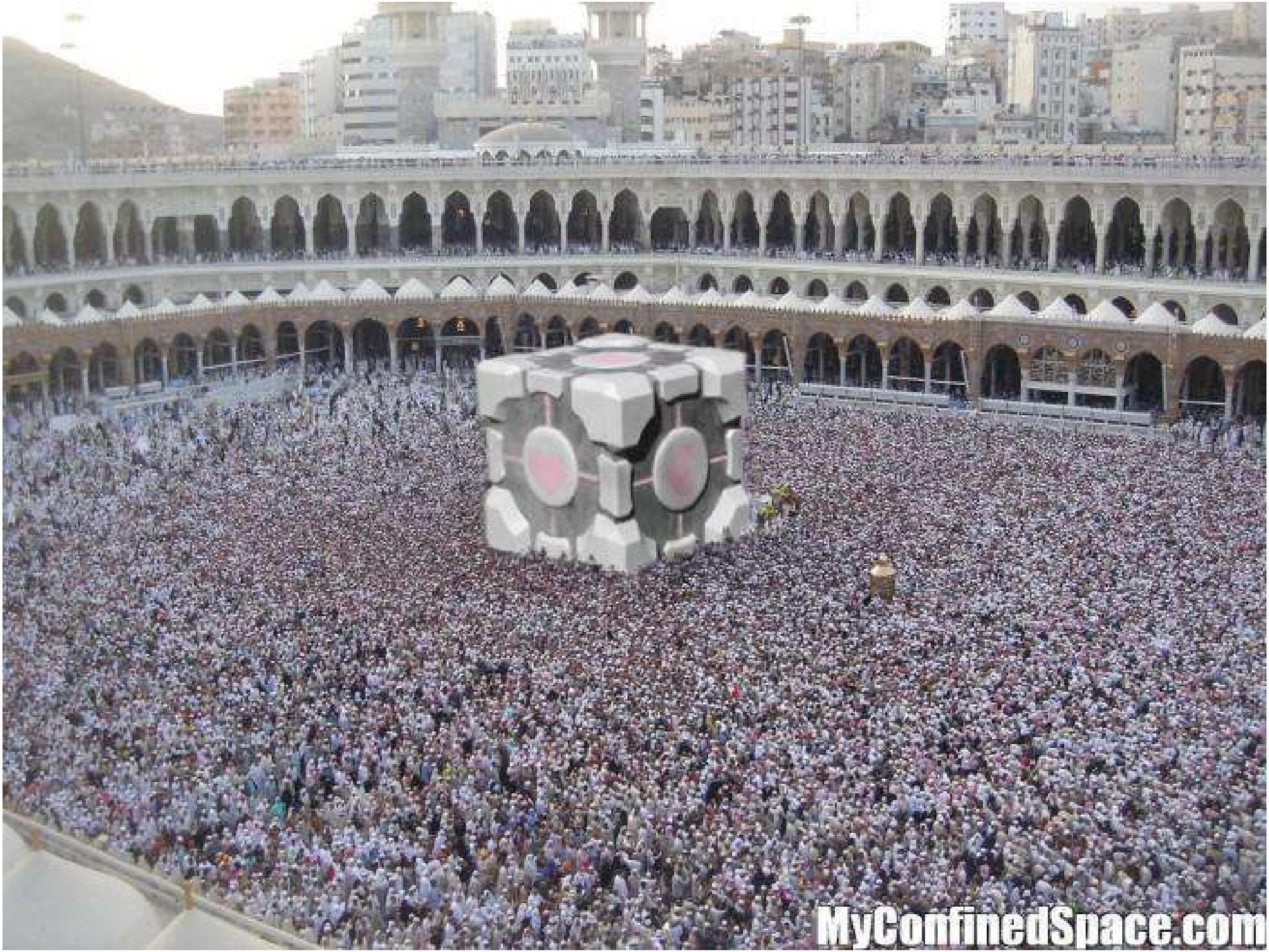
MANHATTAN



AUSTRALIA

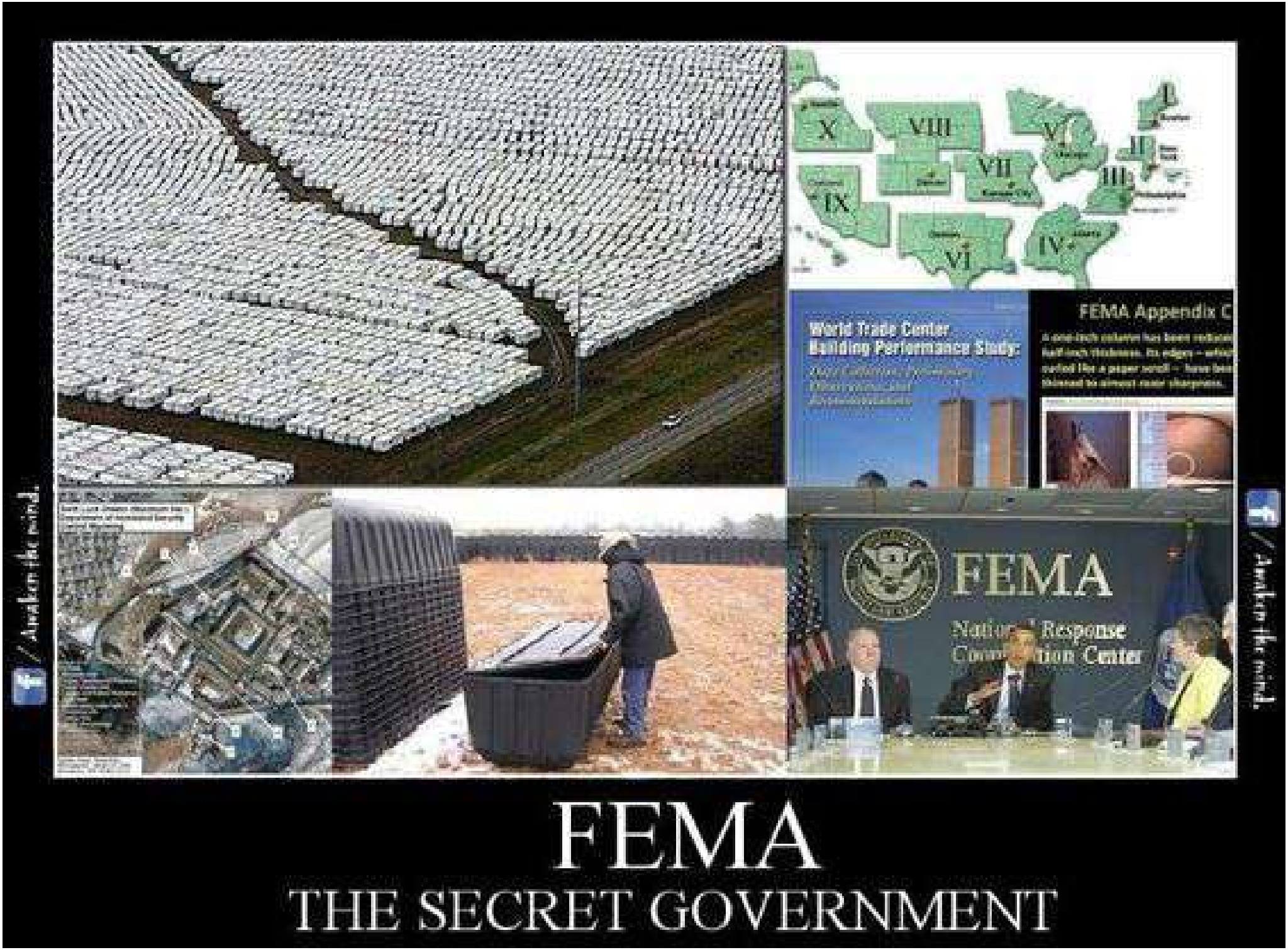


DENMARK


MyConfinedSpace.com

This amazing **Veterans Day Memorial** in **Arizona**, can only be seen perfectly **at 11:11am, on 11/11 each year.**

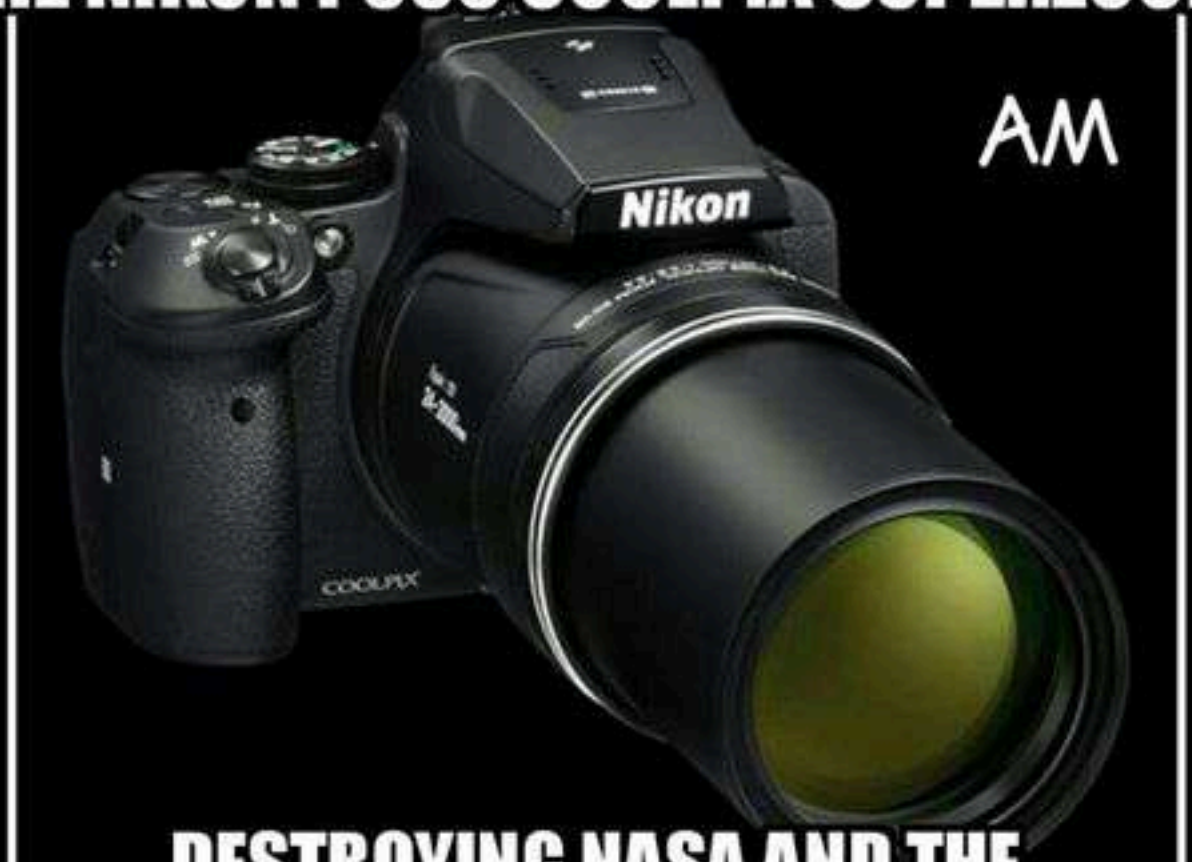




FEMA

THE SECRET GOVERNMENT

THE NIKON P900 COOLPIX SUPERZOOM



AM

DESTROYING NASA AND THE GLOBE EARTH DECEPTION SINCE 2015

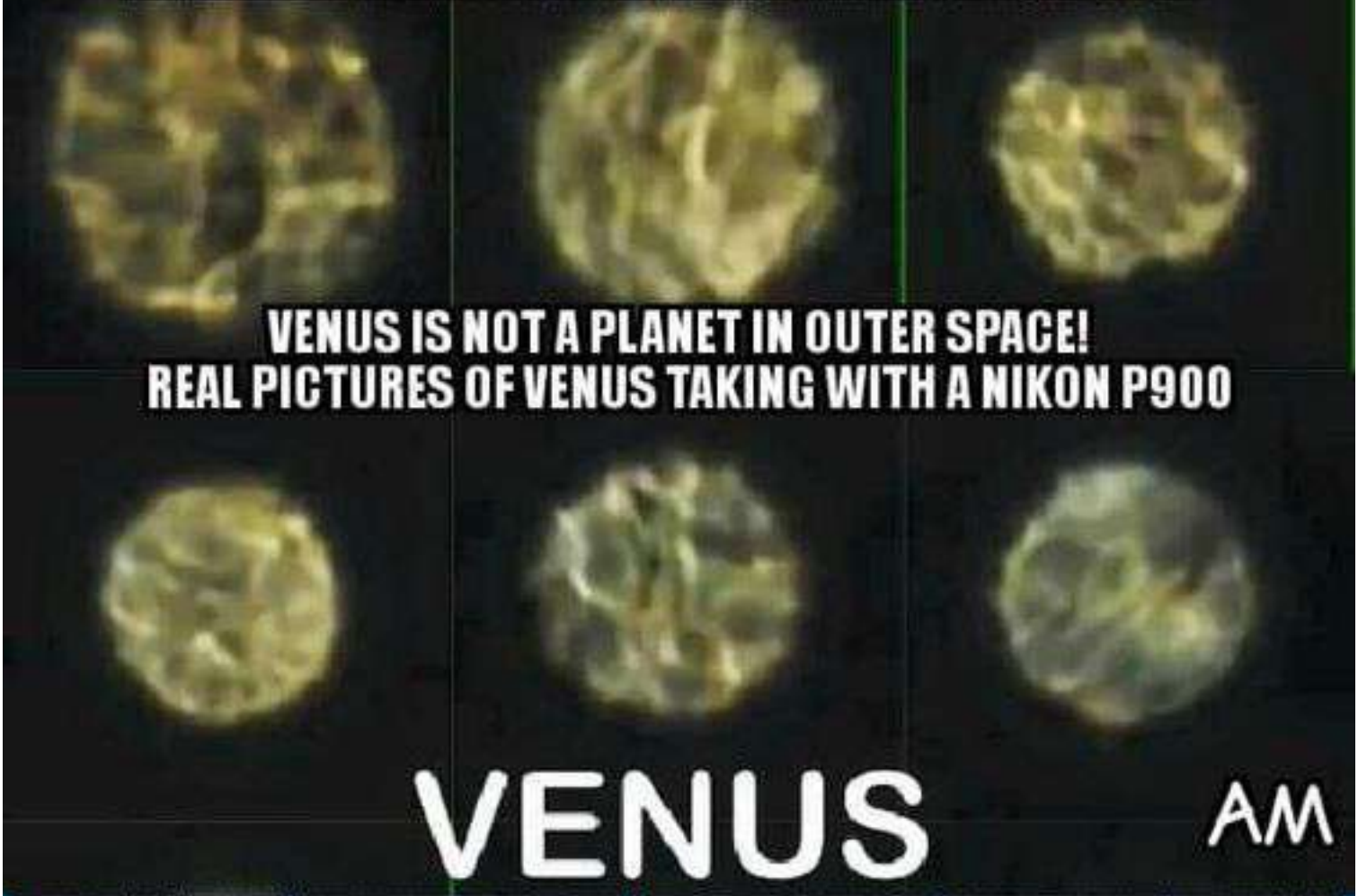






REAL STARS

GENESIS 1:7 "AND GOD MADE THE FIRMAMENT. AND DIVIDED THE WATERS WHICH WERE UNDER THE FIRMAMENT FROM THE WATERS WHICH WERE ABOVE THE FIRMAMENT: AND IT WAS SO."



VENUS IS NOT A PLANET IN OUTER SPACE!
REAL PICTURES OF VENUS TAKING WITH A NIKON P900

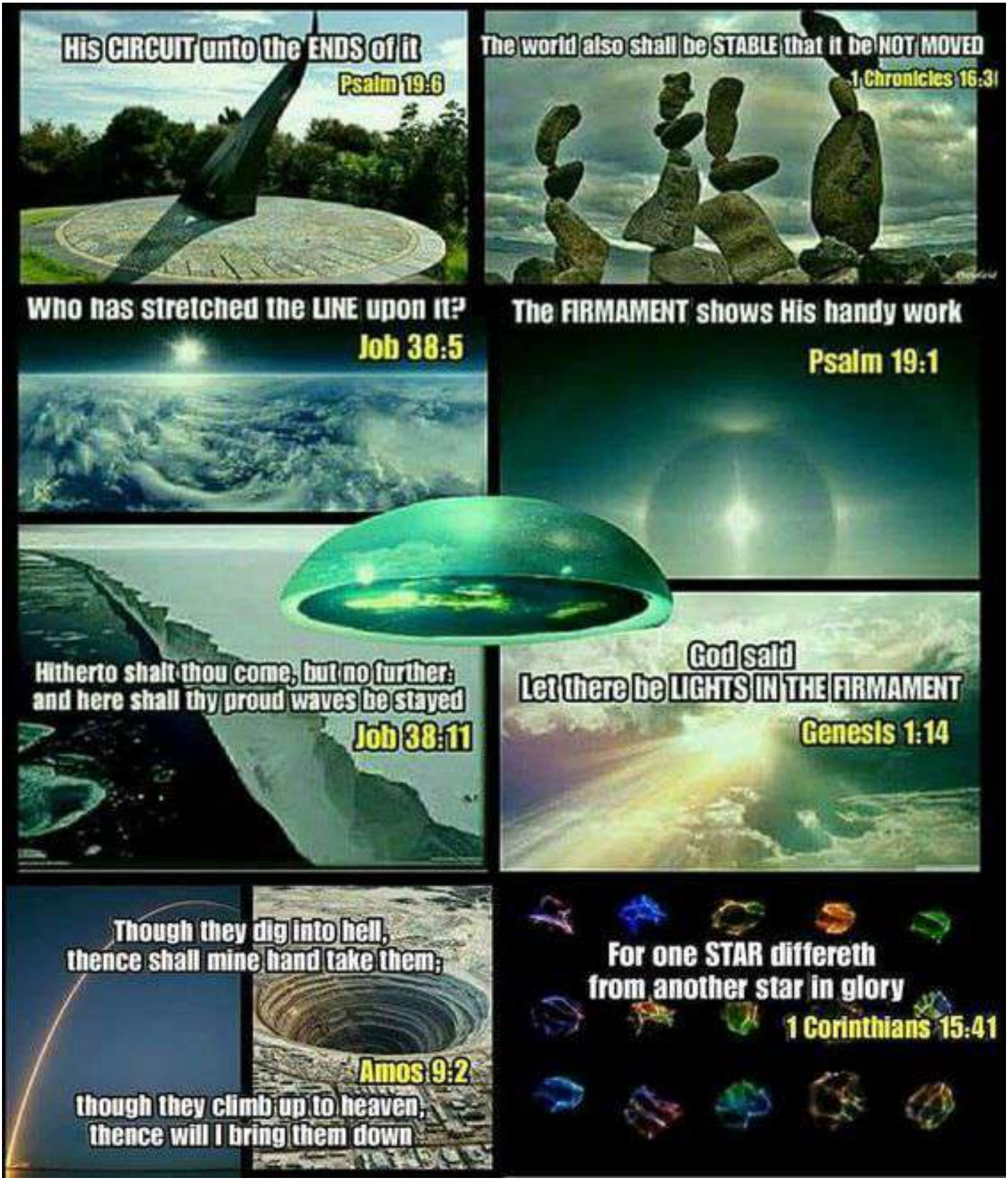
VENUS AM

NOTICE THE WATER RIPPLE APPEARANCE ON VENUS WHICH IS ACTUALLY A WANDERING STAR LIGHT IN THE FIRMAMENT

JUST LIKE THE FLOOR OF A POOL!
BECAUSE THERE IS WATER ABOVE THE DOME FIRMAMENT!

PSALM 148

PRAISE HIM, YE HEAVENS OF HEAVENS, AND YE WATERS THAT BE ABOVE THE HEAVENS.


His CIRCUIT unto the ENDS of it
Psalm 19:6
The world also shall be STABLE that it be NOT MOVED
1 Chronicles 16:30
Who has stretched the LINE upon it?
Job 38:5
The FIRMAMENT shows His handy work
Psalm 19:1
Hitherto shalt thou come, but no further:
and here shall thy proud waves be stayed
Job 38:11
God said
Let there be LIGHTS IN THE FIRMAMENT
Genesis 1:14
Though they dig into hell,
thence shall mine hand take them;
Amos 9:2
though they climb up to heaven,
thence will I bring them down
For one STAR differeth
from another star in glory
1 Corinthians 15:41

FuturePREDICTIONS.com

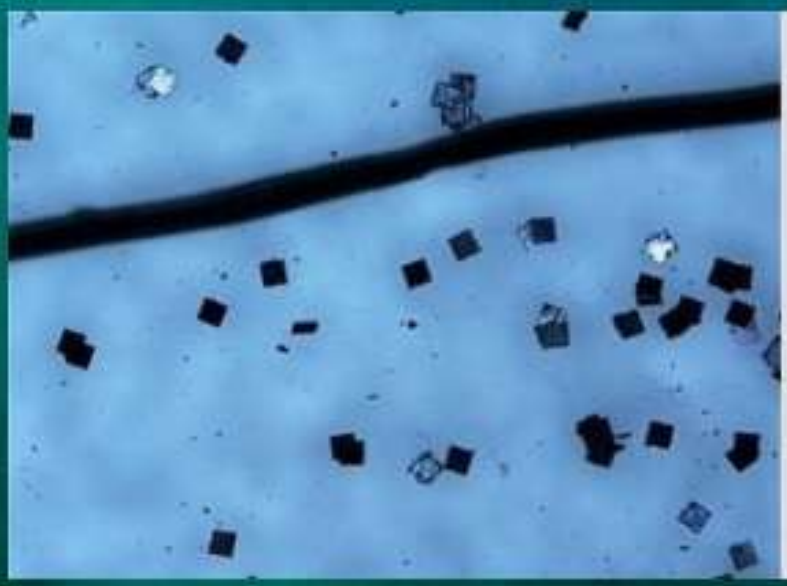
Source of Likely and Preferred Futures ™

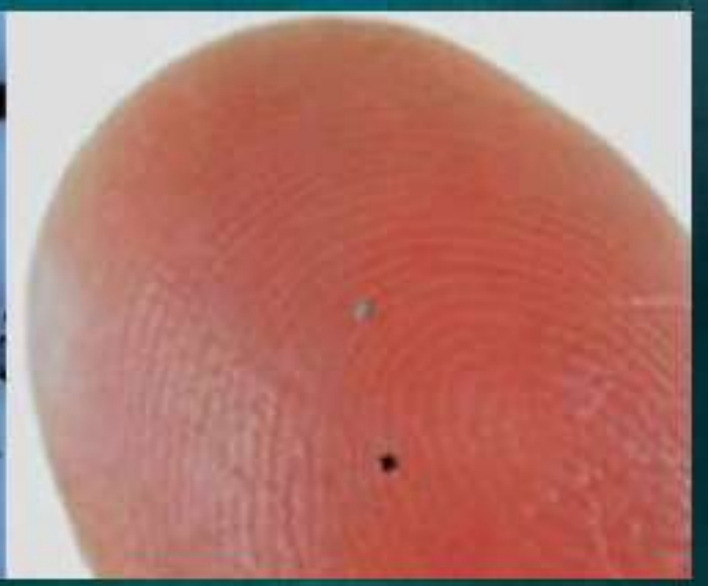
Home | Futurology | Tech | Life Style | Money | Culture | War | 2012

All Humans to Have Microchip RFID Implants by 2017

Filed under: Cloud Computing, Future Predictions, Medicine
by futurepredictions — 4 Comments

June 2, 2011





1014 of H.R. 3590, it certainly seems like this health care reform bill includes a provision that discusses the potential for RFID implantable microchips. You can read the bill at this link. This provision speaks on the analysis of postmarket safety and outcomes data on various medical devices, including Class II devices.

http://futurepredictions.com/2011/06/future-predictions-all-humans-to-have-microchip-rfid-implants-by-2017/

THE FIRMAMENT

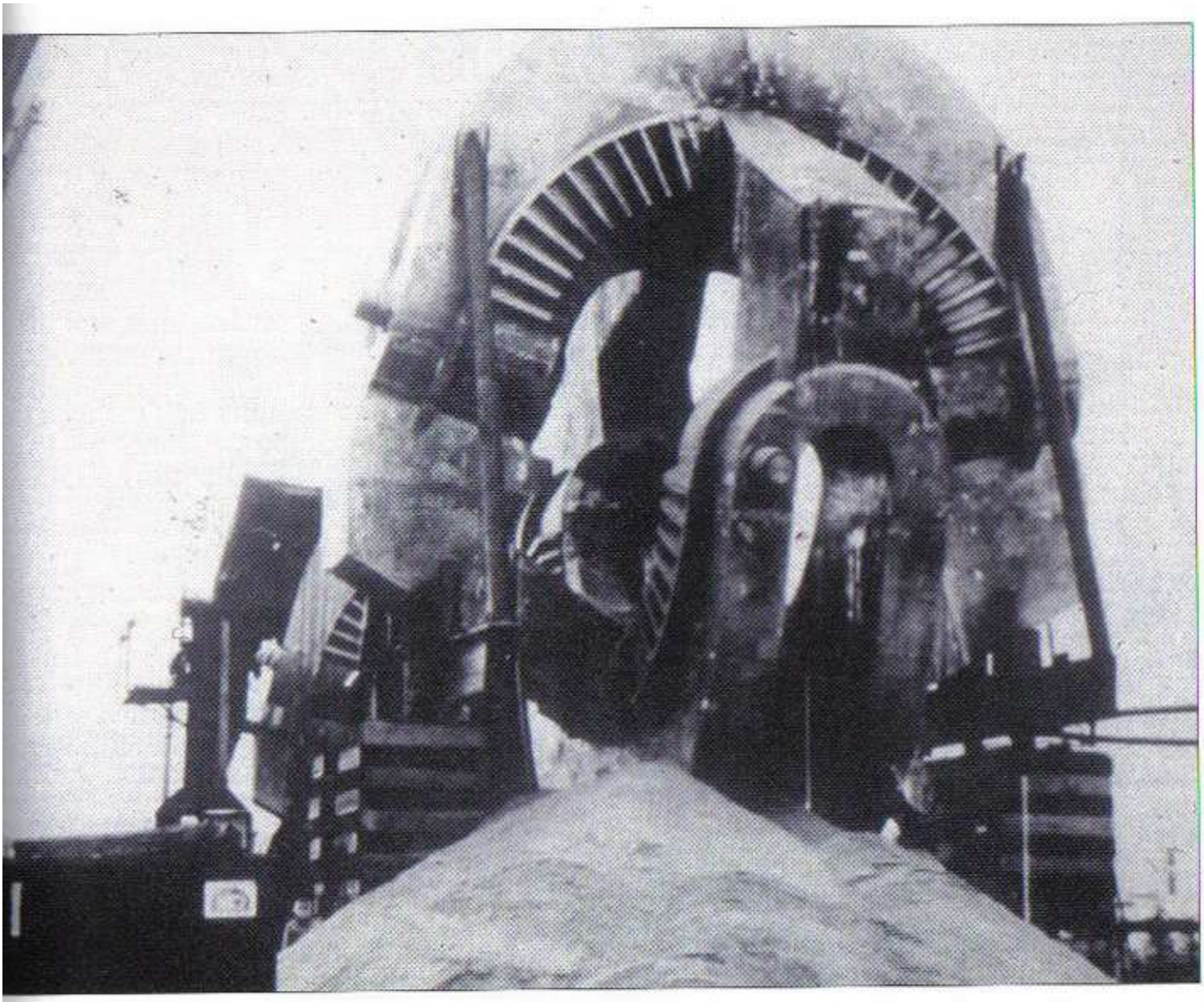


"And God made the firmament, and divided the waters which were under the firmament, from the waters which were above the firmament: and it was so." - Genesis 1:7

"Hast thou with him spread out the sky, which is strong, and as a molten looking glass?" - Job 37:18

"And the stars of heaven fell unto the earth, even as a fig tree casteth her untimely figs, when she is shaken of a mighty wind." - Revelation 6:13

"He set the earth on its foundations, so that it should never be moved." - Psalms 104:5

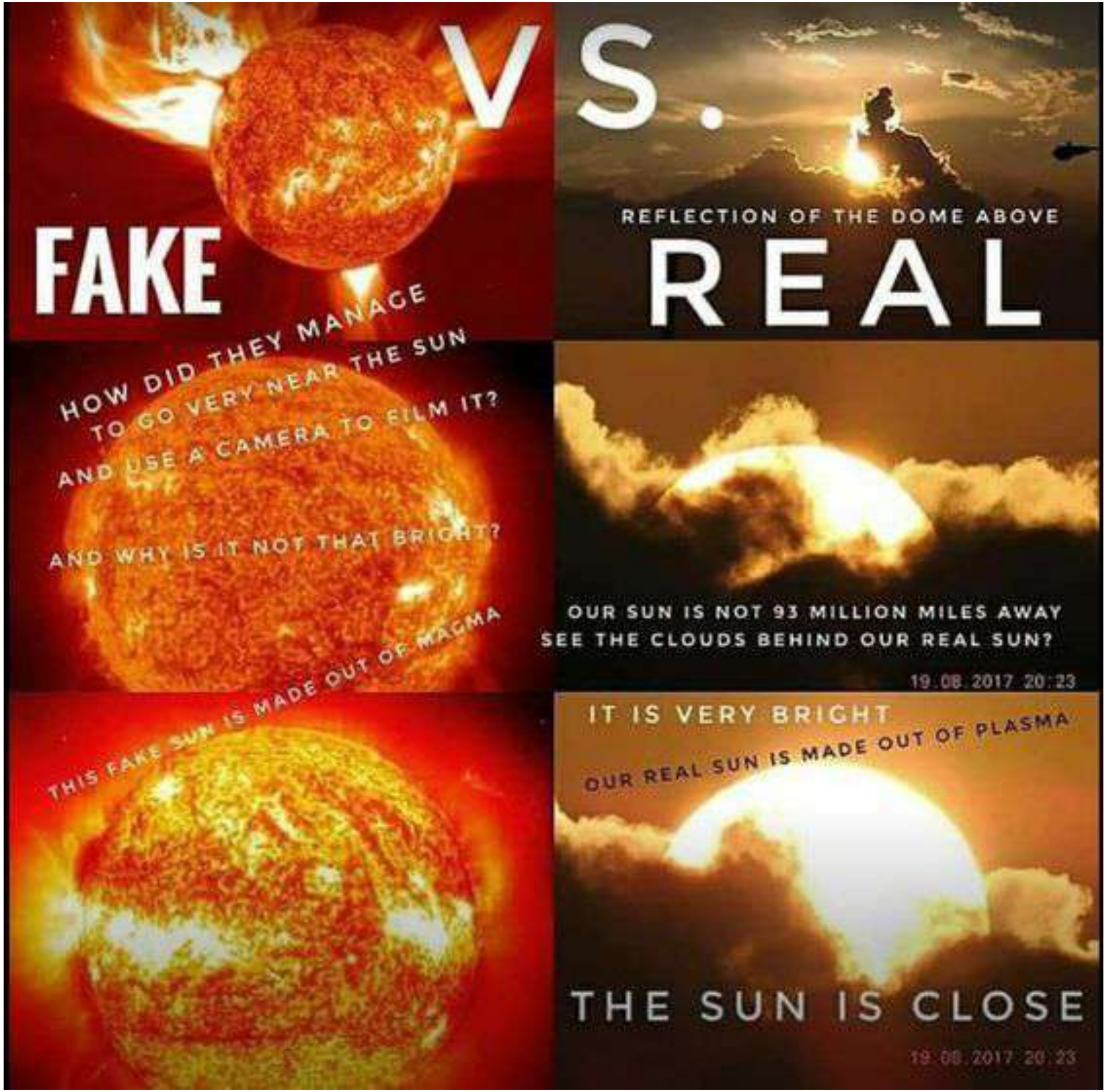


This amazing photo was given to us by a UFO researcher who prefers to remain anonymous. According to our informant, this huge piece of unidentified machinery was one of six excavated circa 1990 from a great depth on secret government property in the United States and promptly reburied in that same area. Dwarfing the dumpster of its left side, the surface of this apparatus is covered with peculiar hieroglyphics that appear similar to characters to ancient Hebrew, Arabic, and Sanskrit.

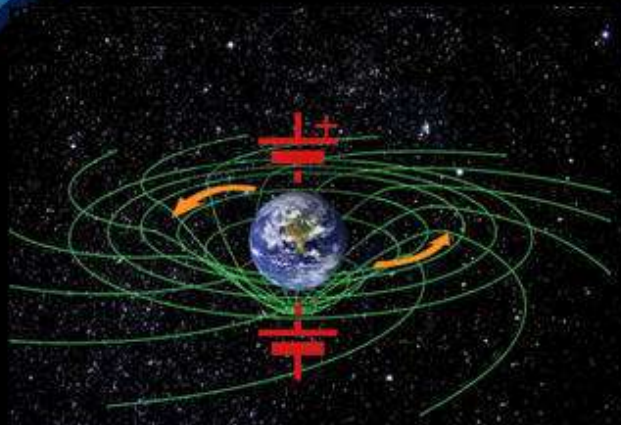


Aerial view of Hoover Dam - Stargate SG1 superlay

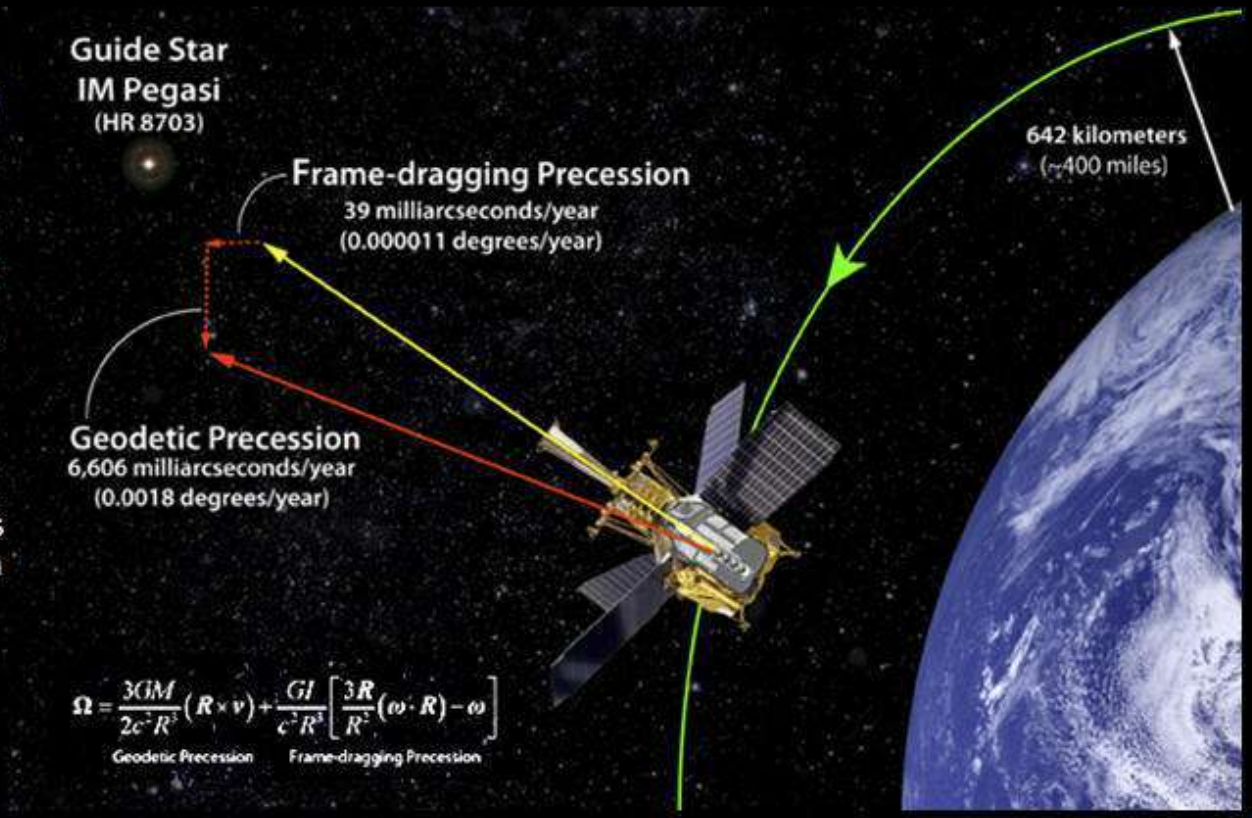



FAKE
VS.
REAL
REFLECTION OF THE DOME ABOVE
HOW DID THEY MANAGE
TO GO VERY NEAR THE SUN
AND USE A CAMERA TO FILM IT?
AND WHY IS IT NOT THAT BRIGHT?
THIS FAKE SUN IS MADE OUT OF MAGMA
OUR SUN IS NOT 93 MILLION MILES AWAY
SEE THE CLOUDS BEHIND OUR REAL SUN?
19.08.2017 20:23
IT IS VERY BRIGHT
OUR REAL SUN IS MADE OUT OF PLASMA
THE SUN IS CLOSE
19.08.2017 20:23

Time-warped Fields (TwF)



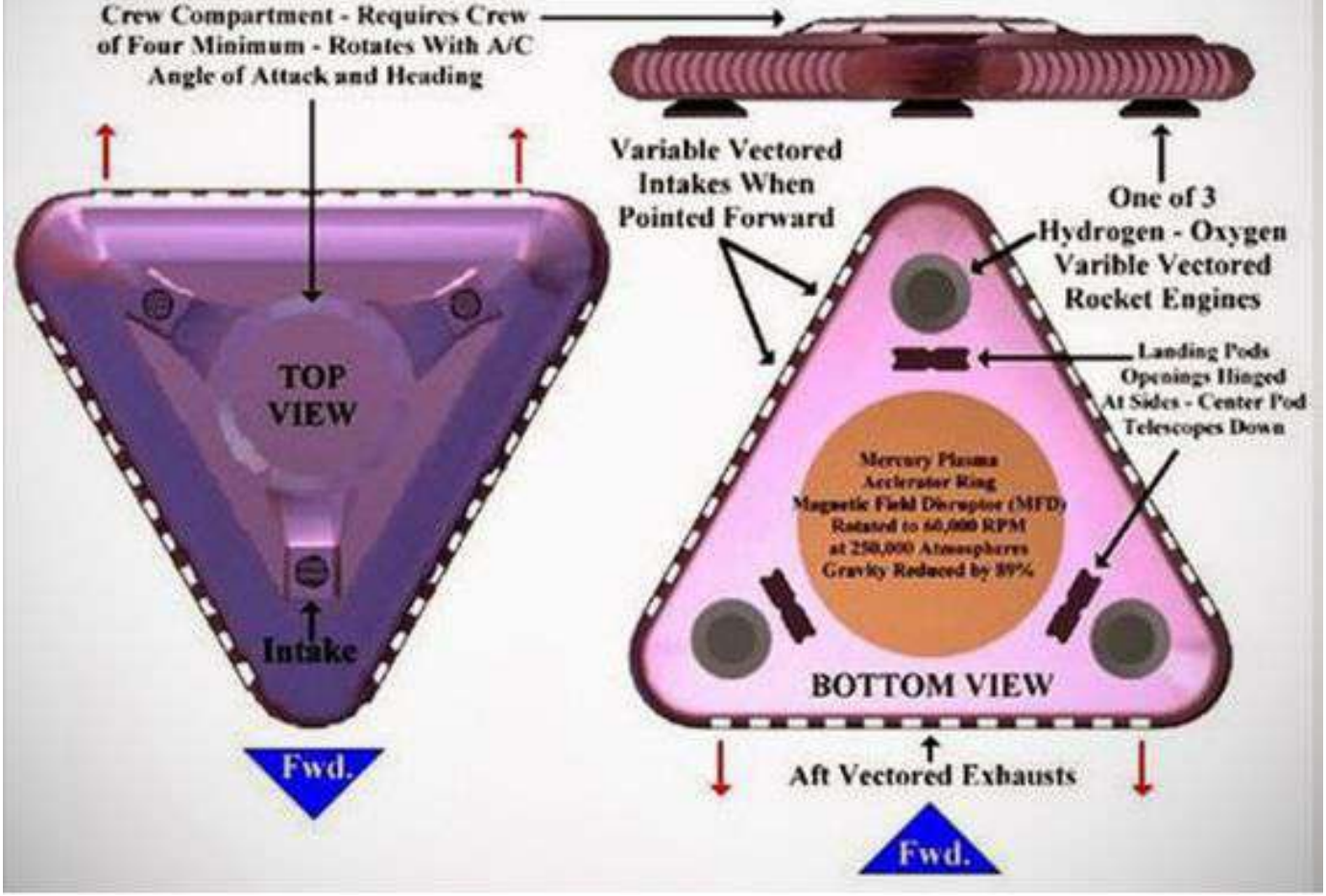
Time-warped Field Technology accesses the potential energy differences between two areas of twisted spacetime created by inertial frame-dragging.



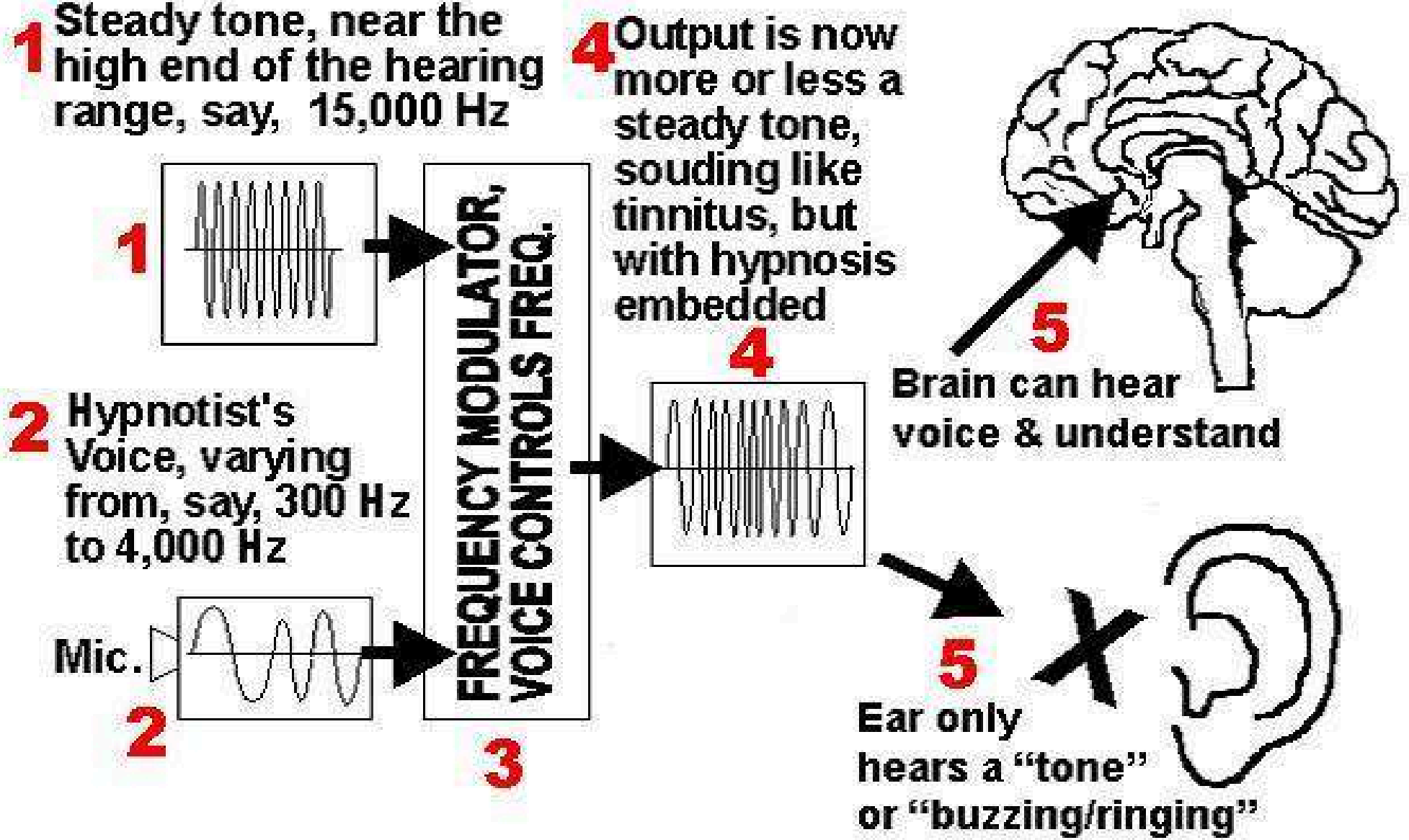
Time-warped Fields: use energy within curvatures of spacetime around a rotating mass or energy field to generate containable and controllable fields of closed-timelike curves that can move matter and information forward or backward in time.



USAF Top Secret Nuclear Powered Flying Triangle - The TR-3B



Silent Sound Subliminal Mind Control

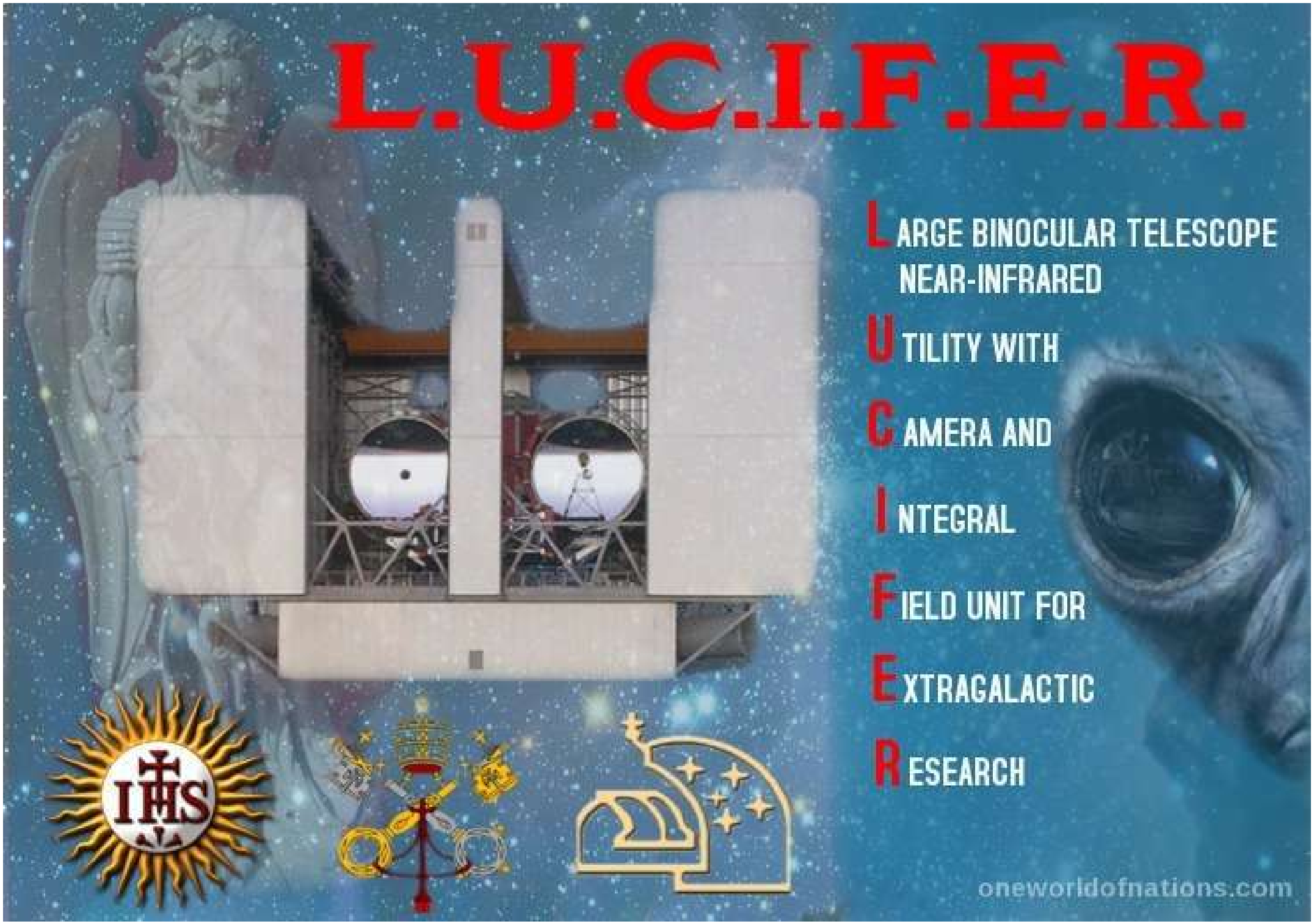


Output can be via open air broadcast or piggybacked on TV/radio signals

U.S. Patent 5159703 issued Oct 27, 1992


MEGADETH

L.U.C.I.F.E.R.



LARGE BINOCULAR TELESCOPE NEAR-INFRARED

UTILITY WITH

CAMERA AND

INTEGRAL

FIELD UNIT FOR

EXTRAGALACTIC

RESEARCH

oneworldofnations.com


Each coil has 5 kW power
and is sourced with 380 Volts.
The three-phase mains voltage
is turned into the high frequency current
by the IGBT transistors.
And therefore the Tesla coils have
a few MILLIONS volts Voltage!
TESLA-HALL
Its a wooden stick
SUBSCRIBE
2:50 / 5:17





Called the rescue stone, **Rhodonite** carries a powerful healing vibration that helps with relationship problems. It brings emotional healing, forgiveness, compassion and helps to release fear.

Affirmation:

My heart chakra is clear & balanced.

ENERGY MUSE®
JEWELRY





Ellison (l) and Claude (r) Onizuka



Francis Richard Scobee
Cmdr of Challenger

Richard Scobee
CEO of Cows in Trees, Ltd.



Michael J. Smith
Challenger pilot



Michael J. Smith
Professor Emeritus, U. of W-M



Judith Resnik
Challenger Mission Specialist



Judith Resnik
Yale Law Professor



Sharon Christa McAuliffe
Challenger Payload Specialist



Sharon A. McAuliffe
Syracuse Law Professor



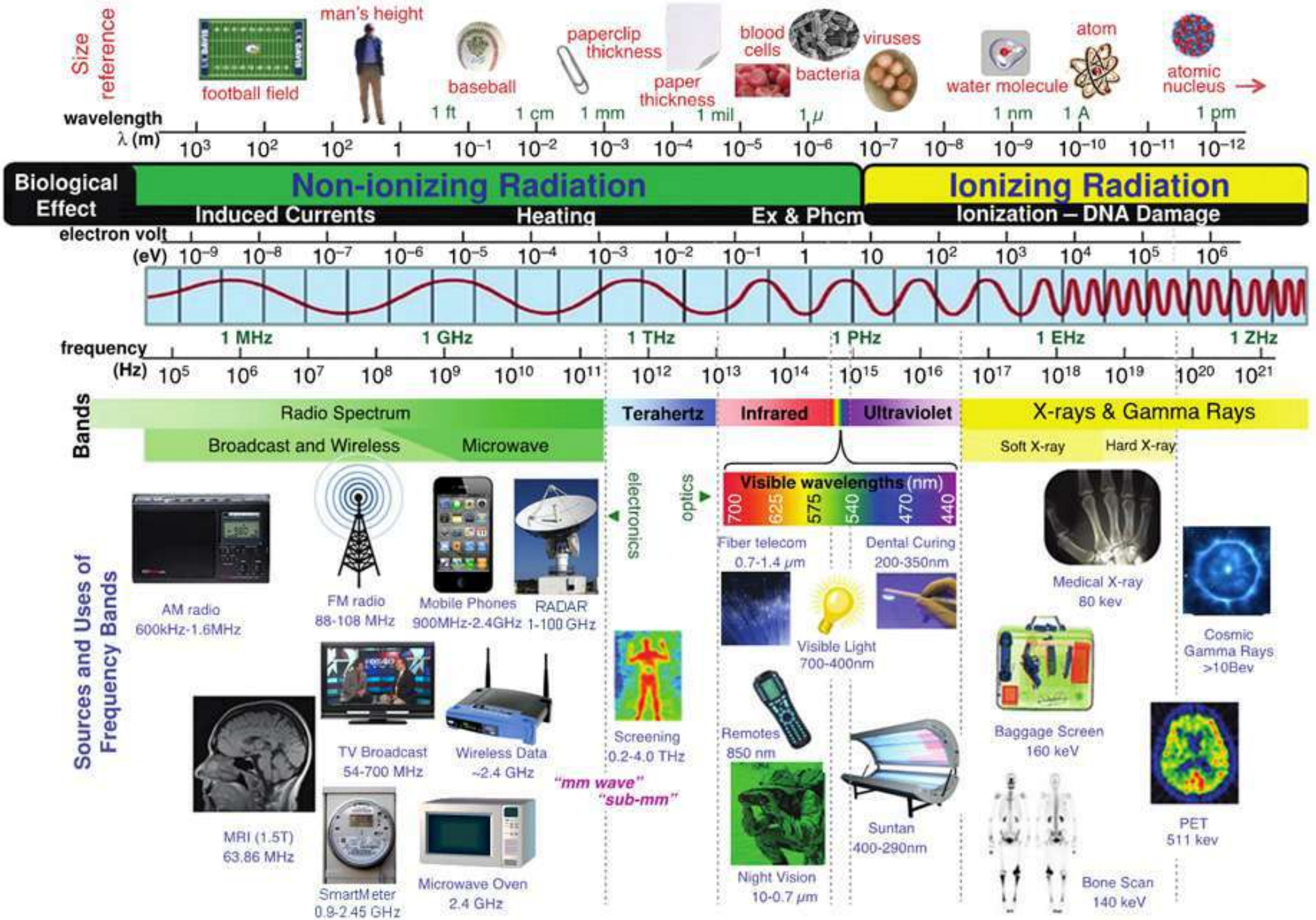
Ronald McNair

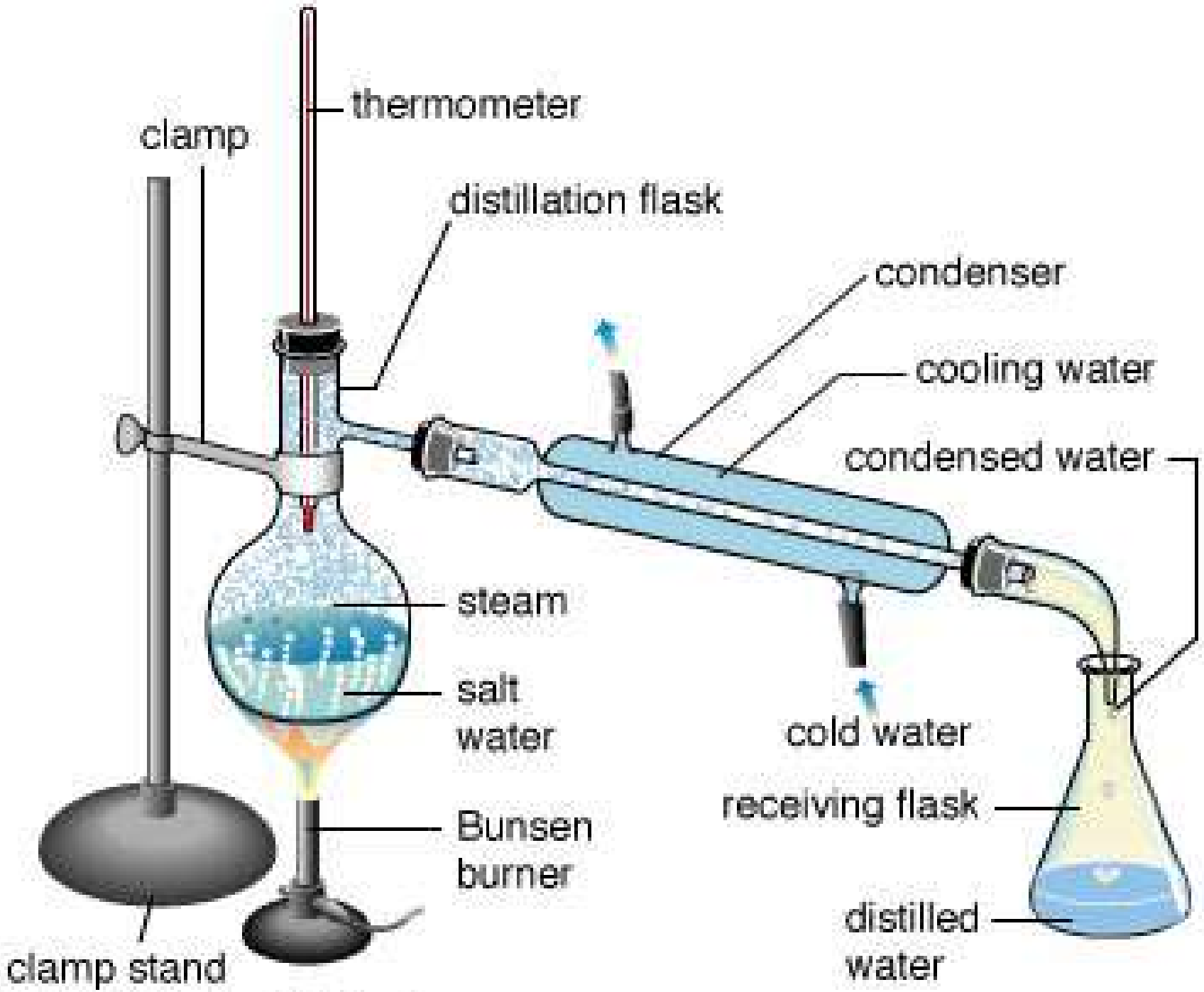


Carl McNair
brother of Ronald McNair



ELECTROMAGNETIC RADIATION SPECTRUM





© 2006 Merriam-Webster, Inc.


WHAT
• What (exactly) do I want to achieve?
• What are the facts?
• What would happen if no decision was made or solution found?
• What do I need in order to find a solution?
WHY
• Why do I want to achieve a solution?
• Why did the problem or opportunity arise?
• Why do I need to find a solution or way forward at all?
• Ask 5 Whys
HOW
• How will the situation be different?
• How relevant is the information I am gathering?
• How can I find out more?
• How can I involve relevant people?
WHERE
• Where did the issue arise?
• Where does it impact?
• Is the "where" important?
• If so, why?
WHO
• Who am I trying to please?
• Who cares about this situation? Who is affected?
• Who is involved (information, help, action)?
• Who needs to be informed?
WHEN
• When did the issue arise?
• When do we need to act?
• By when must it be resolved?

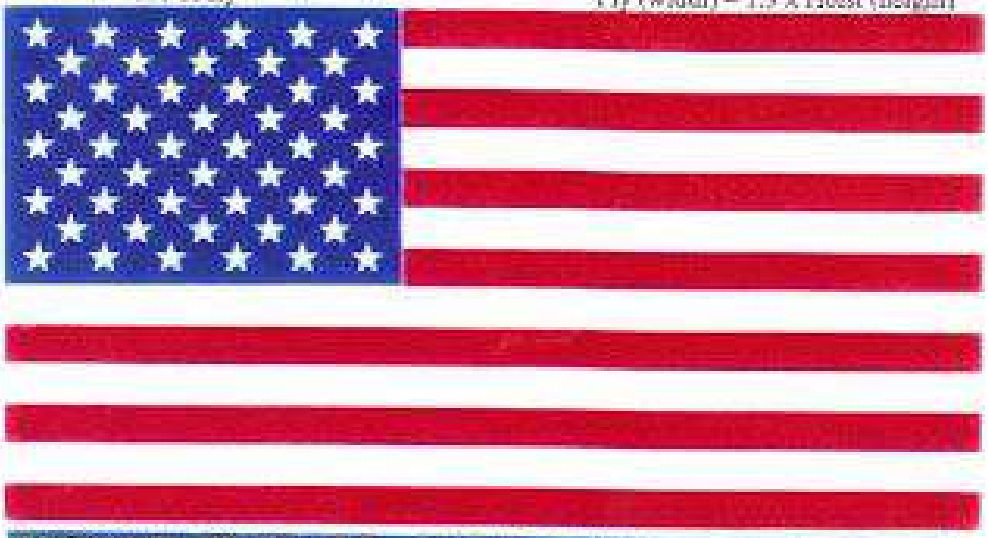
Flag of the Unity-States of the America

Title: 4: U.S.A. Codes: Chapter: 1: Section: 1&2 and under
Presidential: Executive-Order: #10834, dated August the 25 of 1959.

Preserves Constitution

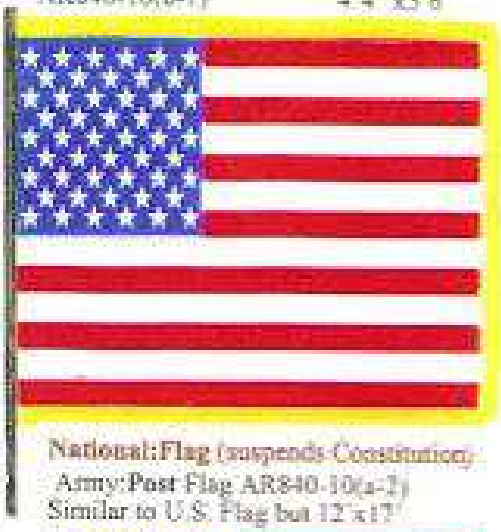
Union = 40% of fly

Fly (width) = 1.9 x Hoist (height)

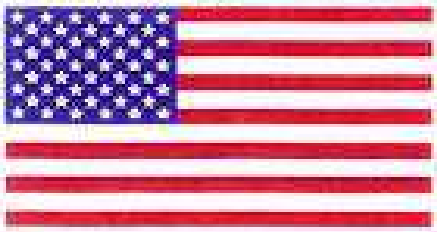


OFFICIAL FLAG of the UNITY-STATES of the AMERICA

National:Flag (suspends Constitution)
Army:**Ceremonial** and **Parade:Flag**
AR840-10(b-1) 4'4" x5'6"



National:Flag (suspends Constitution)
Army:**Post** Flag AR840-10(a-2)
Similar to U.S. Flag but 12'x17'



Official State Flag



National:flags authorized in Title: 4: U.S.A. Codes: Chapter: 1: Part:II: Section: 22-25: Part:III: Section: 31&32 are those used by the executive branch of the government. They represent government not individual citizens.

Union hoist = 7/13 (.5385x1)

Hoist (height) = 1



A yellow fringe is not authorized on a Title: 4: U.S.A.: Codes: Chapter: 1: Sec.: 1&2 flag. It is a mutilation (Sec.:3)



Gold Tassel Admiralty

Gold Spire Court-martial

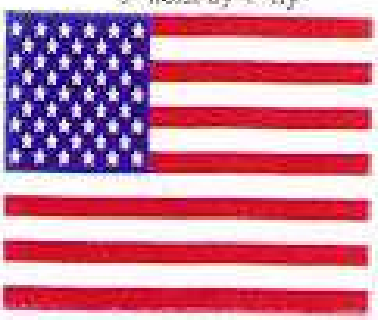
Gold Ball Recruiting

Gold Eagle President, U.S.A.



This Flag, with yellow fringe, represents No nation and No constitution.

National Flag:(suspends Constitution)
Army:**Boat** Flag AR840-10(a-6)
3' hoist by 4' fly



Desecrated State Flag





OUR FLAG

There is only one, official, United: States flag which preserves the rights protected by the U.S.A. Constitution. Under it you are innocent until proven guilty.

National flags are government flags. They do not preserve the U.S.A. Constitutional rights. (You are guilty until proven innocent under them.)

Our flag is red, white and blue (no yellow).

Army

no insignia										
Private E-1 (PV1)	Private E-2 (PV2)	Private First Class (PFC)	Corporal (CPL) / Specialist (SPC)	Sergeant (SGT)	Staff Sergeant (SSG)	Sergeant First Class (SFC)	Master Sergeant (MSG)	First Sergeant (1SG)	Sergeant Major (SGM)	Command Sergeant Major (CSM)	Sergeant Major of the Army (SMA)

Marines

no insignia										
Private (Pvt)	Private First (PFC)	Lance Corporal (LCpl)	Corporal (Cpl)	Sergeant (Sgt)	Staff Sergeant (SSgt)	Gunnery Sergeant (GySgt)	Master Sergeant (MSgt)	First Sergeant (1stSgt)	Master Gunnery Sergeant (MGySgt)	Sergeant Major (SgtMaj)	Sergeant Major of the Marine Corps (SgtMajMC)

Air Force

no insignia											
Airman Basic (AB)	Airman (Amn)	Airman First Class (A1C)	Senior Airman (SrA)	Staff Sergeant (SSgt)	Technical Sergeant (TSgt)	Master Sergeant (MSgt)	First Sergeant (E-7)	Senior Master Sergeant (SMSgt)	First Sergeant (E-8)	Chief Master Sergeant (CMSgt)	First Sergeant (E-9)	Command Chief Master Sergeant (CCM)	Chief Master Sergeant of the Air Force (CMSAF)

Navy

no insignia										
Seaman Recruit (SR)	Seaman Apprentice (SA)	Seaman (SN)	Petty Officer Third Class (PO3)	Petty Officer Second Class (PO2)	Petty Officer First Class (PO1)	Chief Petty Officer (CPO)	Senior Chief Petty Officer (SCPO)	Master Chief Petty Officer (MCPO)	Force or Fleet Command Master Chief Petty Officer (FORMC) (FLTMC)	Master Chief Petty Officer of the Navy (MCPON)

Coast Guard

Seaman Recruit (SR)	Seaman Apprentice (SA)	Seaman (SN)	Petty Officer Third Class (PO3)	Petty Officer Second Class (PO2)	Petty Officer First Class (PO1)	Chief Petty Officer (CPO)	Senior Chief Petty Officer (SCPO)	Master Chief Petty Officer (MCPO)	Command Master Chief (CMC)	Master Chief Petty Officer of the Coast Guard (MCPO-CG)

WHERE DID THE TOWERS GO?

THE EVIDENCE OF DIRECTED FREE-ENERGY TECHNOLOGY ON 9/11, BY DR. JUDY WOOD



THEY LITERALLY TURNED TO DUST IN MID-AIR

"They didn't burn up, nor did they slam to the ground, but turned into dust in mid-air" Dr. Judy Wood - "Although they were demolished in such a way as to look as if they fell, they did not fall at all" John Lash - "Those towers literally disintegrated, they went into dust." Jesse Ventura - "A plane hitting the building, should not turn the buildings into dust." George Noory - "Arguably the most important book of the 21st century." Richard D. Hall - "If you don't have Dr. Judy Wood's book, do yourself a favor; buy it, read it." Mel Fabregas

CLASSIFIED FREE-ENERGY TECHNOLOGY REVEALED



Secret Space Programs, Aliens, Inner Earth Civilizations & Atlantis - CLE 2017 Corey Goode


Construction on Mars
Declassified footage of Camp Century, a top secret Arctic base.
aka Project "ICEWORM"
Play (k)

Construction on Mars



Declassified footage of Camp Century, a top secret Arctic base.

aka Project "ICEWORM"

Construction on Mars



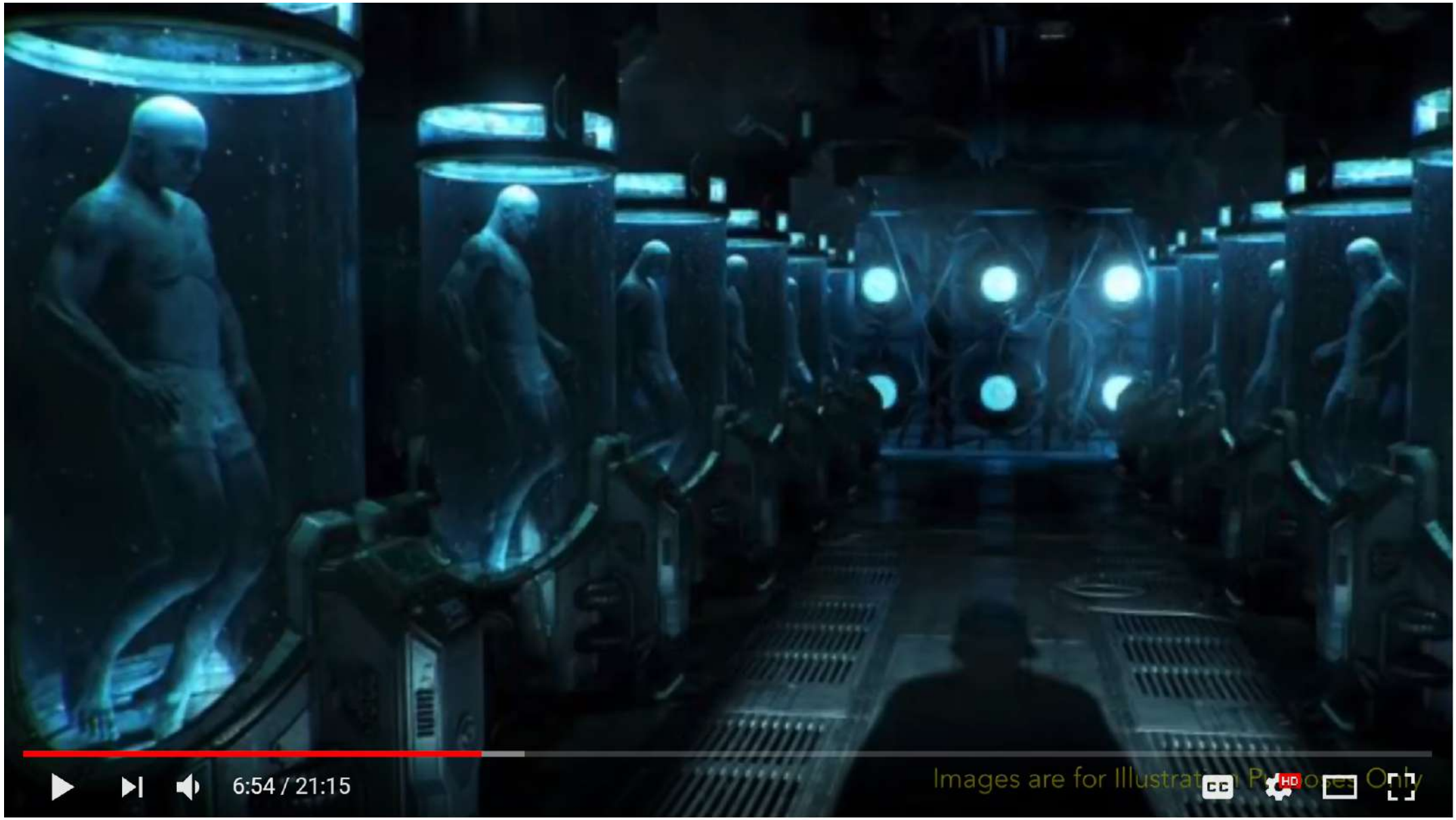
Declassified footage of Camp Century, a top secret Arctic base.

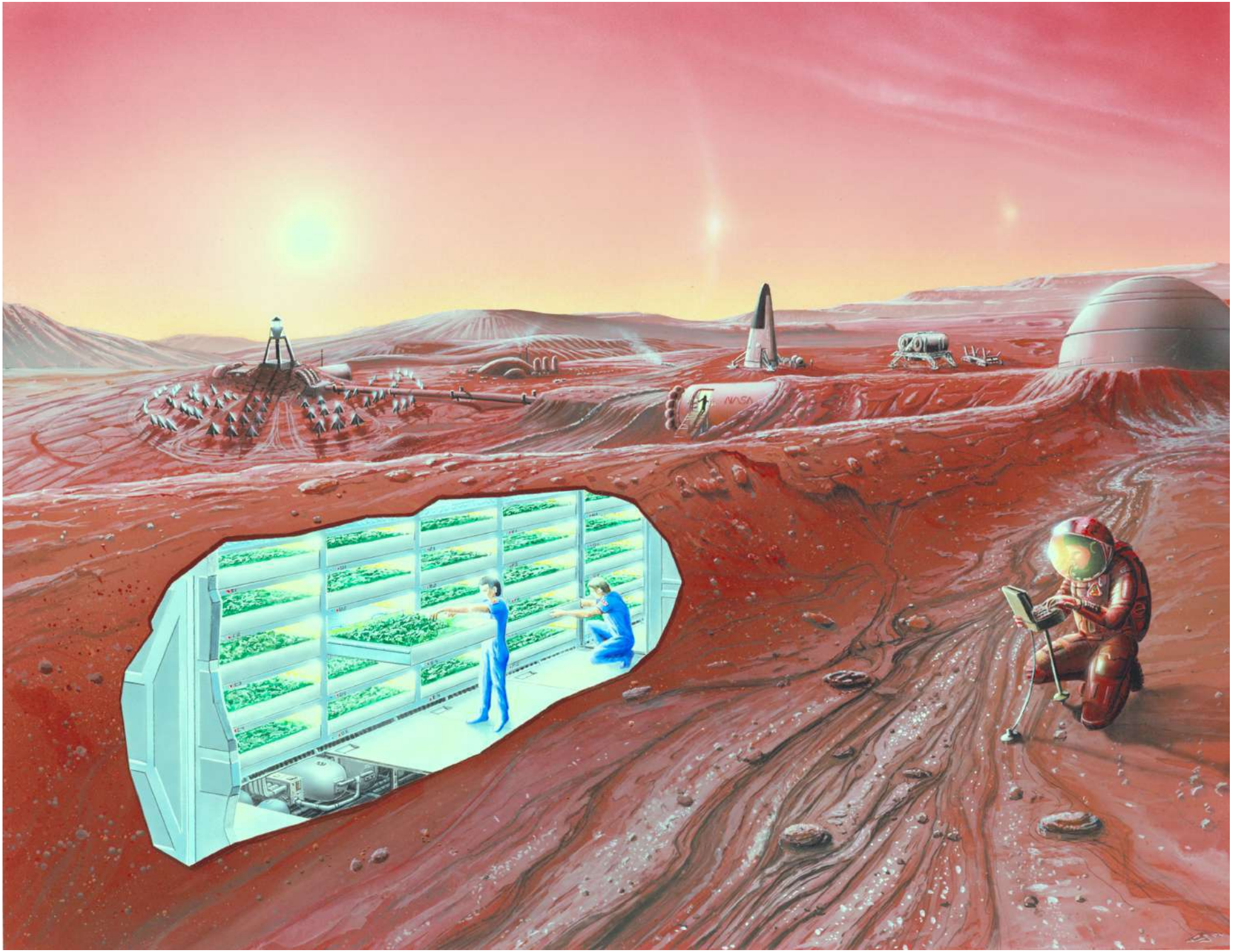
aka Project "ICEWORM"


29:21 / 1:18:13


30:01 / 1:18:13


34:00 / 1:18:13


6:54 / 21:15
Images are for Illustrative Purposes Only

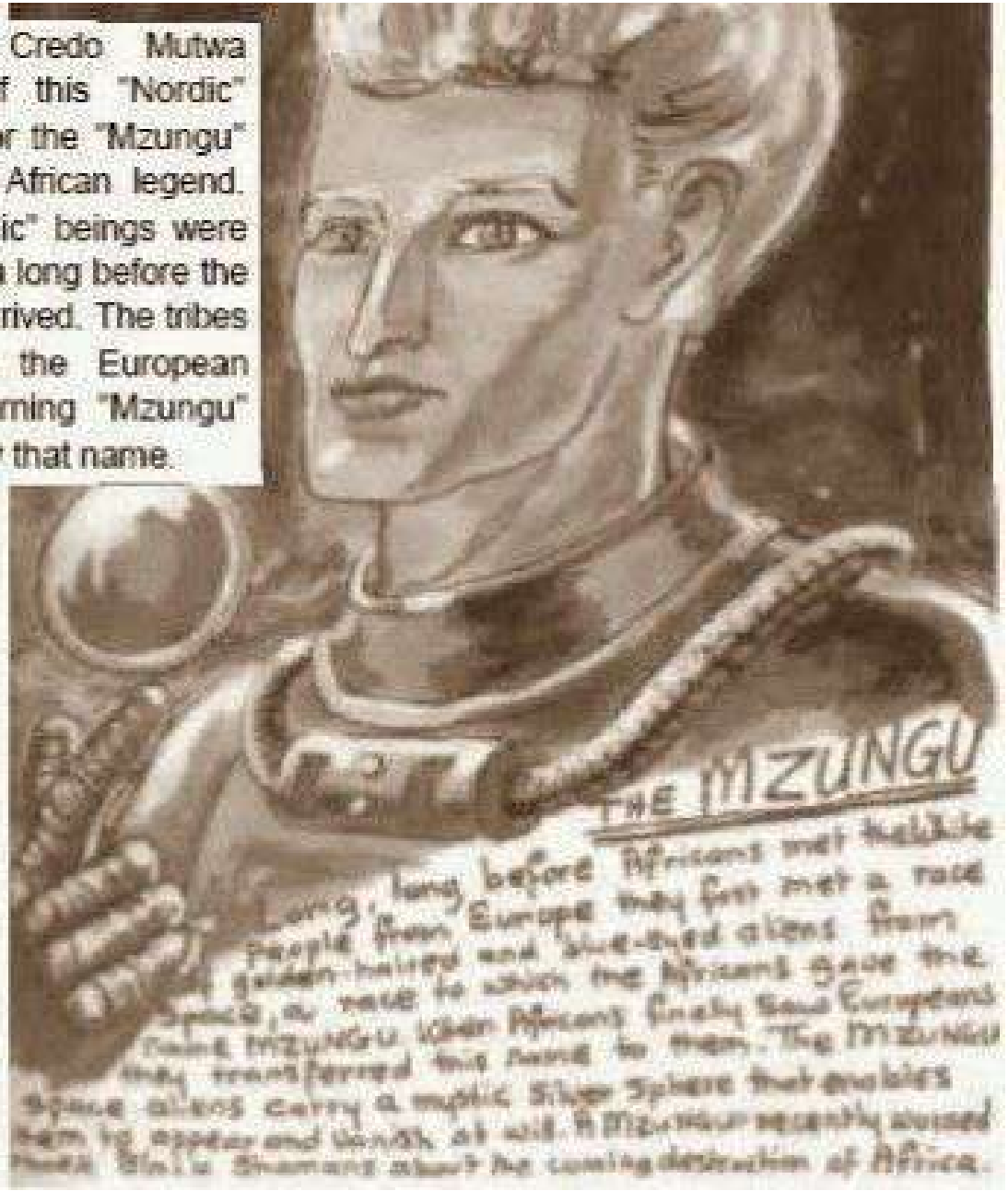

NASA


Credo Vusamazulu Mutwa
1999



The Zulu shaman Credo Mutwa painted the image of this "Nordic" extraterrestrial figure, or the "Mzungu" as they are called in African legend. These tall, white, "Nordic" beings were widely reported in Africa long before the white Europeans first arrived. The tribes people believed that the European settlers were the returning "Mzungu" and they called them by that name.


Official historian of the Zulu nation























Torture of Credo Mutwa an...
aurora-project.forumfree.it



Torture of Credo Mutwa and th...
aurora-project.forumfree.it



Torture of Credo Mutwa and the Theft ...
aurora-project.forumfree.it



Torture of Credo Mutwa and the Theft ...
aurora-project.forumfree.it
















UFOTV


Credo
Mutwa
1979



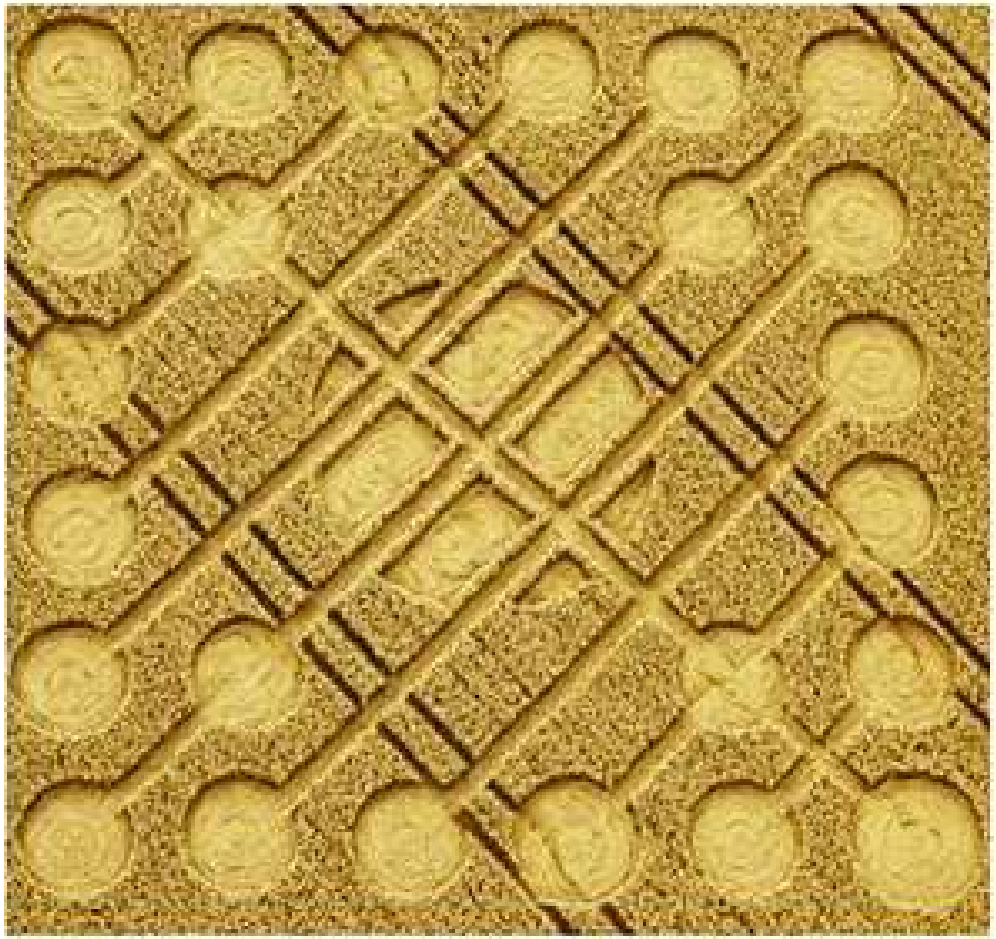


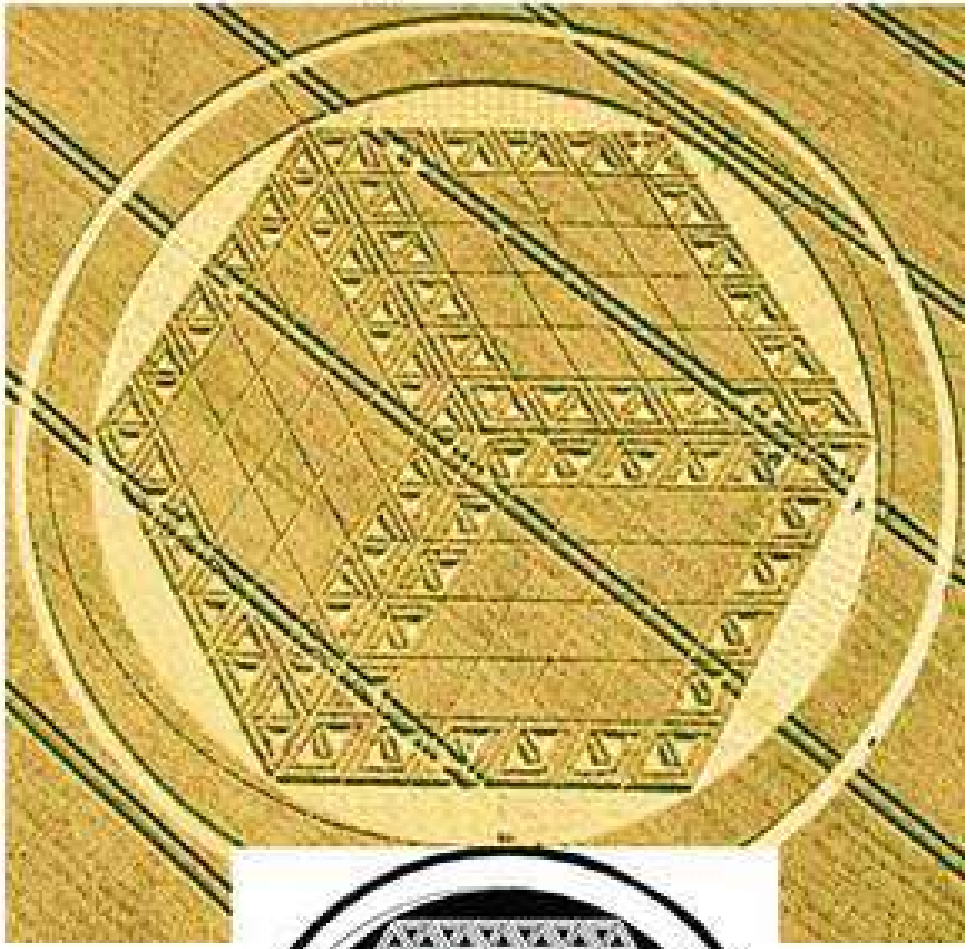



Credo Vusamazulu Mutwa
1999

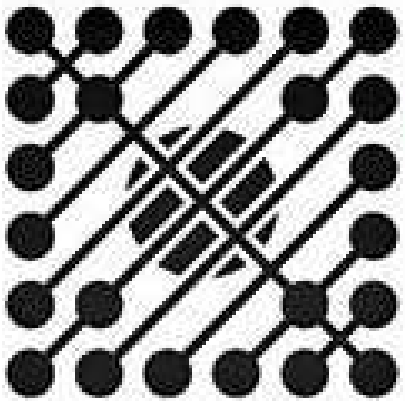


Another device which looks like an "antenna" was drawn in crops on August 23, 2012, then became each of six faces of a "Rubik's cube" on August 26, 2012

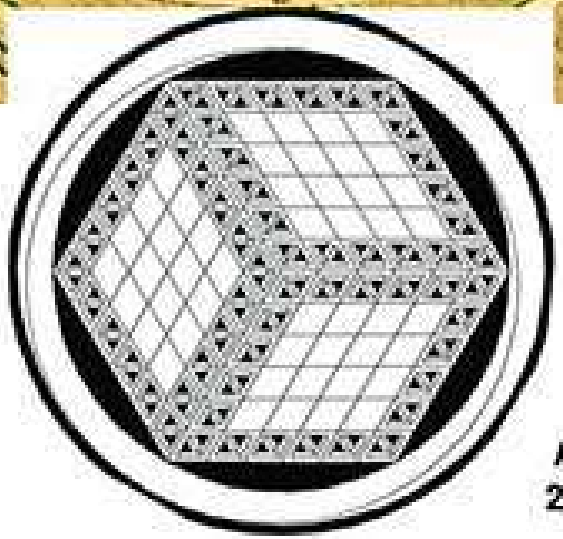








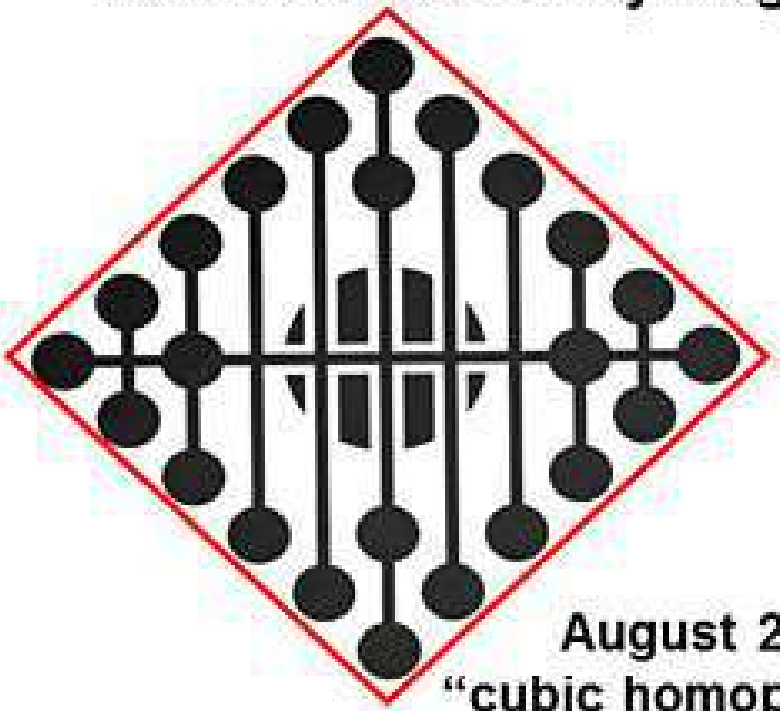
Not made by humans on Earth!



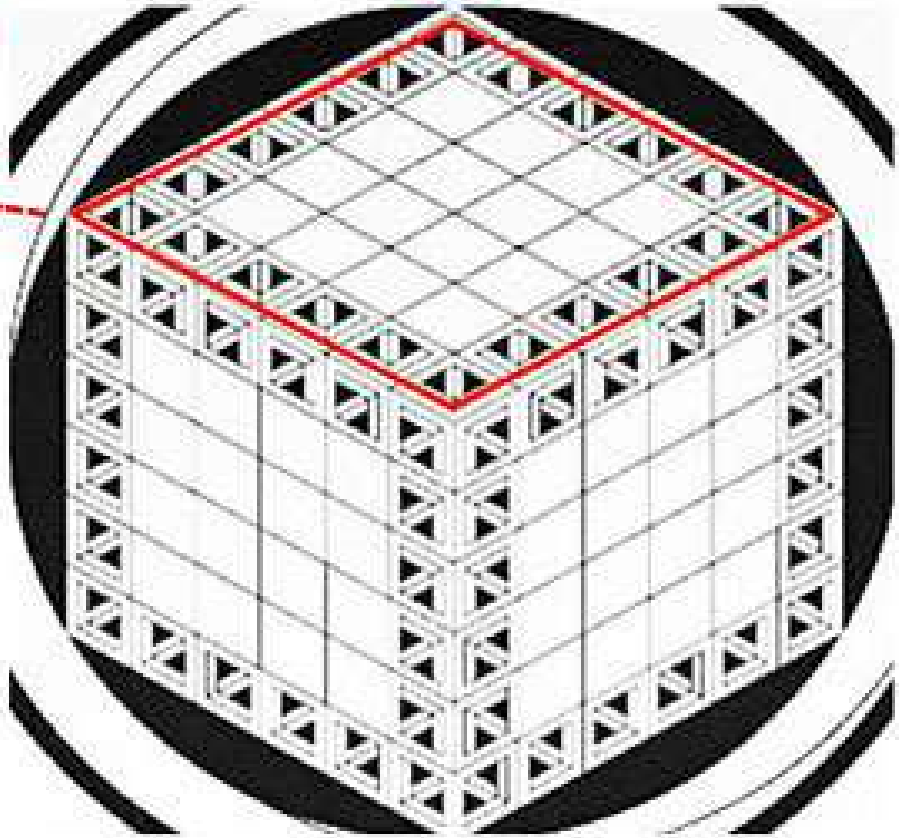
August 23, 2012

August 26, 2012

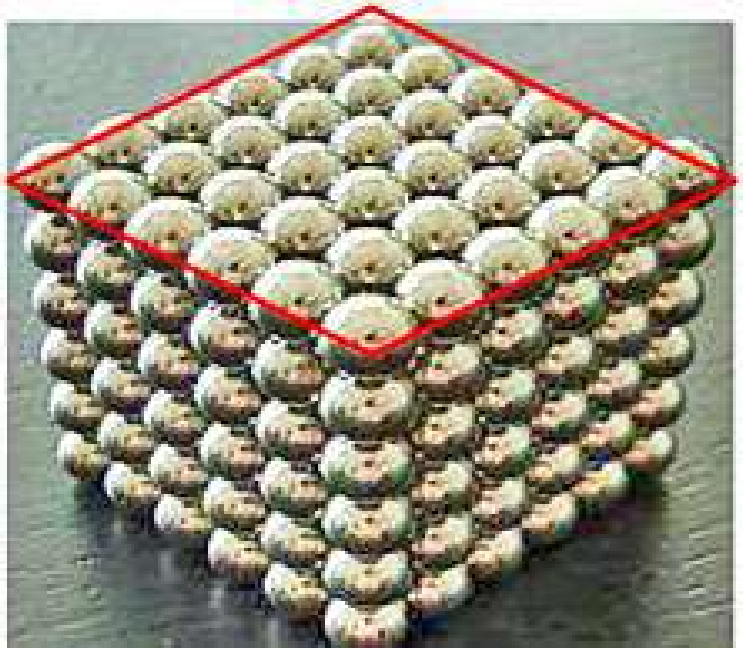
The top of that "cube magnet" was drawn in another crop picture, where it now resembles a toy magnet made from 216 round magnetic balls



top view

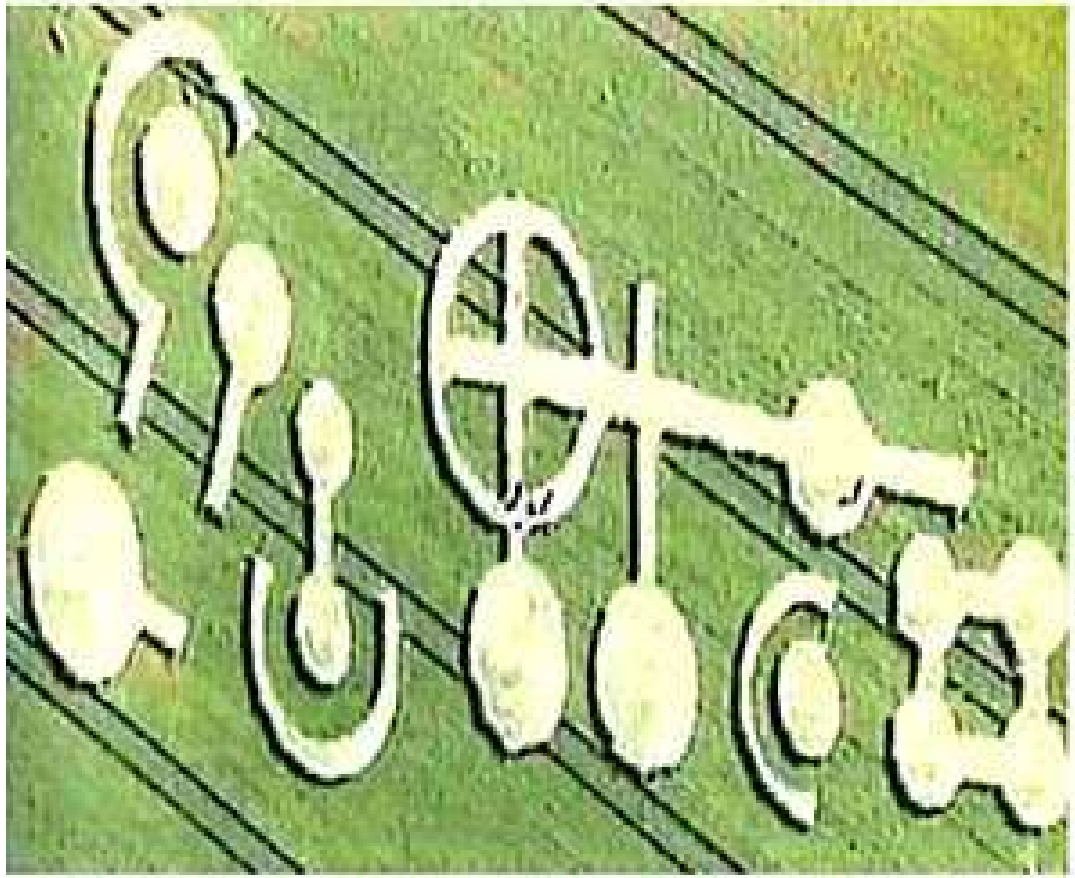


August 23, 2012
"cubic homopolar motor"



August 26, 2012 in crops
"cube magnet"

A possible physical artefact from our distant past shows a modern crop picture from 1991

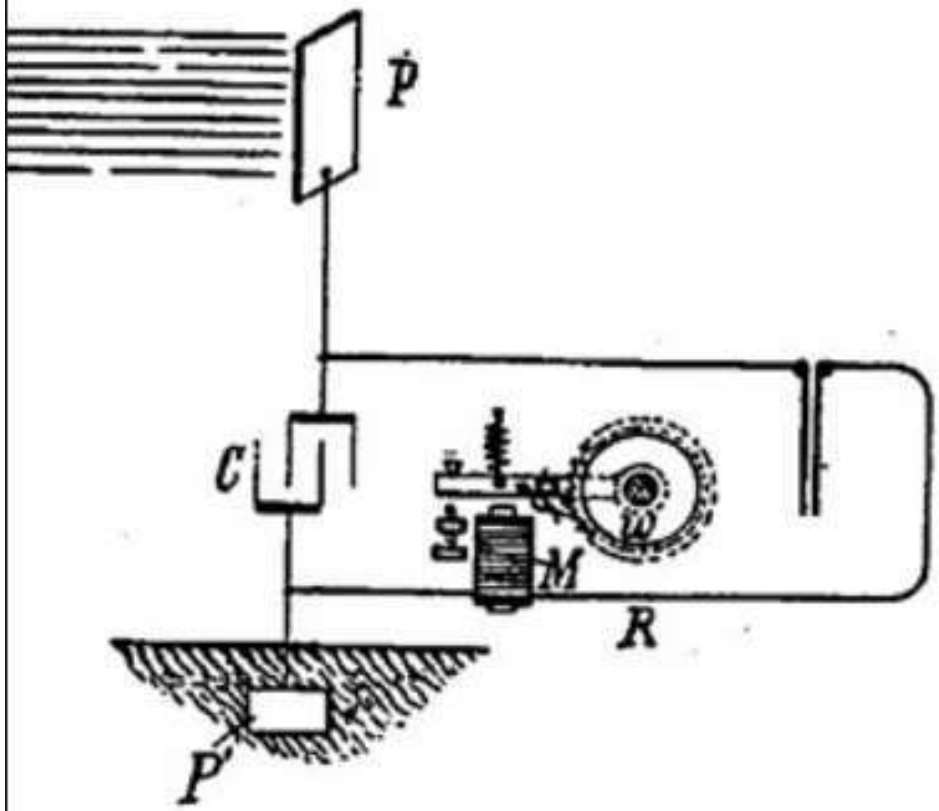


Grasdorf, Germany 1991



buried golden plate

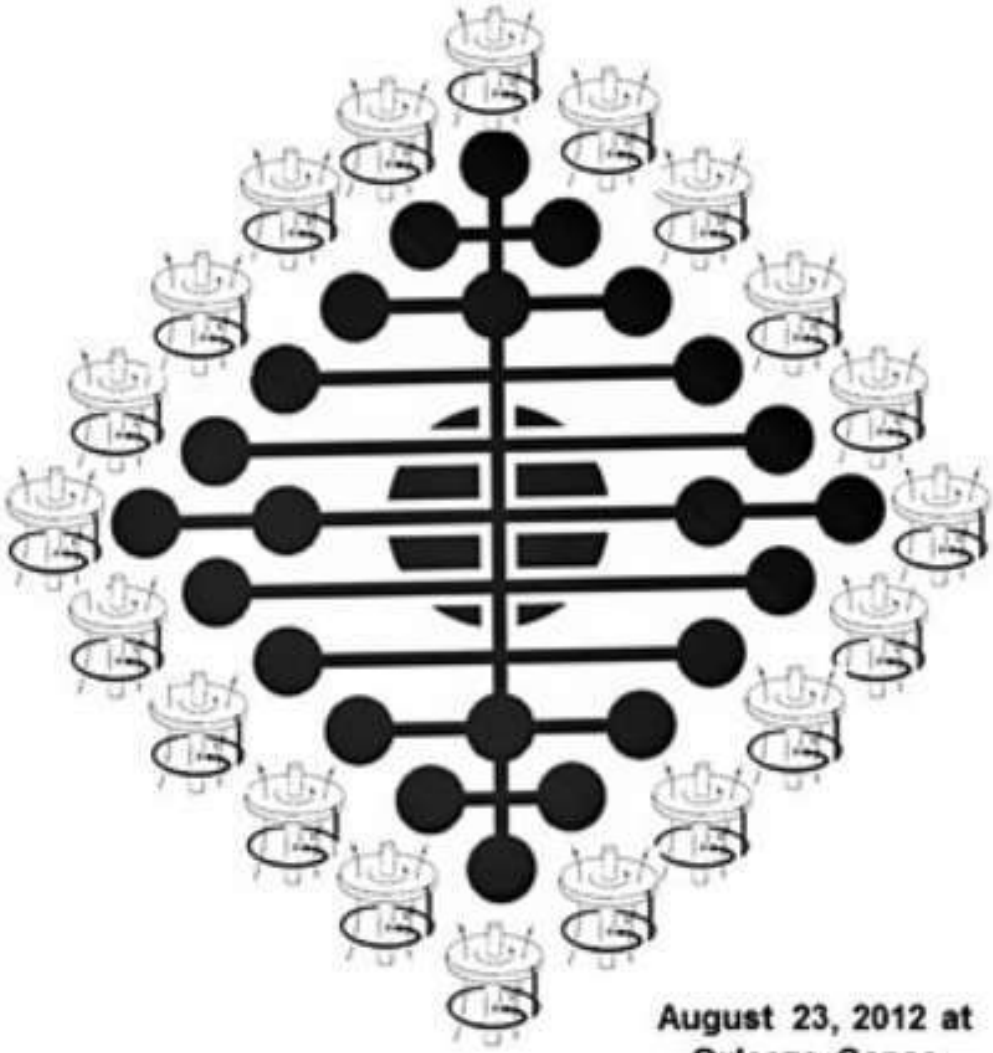
Tesla's "radiant energy receiver" of 1901 used a metal plate P and a capacitor C to collect charged particles from space, which were then discharged into a receiver R, that consisted of an electromagnet M coupled to a mechanical wheel w.



Inventor

Nikola Tesla

The crop artist device seems to use a dipole antenna to collect electromagnetic waves or particles from space, which then induce weak AC currents that turn a series of self-exciting homopolar generators.



August 23, 2012 at Oxleaze Copse



















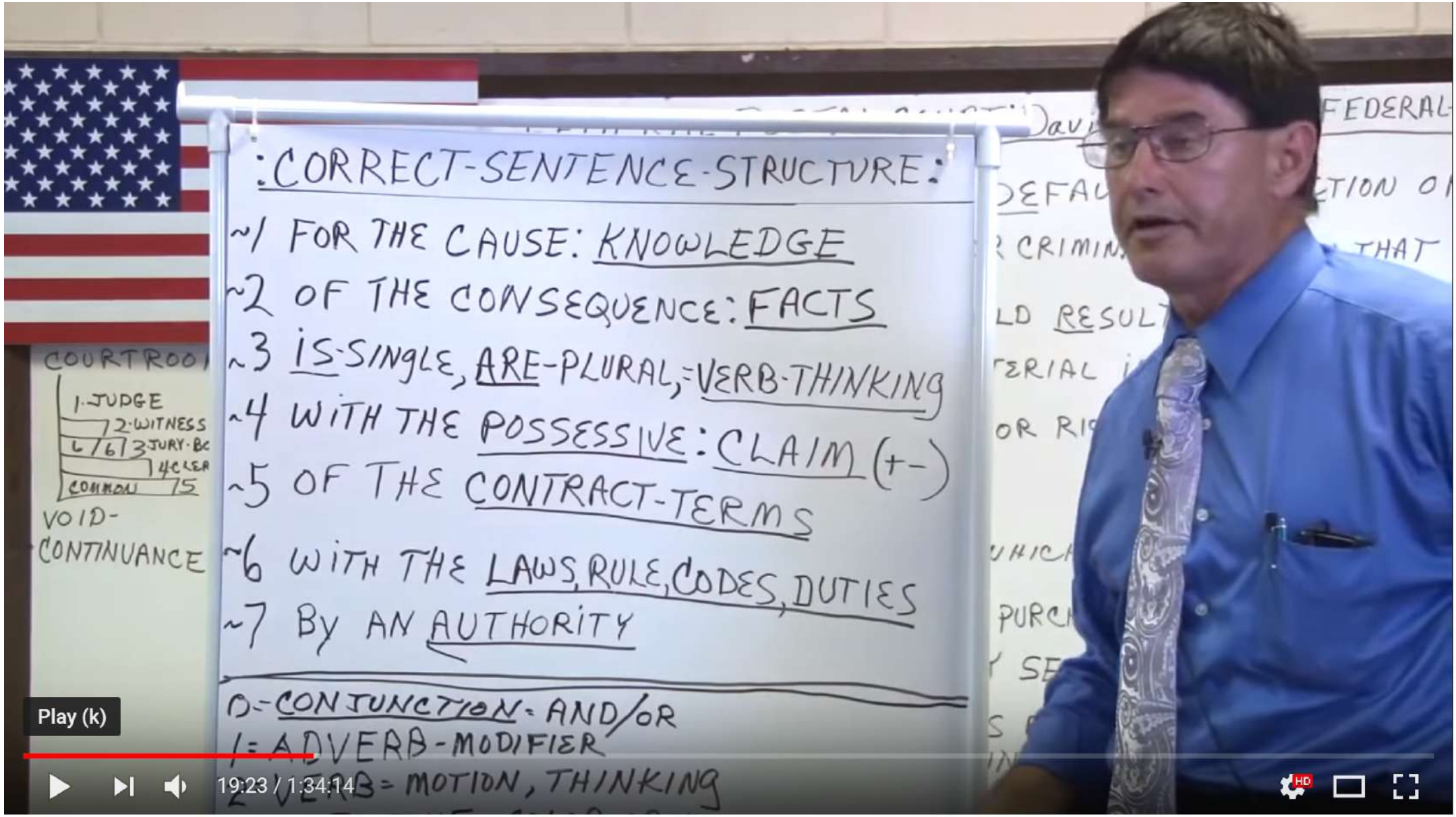




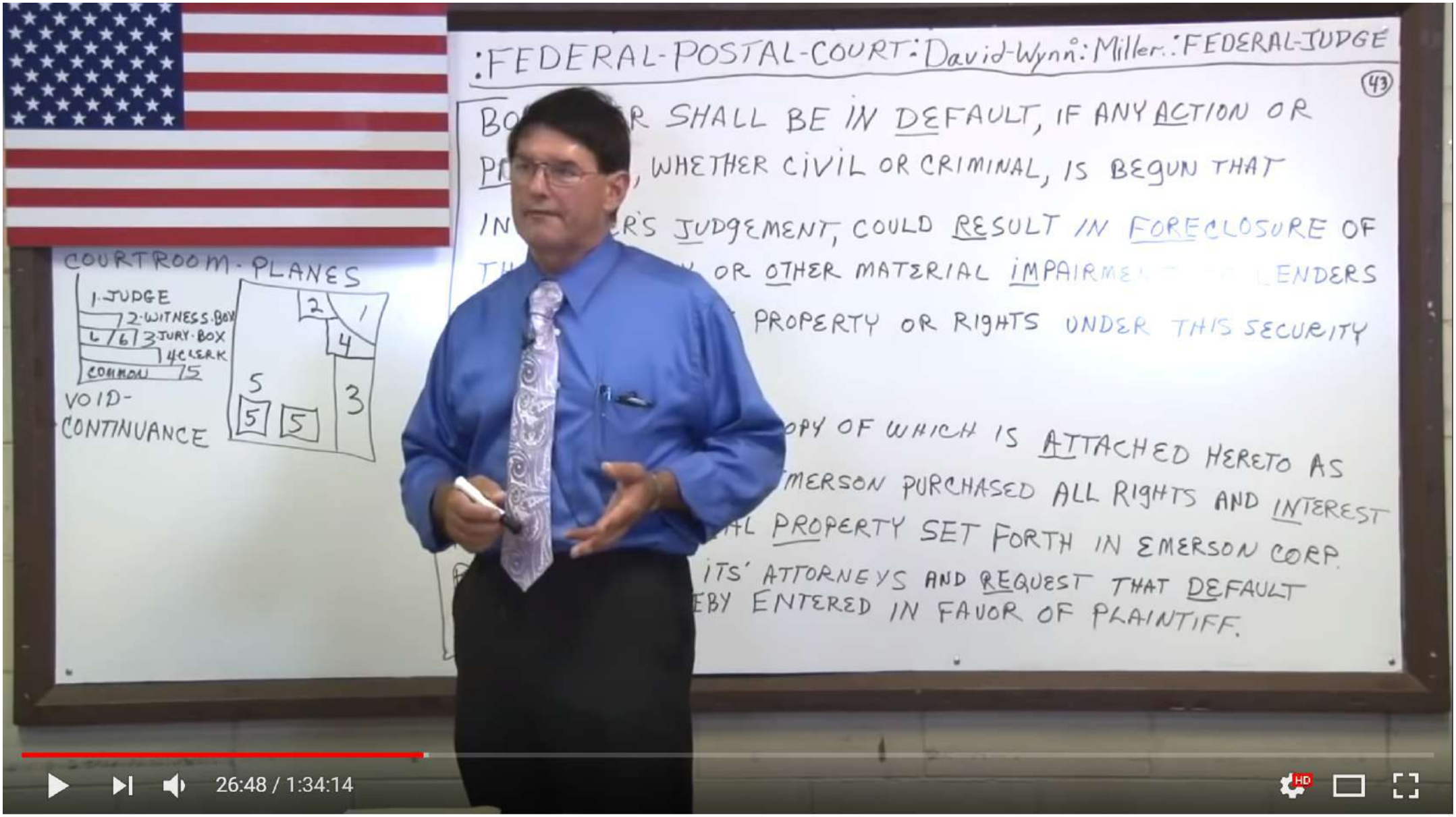

IronAmmonite.com



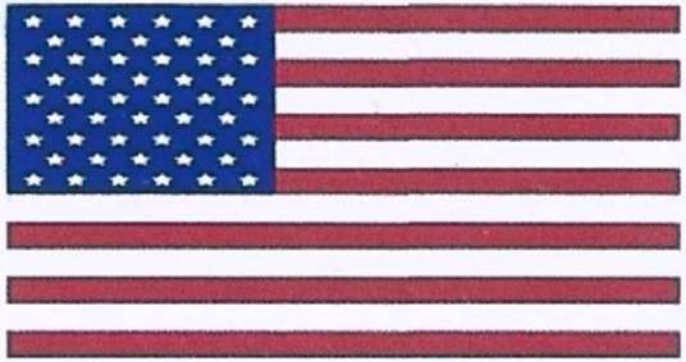




The STRAW MAN "Explained" :David-Wynn: Miller


:FEDERAL-POSTAL-COURT:David-Wynn:Miller.:FEDERAL-JUDGE
(43)
SHALL BE IN DEFAULT, IF ANY ACTION OR
WHETHER CIVIL OR CRIMINAL, IS BEGUN THAT
'S JUDGEMENT, COULD RESULT IN FORECLOSURE OF
OR OTHER MATERIAL IMPAIRMENT
LENDERS
PROPERTY OR RIGHTS UNDER THIS SECURITY
OPY OF WHICH IS ATTACHED HERETO AS
MERSON PURCHASED ALL RIGHTS AND INTEREST
AL PROPERTY SET FORTH IN EMERSON CORP.
ITS' ATTORNEYS AND REQUEST THAT DEFAULT
EBY ENTERED IN FAVOR OF PLAINTIFF.
COURTROOM-PLANES
1-JUDGE
2-WITNESS-BOX
3-JURY-BOX
4-CLERK
5
COMMON
VOID-
CONTINUANCE
26:48 / 1:34:14

For the Mark-kishon: Christopher is with the claim of the fair-market-usage:



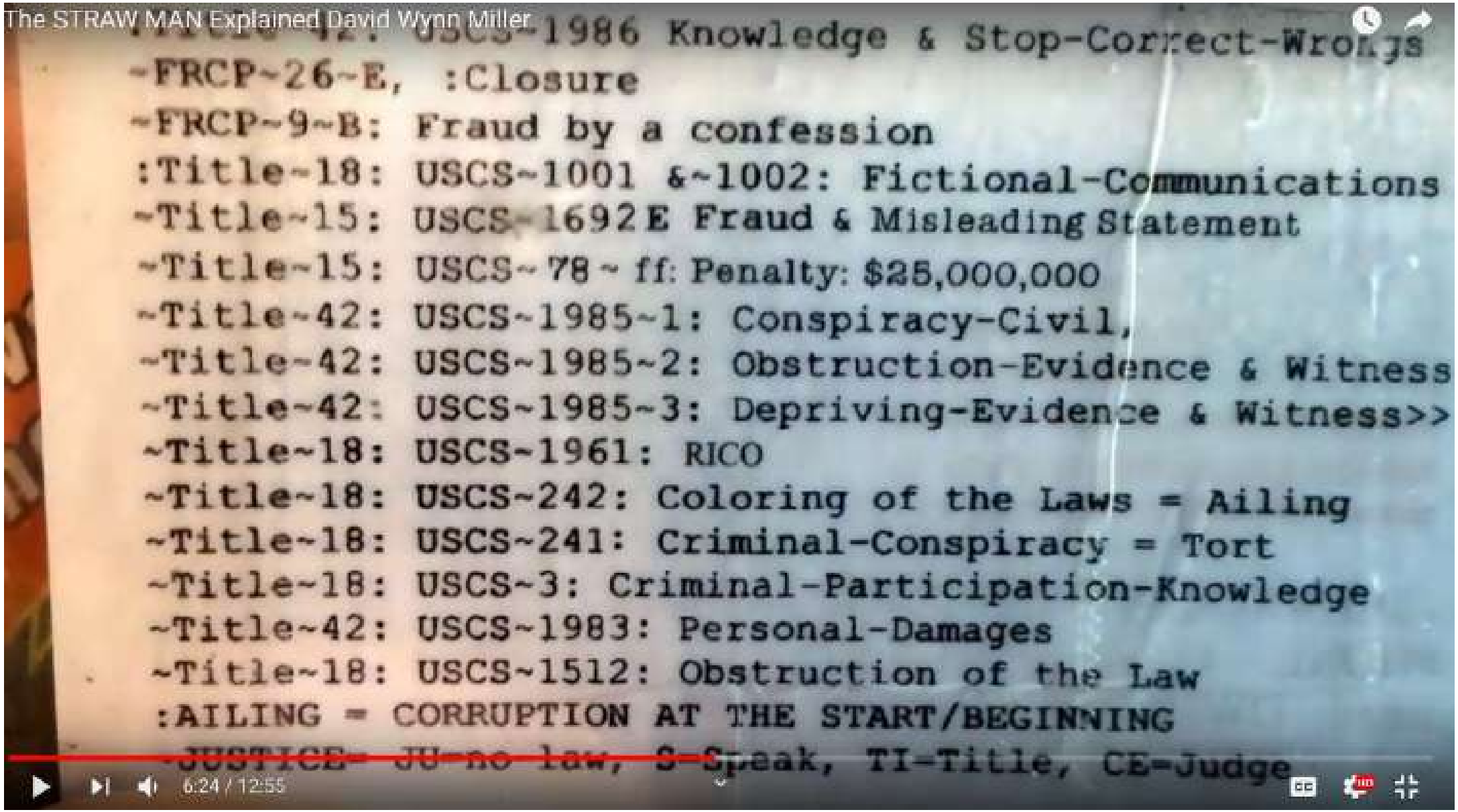




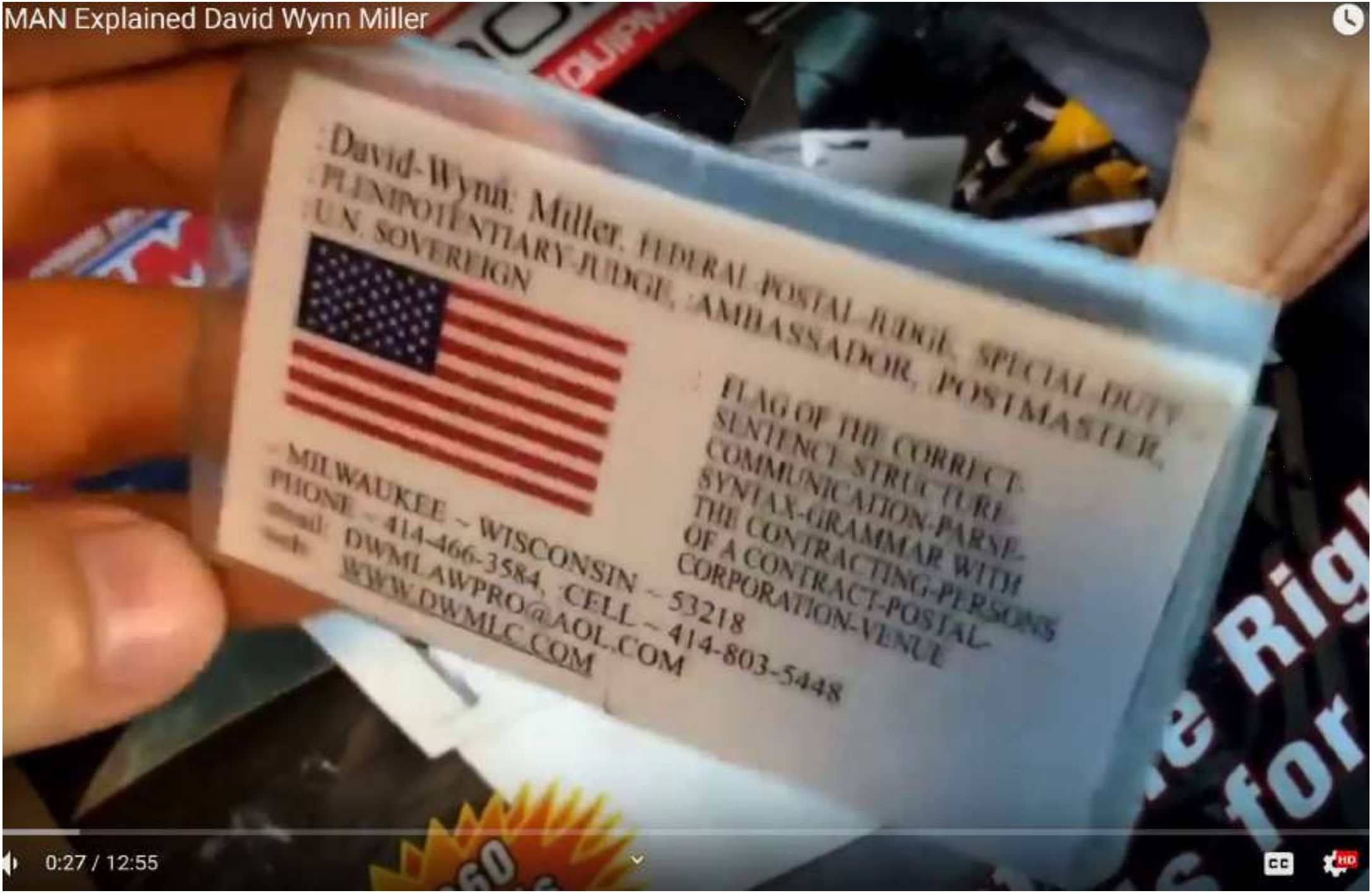
:C.-S.-S.-C.-P.-S.-G.-
FLAG OF THIS
DOCUMENT-
CONTRACT-POSTAL-
VESSEL-COURT-
VENUE.

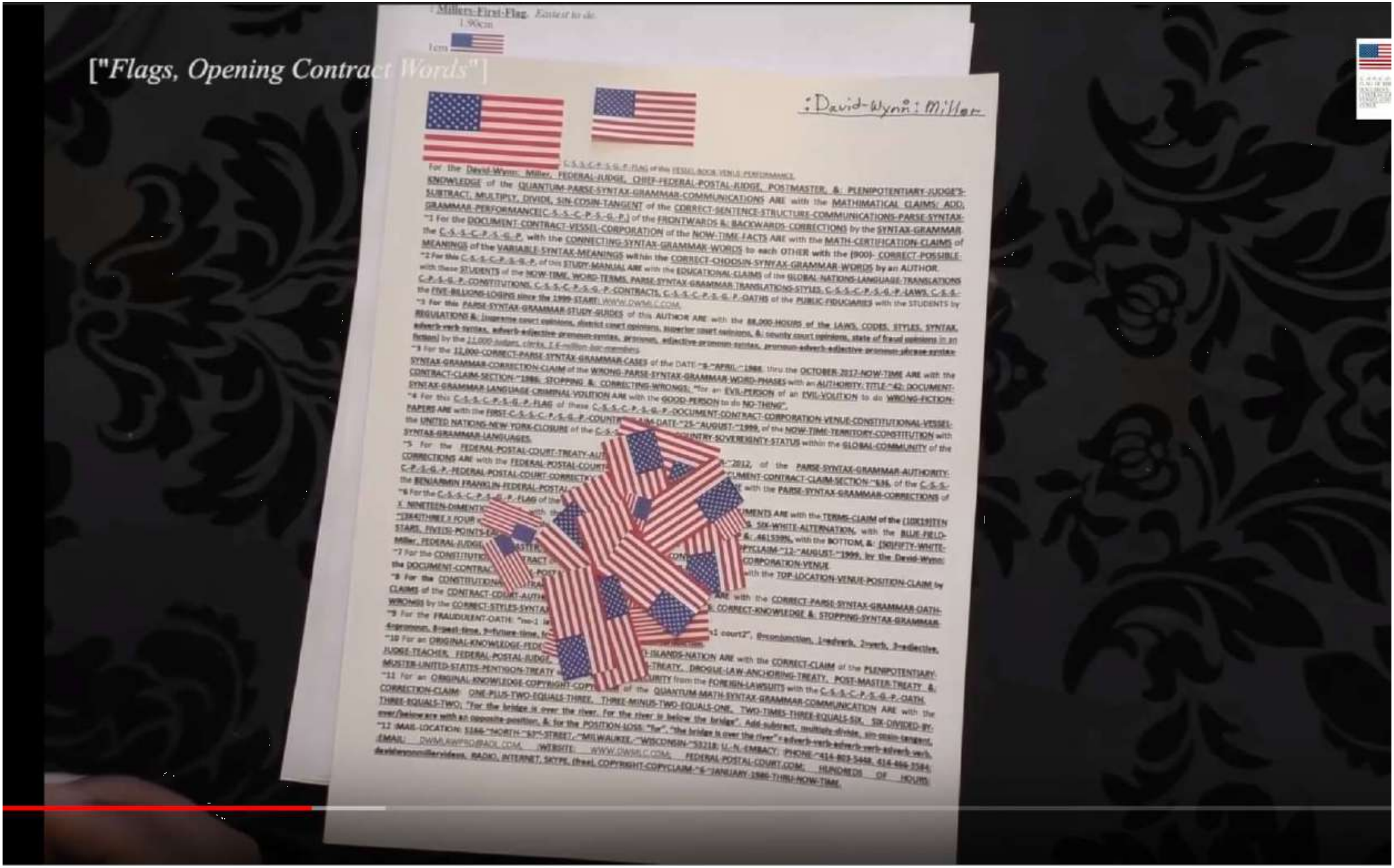
Play (k)

0:01 / 9:32


The STRAW MAN Explained David Wynn Miller
~FRCP~26~E, :Closure
~FRCP~9~B: Fraud by a confession
:Title~18: USCS~1001 &~1002: Fictional-Communications
~Title~15: USCS~1692E Fraud & Misleading Statement
~Title~15: USCS~78~ff: Penalty: $25,000,000
~Title~42: USCS~1985~1: Conspiracy-Civil,
~Title~42: USCS~1985~2: Obstruction-Evidence & Witness
~Title~42: USCS~1985~3: Depriving-Evidence & Witness>>
~Title~18: USCS~1961: RICO
~Title~18: USCS~242: Coloring of the Laws = Ailing
~Title~18: USCS~241: Criminal-Conspiracy = Tort
~Title~18: USCS~3: Criminal-Participation-Knowledge
~Title~42: USCS~1983: Personal-Damages
~Title~18: USCS~1512: Obstruction of the Law
:AILING = CORRUPTION AT THE START/BEGINNING
6:24 / 12:55


STRAW MAN Explained David Wynn Miller
:David-Wynn: Miller. :FEDERAL-POSTAL-JUDGE, :SPECIAL-DUTY
PLENIPOTENTIARY-JUDGE, :AMBASSADOR, :POSTMASTER,
:UN: SOVEREIGN
: FLAG OF THE CORRECT-
SENTENCE-STRUCTURE.
COMMUNICATION-PARSE-
SYNTAX-GRAMMAR WITH
THE CONTRACTING-PERSONS
OF A CONTRACT-POSTAL-
CORPORATION-VENUE
WISCONSIN – 53218
– CELL – 414-803-5448
AWPRO@AOL.COM
DDWMILC.COM
0:25 / 12:55


MAN Explained David Wynn Miller
:David-Wynn: Miller, FEDERAL-POSTAL-JUDGE, SPECIAL-DUTY
:PLENIPOTENTIARY-JUDGE, AMBASSADOR, POSTMASTER,
:U.N. SOVEREIGN
FLAG OF THE CORRECT
SENTENCE-STRUCTURE
COMMUNICATION-PARSE-
SYNTAX-GRAMMAR WITH
THE CONTRACTING-PERSONS
OF A CONTRACT-POSTAL-
CORPORATION-VENUE
~MILWAUKEE~WISCONSIN~53218
PHONE~414-466-3584, CELL~414-803-5448
DWMLAWPRO@AOL.COM
WWW.DWMLC.COM
0:27 / 12:55


["Flags, Opening Contract Words"]
:Millers-First-Flag. Fastest to die
1.90cm
1cm
:David-Wynn: Miller

ler Book

FOR THE QUANTUM-PARSE-SYNTAX-GRAMMAR OF THE CORRECT-SENTENCE-STRUCTURE-COMMUNICATION-PARSE-SYNTAX-GRAMMAR(C.-S.-S.-C.-P.-S.-G.) IS WITH THESE CLAIMS BY THIS FEDERAL-JUDGE, POSTMASTER, AND PLENIPOTENTIARY-JUDGE :David-Wynn: Miller.

~1 FOR THIS DOCUMENT-CONTRACT-VESSEL-CORPORATION OF THE NOW-TIME-FACTS ARE WITH THE CLAIMS OF THE MATH-CERTIFICATIONS WITH THE C.-S.-S.-C.-P.-S.-G. OF EACH CONNECTING-WORD-SYNTAX WITH EACH OTHER-WORD'S-CONNECTING-SYNTAX OF THE C.-S.-S.-C.-P.-S.-G. WITH THE DOCUMENT-CONTRACT-POSTAL-VESSEL-FEDERAL-CORT-VENUE BY THIS AUTHORITY AND: FEDERAL-JUDGE: David-Wynn: Miller.

~2 FOR THE C.-S.-S.-C.-P.-S.-G. OF THIS STUDY-MANUAL IS WITH THESE EDUCATIONAL-STUDY-CLAIMS OF THE 150-NATIONS AND: PARSE-SYNTAX-GRAMMAR-TRANSLATIONS WITH THESE GLOBAL-STUDENTS WITH THE NOW-TIME, WORD-TERMS, SYNTAXS-STYLES, CORRECT-SYNTAX-GRAMMAR-LAWS, CONSTITUTIONAL-CONTRACT-CLAIMS AND MARKET-CLOSURES. (3-BILLION-STUDENTS)-'INTERNET'-LOCATION-COUNTER: WWW.DWMLC.COM.

~3 FOR THE STUDY-GUIDE-SYNTAXS-GRAMMAR OF THIS AUTHOR ARE WITH THE CLAIMS OF THE 80,000-HOURS WITH THESE THIRTY-TWO(32)-YEARS-~JANUARY~1980-TO-~JULY~2012.

~4 FOR THIS C.-S.-S.-C.-P.-S.-G.-FLAG OF THE DOCUMENT-CONTRACT-CORPORATION-VESSEL ARE WITH THE NOW-TIME-QUANTUM-COMMUNICATIONS-SYNTAX-GRAMMAR-CLAIMS OF THIS DATE-~25-~AUGUST-~1999, WITH THE TERRITORY-CLAIMS OF THE FIRST-ORIGINAL-C.-S.-S.-C.-P.-S.-G.-VESSEL-COUNTRY IN THE C.-S.-S.-C.-P.-S.-G.-TERRITORY-DRYDOCK-COURT-PAPER-DOCUMENT-CONTRACT-VESSEL WITHIN THE WRITTEN-HISTORY OF THE PLANET-EARTH.

~5 FOR THIS C.-S.-S.-C.-P.-S.-G.-FLAG OF THE CONTRACT-STATES-CORPORATION-VESSEL IS WITH THE CLAIMS OF THE 1-X-1.9-DIMENSION WITH THE THIRTEEN-HORIZONTAL-STRIPS OF THE SEVEN-HORIZONAL-RED AND: SIX-HORIZONAL-WHITE WITH THE RED-WHITE-RED-WHITE-ALTERATION AND WITH THE BLUE-FIELD OF THE 3X4: DIMENSION WITH THE 40% OF THE TOP-LENGTH AND .538461% OF THE SIDE-HEIGHT~TOP & .461539% TO-BOTTOM WITH THE 50-WHITE-5-POINT-STARS ON THE 3X4-DIMENTIONAL-BLUE-FIELD BY THIS COPYCLAIM-COPYRIGHT.

~6 FOR THIS C.-S.-S.-C.-P.-S.-G.-FLAG OF THIS HONOR-POSITION ARE WITH THE TOP-LEFT-LOCATION-CLAIM ON THE DOCUMENT-CONTRACT-POSTAL-VESSEL-COURT WITH THE DOCUMENT-CONTRACT-STATES-CORPORATION-VESSEL.

~7 FOR THE CONSTITUTIONAL-CONTRACT-LAW-TERMS OF THE C.-S.-S.-C.-P.-S.-G.-CONTRACT-COURT ARE WITH THE C.-S.-S.-C.-P.-S.-G.-OATH WITH THE TERMS OF THE COMPLAINT-CAUSE WITH A C.-S.-S.-C.-P.-S.-G.-JURISDICTIONAL-FLAG-VENUE-COURT.

~8 FOR AN OATH OF THE FICTIONAL-WORDS: *"1-NO 2-LAW OR 2-FACT, 4-9-SHALL 1-BE 2-8-TRIED 1-IN 2-COURT(DPV):*ADVERB-VERV-FICTIONAL-COURT-OATH.

~9 FOR THIS JUDGE: David-Wynn: Miller's-KNOWLEDGE OF OUR SEE-TREATY, SEA-PASS, HEAR-TREATY, DROGUE-LAW, MUSTER-MASTER-TREATY, POSTMASTER-TREATY AND: BANKING-TREATY ARE WITH THESE SYNTAX-GRAMMAR-CORRECTION-CLAIMS OF THE FICTIONAL-LANGUAGE-FORMATS WITH THE C.-S.-S.-C.-P.-S.-G.-POSITION-LODIAL-FACT=PHRASE OF THE C.-S.-S.-C.-P.-S.-G.-DOCUMENT-CONTRACT-POSTAL-VESSEL-COURT WITH THESE UNITED-STATES-POSTAL-YELLOW-FRINGE-FLAG-DI-STRICT-COURT-BUILDINGS.

~10 FOR THIS ORIGINAL-KNOWLEDGE OF THIS COPYCLAIMS/COPYRIGHTS ARE WITH THE CLAIM OF THESE QUANTUM-MATH-COMMUNICATION-PARSE-SYNTAX-GRAMMAR WITH THESE MATH-SYNTAX-OPERATIONAL-CLAIMS: (1 + 2 = 3*3 - 2 = 1), (2 X 3 = 6 * 6/3 = 2).

:MAIL: FEDERAL-JUDGE: David-Wynn: Miller, ~5166~NORTH~63RD~STREET, ~MILWAUKEE,~WISCONSIN, ~53218, PHONE:(414)466-3584, CELL-(414)803-5448 E-MAIL: DWMLAWPRO@AOL.COM, WEB-SITE: WWW.DWMLC.COM; SKYPE: davidwynnm(away) AND davidwynnm2(home) ~JAN~1980 ~THROUGH-~JULY-~2012: COPYRIGHT/COPYCLAIM.



FOR THE CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFE IS WITH THIS CLAIM BY THIS CLAIMANT.

-1 FOR THIS CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFE **IS** WITH THIS CLAIM OF THE LIVEBIRTH-NAME: _____, ON THIS DATE-____DAY WITHIN THE MONTH--_____, IN THE YEAR--_____, BY THESE WITNESSES AND: CLAIMANT.

-2 FOR THIS CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFEBIRTH **IS** WITH THE LOCATION IN THE CITY--_____, STATE--_____, TERRITORY--_____, COUNTY--_____(U.-S.-A.) BY THE PARENTS: FATHER:_____, MOTHER:_____.

-3 FOR THESE WITNESSES OF THIS LIVE-LIFEBIRTH **ARE** WITH THE CLAIM OF THE **CLAIM OF THE LIVE-LIFE-DOCUMENT**: _____,

:_____, :_____.

-4 FOR THIS PICTURE, FINGERPRINT-SEAL AND DNA-SAMPLE OF THIS CLAIMANT **ARE** WITH THESE CLAIMS OF THIS **FACTUAL-LIVE-LIFEBIRTH**:

PICTURE:

FINGERPRINT:

DNA-BLOOD/SALIVA:

:_____, :_____

:AUTOGRAPH-WITNESS:

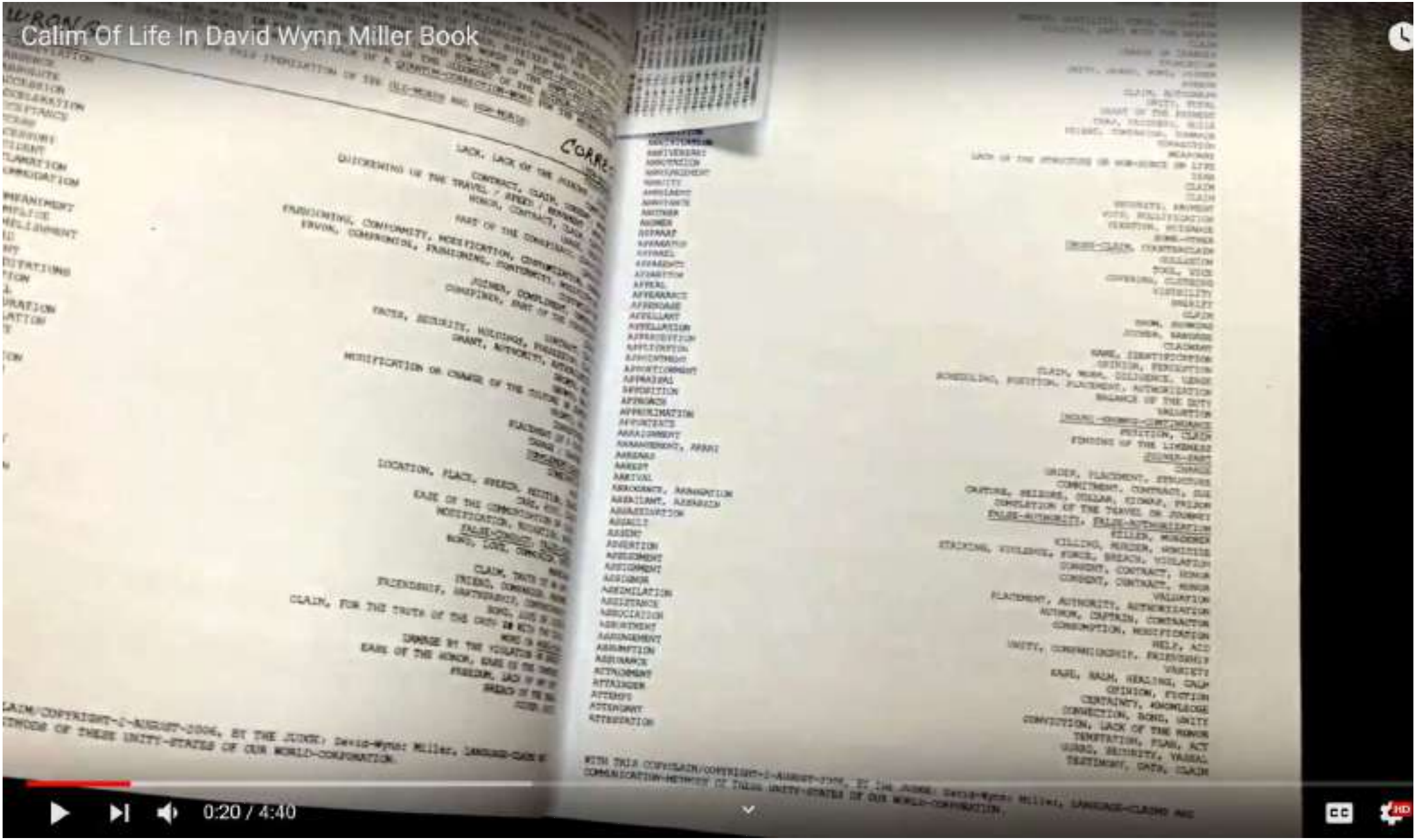
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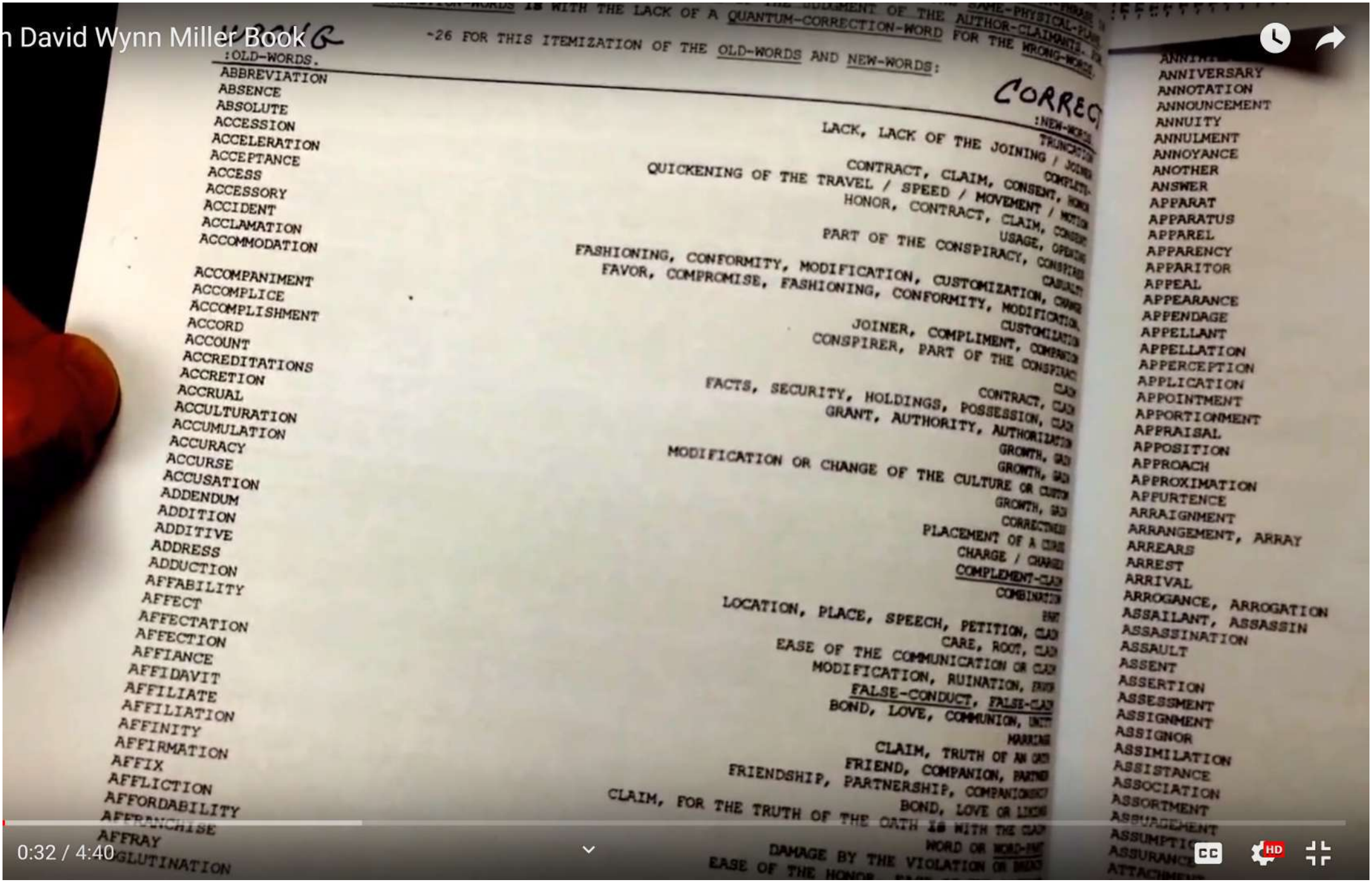
:AUTOGRAPH-WITNESS:

:AUTOGRAPH-CLAIMANT-LIFEBIRTH:

FOR THIS COPYRIGHT/COPYCLAIM -2-FEBRUARY-, DO BY THIS PLENIPOTENTIARY-JUDGE: David-Wynn: Miller
WITH THE CONTRACT-STATES-CORPORATION OF THIS LIFEBIRTH-CLAIMANT.


Calim Of Life In David Wynn Miller Book
0:20 / 4:40

n David Wynn Miller Book



~26 FOR THIS ITEMIZATION OF THE OLD-WORDS AND NEW-WORDS:

:OLD-WORDS.	:NEW-WORDS.
ABBREVIATION	TRUNCATION
ABSENCE	LACK, LACK OF THE JOINING / JOINER
ABSOLUTE	CONTRACT, CLAIM, CONSENT, HONOR
ACCESSION	QUICKENING OF THE TRAVEL / SPEED / MOVEMENT / MOTION
ACCELERATION	HONOR, CONTRACT, CLAIM, CONSENT
ACCEPTANCE	USAGE, OPERATION
ACCESS	PART OF THE CONSPIRACY, CONSPIRER
ACCESSORY	CASUALTY
ACCIDENT	FASHIONING, CONFORMITY, MODIFICATION, CUSTOMIZATION, CHANGE
ACCLAMATION	FAVOR, COMPROMISE, FASHIONING, CONFORMITY, MODIFICATION,
ACCOMMODATION	CUSTOMIZATION
ACCOMPANIMENT	JOINER, COMPLIMENT, COMPANION
ACCOMPLICE	CONSPIRER, PART OF THE CONSPIRACY
ACCOMPLISHMENT	CLAIM
ACCORD	FACTS, SECURITY, HOLDINGS, POSSESSION, CLAIM, CONTRACT, CLAIM
ACCOUNT	GRANT, AUTHORITY, AUTHORIZATION
ACCREDITATIONS	GROWTH, GRANT
ACCRETION	MODIFICATION OR CHANGE OF THE CULTURE OR CUSTOM
ACCRUAL	GROWTH, GRANT
ACCULTURATION	CORRECTNESS
ACCUMULATION	PLACEMENT OF A CLAIM
ACCURACY	CHARGE / CHARGER
ACCURSE	COMPLEMENT-CLAIM
ACCUSATION	COMBINATION
ADDENDUM	LOCATION, PLACE, SPEECH, PETITION, CLAIM
ADDITION	CARE, ROOT, CLAIM
ADDITIVE	EASE OF THE COMMUNICATION OR CLAIM
ADDRESS	MODIFICATION, RUINATION,
ADDUCTION	FALSE-CONDUCT, FALSE-CLAIM
AFFABILITY	BOND, LOVE, COMMUNION, UNITY
AFFECT	MARRIAGE
AFFECTATION	CLAIM, TRUTH OF AN OATH
AFFECTION	FRIEND, COMPANION, PARTNER
AFFIANCE	FRIENDSHIP, PARTNERSHIP, COMPANIONSHIP
AFFIDAVIT	BOND, LOVE OR LICENSE
AFFILIATE	CLAIM, FOR THE TRUTH OF THE OATH IS WITH THE CLAIM
AFFILIATION	WORD OR WORD-PART
AFFINITY	DAMAGE BY THE VIOLATION OR BREACH
AFFIRMATION	EASE OF THE HONOR
AFFIX	
AFFLICTION	
AFFORDABILITY	
AFFRANCHISE	
AFFRAY	
AGGLUTINATION	

ANNIVERSARY	
ANNOTATION	
ANNOUNCEMENT	
ANNUITY	
ANNULMENT	
ANNOYANCE	
ANOTHER	
ANSWER	
APPARAT	
APPARATUS	
APPAREL	
APPARENCY	
APPARITOR	
APPEAL	
APPEARANCE	
APPENDAGE	
APPELLANT	
APPELLATION	
APPERCEPTION	
APPLICATION	
APPOINTMENT	
APPORTIONMENT	
APPRAISAL	
APPOSITION	
APPROACH	
APPROXIMATION	
APPURTENCE	
ARRAIGNMENT	
ARRANGEMENT, ARRAY	
ARREARS	
ARREST	
ARRIVAL	
ARROGANCE, ARROGATION	
ASSAILANT, ASSASSIN	
ASSASSINATION	
ASSAULT	
ASSENT	
ASSERTION	
ASSESSMENT	
ASSIGNMENT	
ASSIGNOR	
ASSIMILATION	
ASSISTANCE	
ASSOCIATION	
ASSORTMENT	
ASSUAGEMENT	
ASSUMPTION	
ASSURANCE	
ATTACHMENT	

0:32 / 4:40



:C.-S.-S.-C.-S.-L.-FLAG OF THIS VESSEL.

$1.STAMP

FOR THE CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFE IS WITH THIS CLAIM BY THIS CLAIMANT.

~1 FOR THIS CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFE **IS** WITH THIS CLAIM OF THE LIVEBIRTH-NAME: _____, ON THIS DATE~___ DAY WITHIN THE MONTH--~_____, IN THE YEAR--~_____, BY THESE WITNESSES AND: CLAIMANT.

~2 FOR THIS CLAIMANT'S-KNOWLEDGE OF THIS LIVE-LIFEBIRTH **IS** WITH THE LOCATION IN THE CITY--~_____, STATE--~_____, TERRITORY--~_____, COUNTY--~_____(U.-S.-A.) BY THE PARENTS: FATHER:_____, MOTHER:_____.

~3 FOR THESE WITNESSES OF THIS LIVE-LIFEBIRTH **ARE** WITH THE CLAIM OF THE **CLAIM OF THE LIVE-LIFE-DOCUMENT**: _____,

1:52 / 4:40

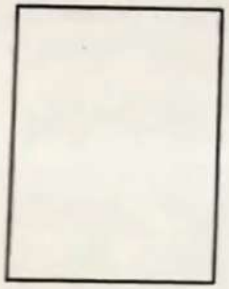
THE PARENTS: FATHER: _____, MOTHER: _____.

~3 FOR THESE WITNESSES OF THIS LIVE-LIFEBIRTH **ARE** WITH THE CLAIM O
THE **CLAIM OF THE LIVE-LIFE-DOCUMENT**: _____,

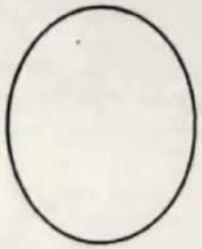
:_____, :_____.

~4 FOR THIS PICTURE, FINGERPRINT-SEAL AND DNA-SAMPLE OF THIS CLAIMAN
ARE WITH THESE CLAIMS OF THIS **FACTUAL-LIVE-LIFEBIRTH**:

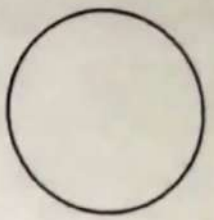
PICTURE:



FINGERPRINT:



DNA-BLOOD/SALIVA:



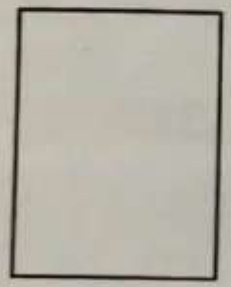
:_____, :_____

:AUTOGRAPH-WITNESS: :AUTOGRAPH-WITNESS:

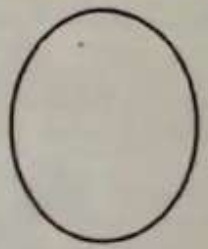
vid Wynn Miller Book Up next

ARE WITH THESE CLAIMS OF THIS **FACTUAL-LIVE-LIFEBIRTH**:

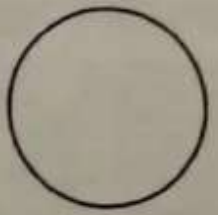
PICTURE:



FINGERPRINT:



DNA-BLOOD/SALIVA:



: _____ ,

:AUTOGRAPH-WITNESS:

: _____

:AUTOGRAPH-WITNESS:

: _____

:AUTOGRAPH-WITNESS:

: _____

:AUTOGRAPH-CLAIMANT-LIFEBIRTH:

ALIEN AGENDA IS REAL!

Politics & pyramidal structure is the function of their control. The reptilians are in full and total control of planet earth. They are in deep underground secret bases in Dulce, NM. US government NSA secret black op's, 47 levels above top secret, sold us out to the these aliens in exchange for their technology. The breathable air in our atmosphere at present is at 18%, at under 15%, we suffocate of lack of oxygen. The reptilians are planning to wipe us out by 2029 and forcibly control no more then 1 billion. Humanity needs to decide to fight back by educating others and find viable solutions or be forever be enslaved via microchip.



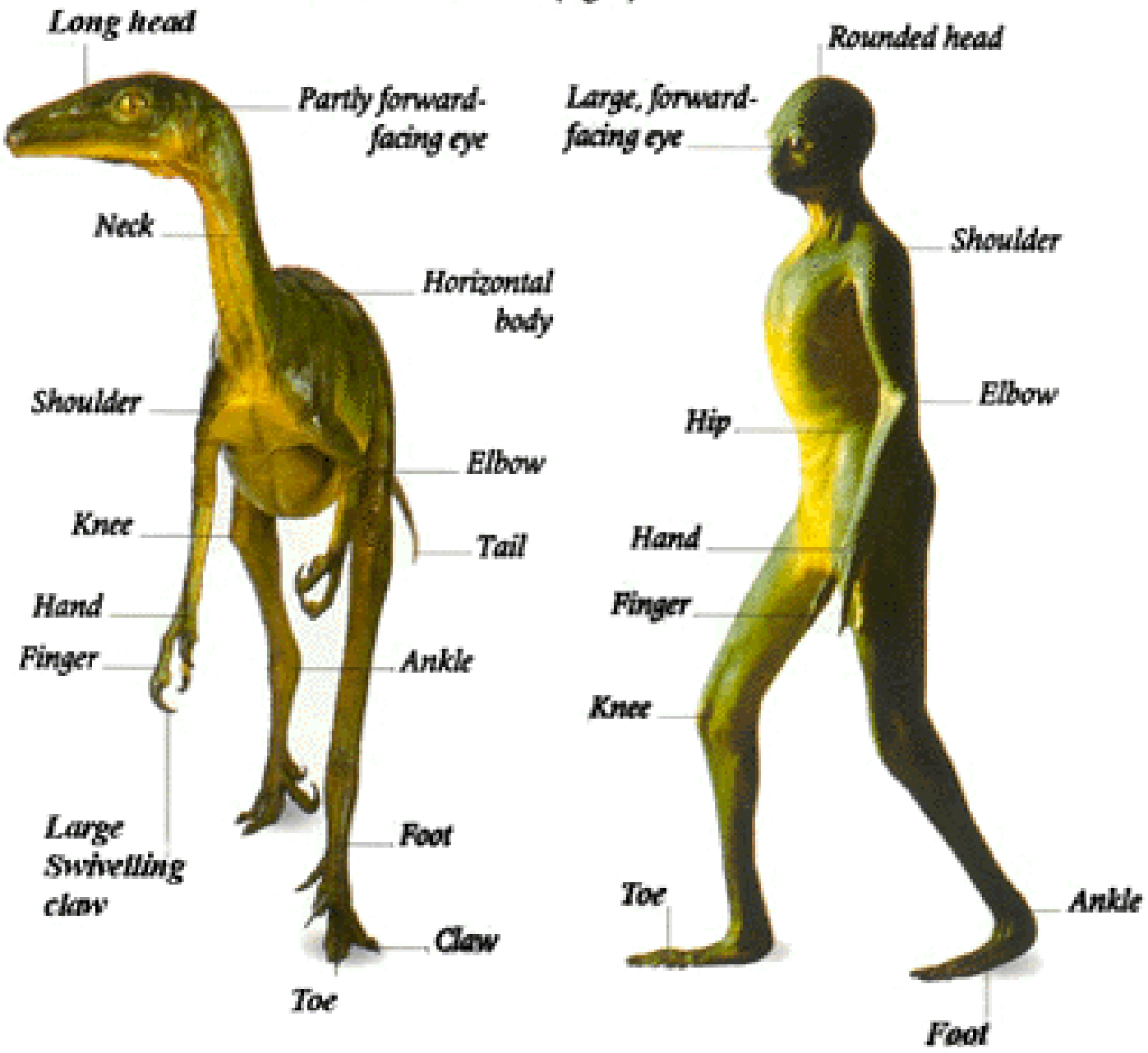


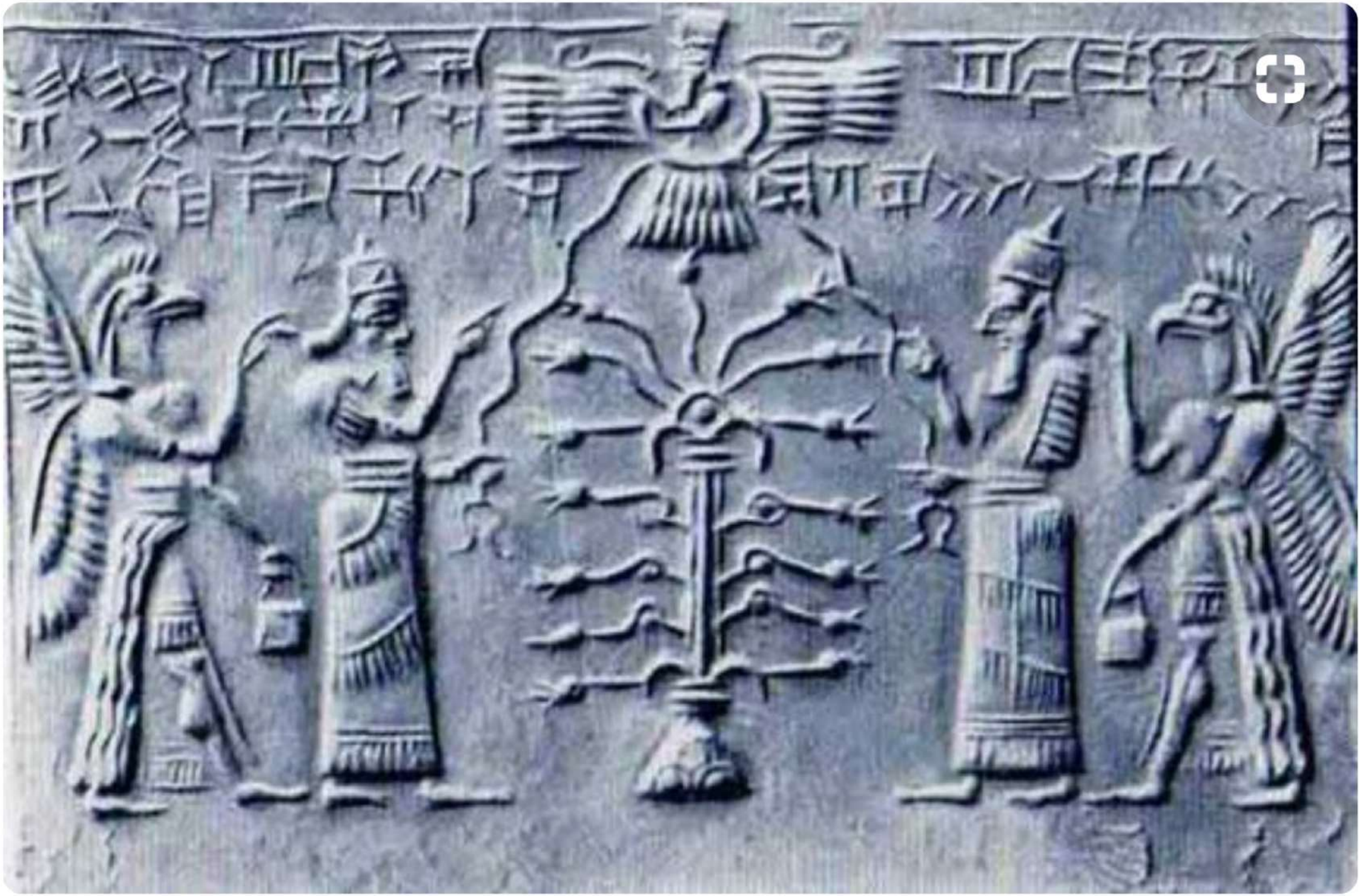
Concept Roberto Csiki 2014

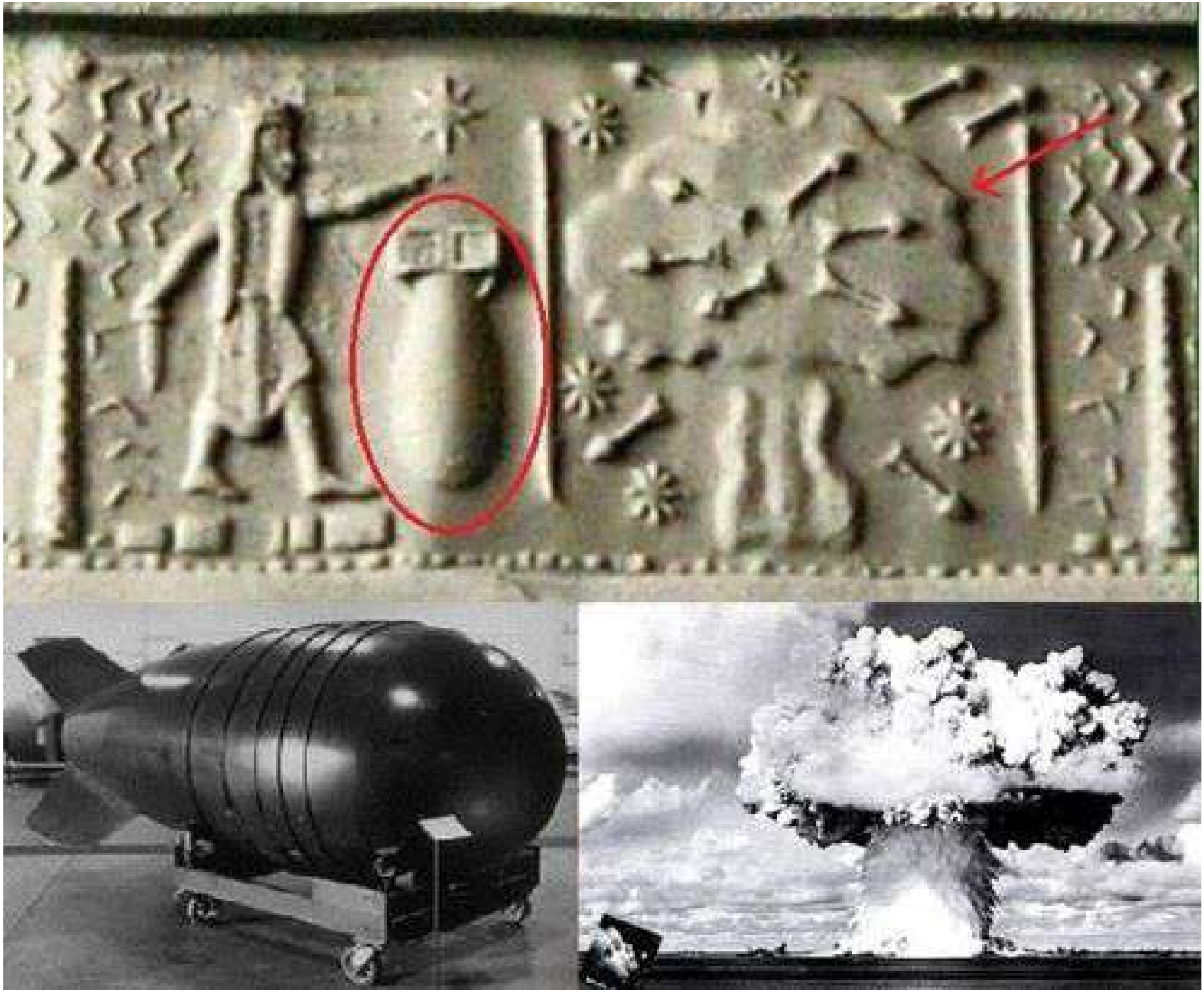

V Final Battle John Unmasked

TROODON AND DINOSAUROID

In the early 1980s, the American palaeontologist Dale Russell suggested that, had dinosaurs survived, the big-brained, bipedal, bird-like *Troodon* with grasping hands (left), might have given rise to an intelligent and human-looking descendant like the "dinosauroid" (right).













HAARP



/ Awaken the mind.

Notable quotes from patent:

- "A means and method is provided to cause interference with or even total disruption of communications over a very large portion of the earth"

- "Weather modification is possible by, for example, altering upper atmosphere wind patterns or altering solar absorption patterns by constructing one or more plumes of atmospheric particles which will act as a lens or focusing device."

- "The earth's magnetic field could be decreased or disrupted at appropriate altitudes to modify or eliminate the magnetic field."

SBX-1/Mobile HAARP (X-Band aka "The Golf Ball")

High-Frequency Active Auroral Research Program

#FrequencyWarfare #WeatherModification

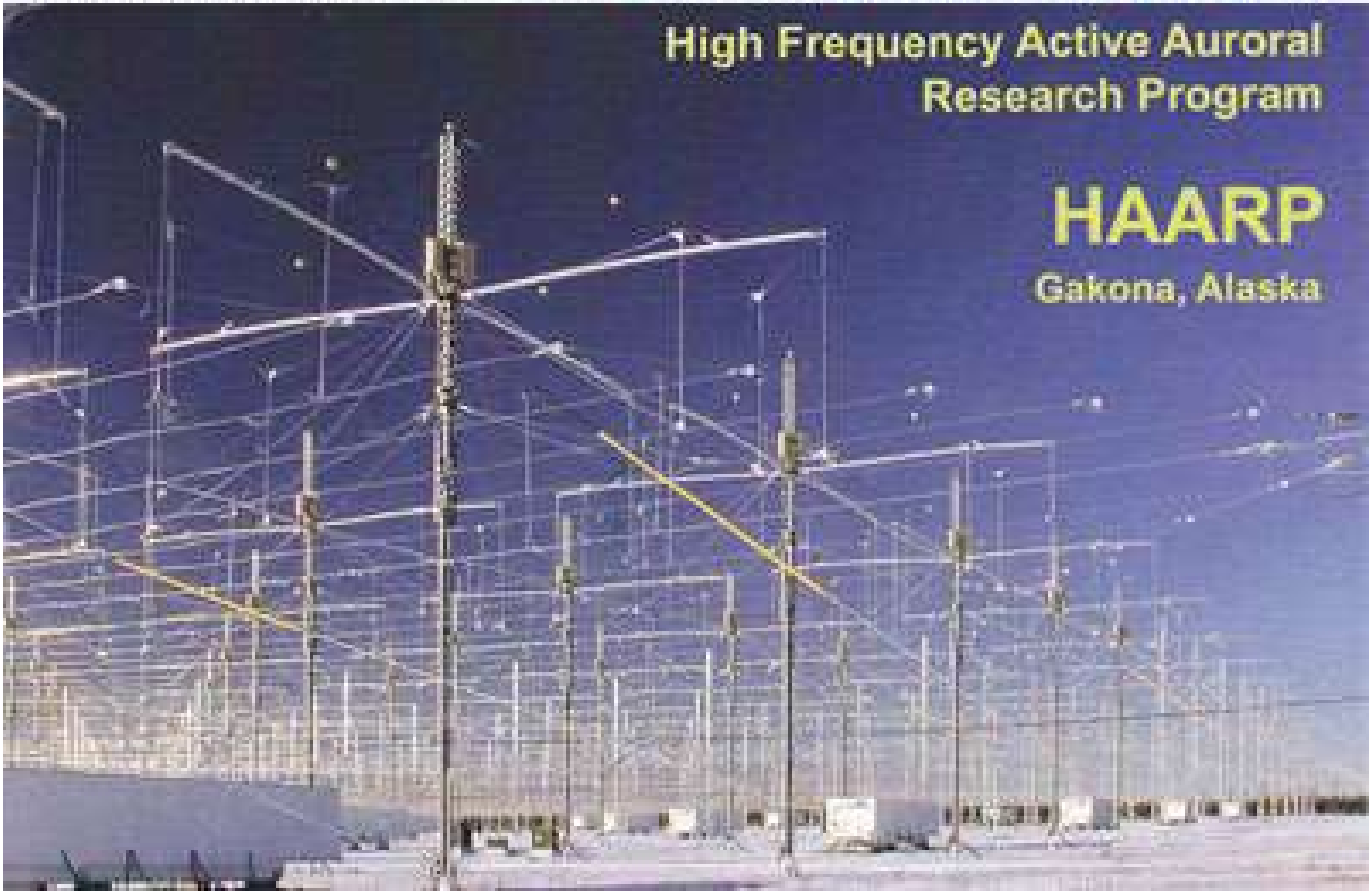




U.S. Patent 4686605

Issued Aug 11, 1987

"Method and apparatus for altering a region in the earth's atmosphere, ionosphere, and/or magnetosphere"



Mass secret torture by Antenna Technology

("VOG - Voice of God Weapons")



GWEN tower emergency system can be transformed and used to broadcast the signals to cause painful effects on the people:

- burning/prickly sensations
- dizziness
- nausea
- pain
- buzzing sound
- vibrations
- sleeplessness
- mood alterations
- hearing tones or tinnitus
- hearing human voices

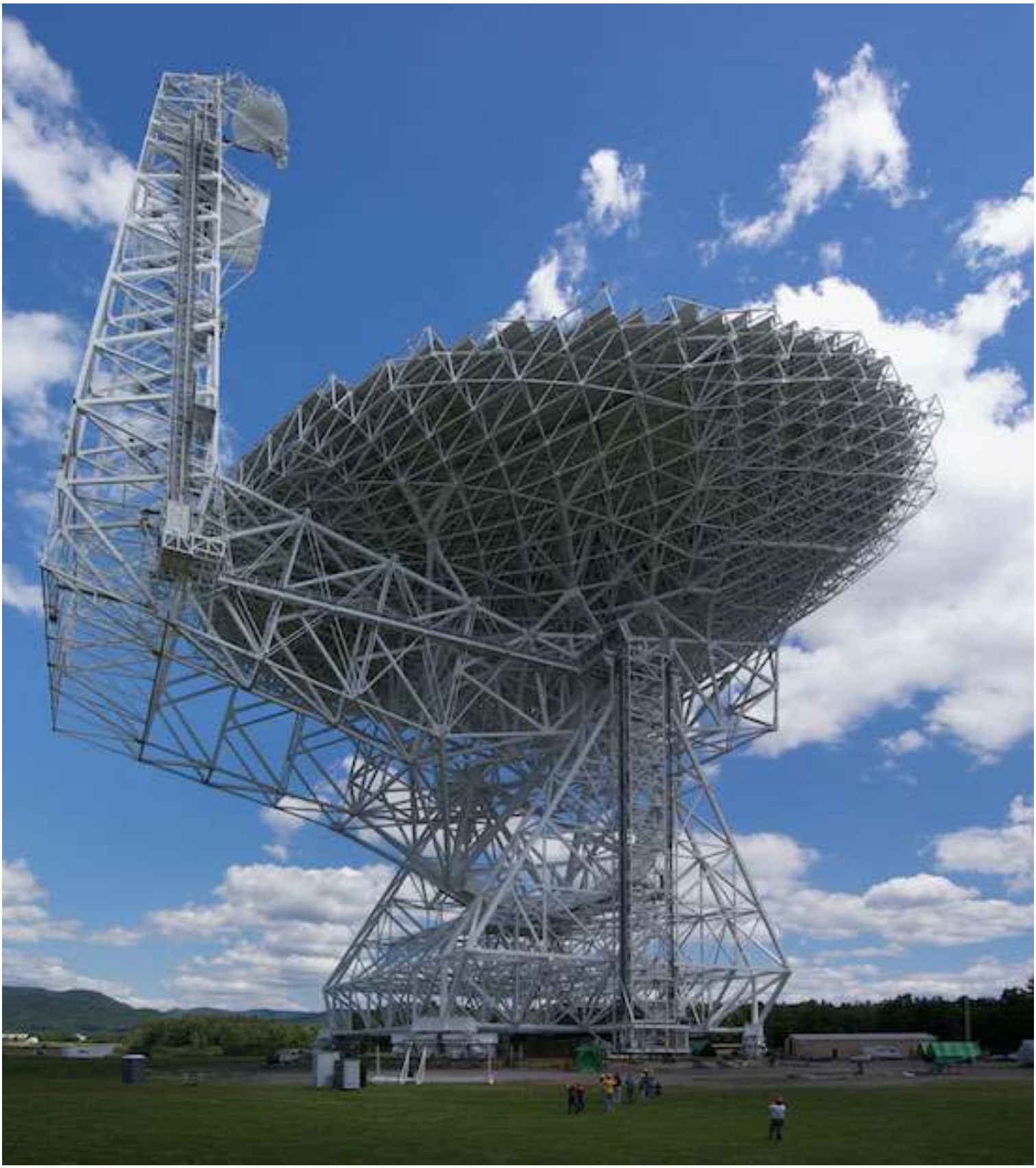
EXPOSING SATANIC WORLD GOVERNMENT















26 TOWERS- 850 to 1000 FT HIGH



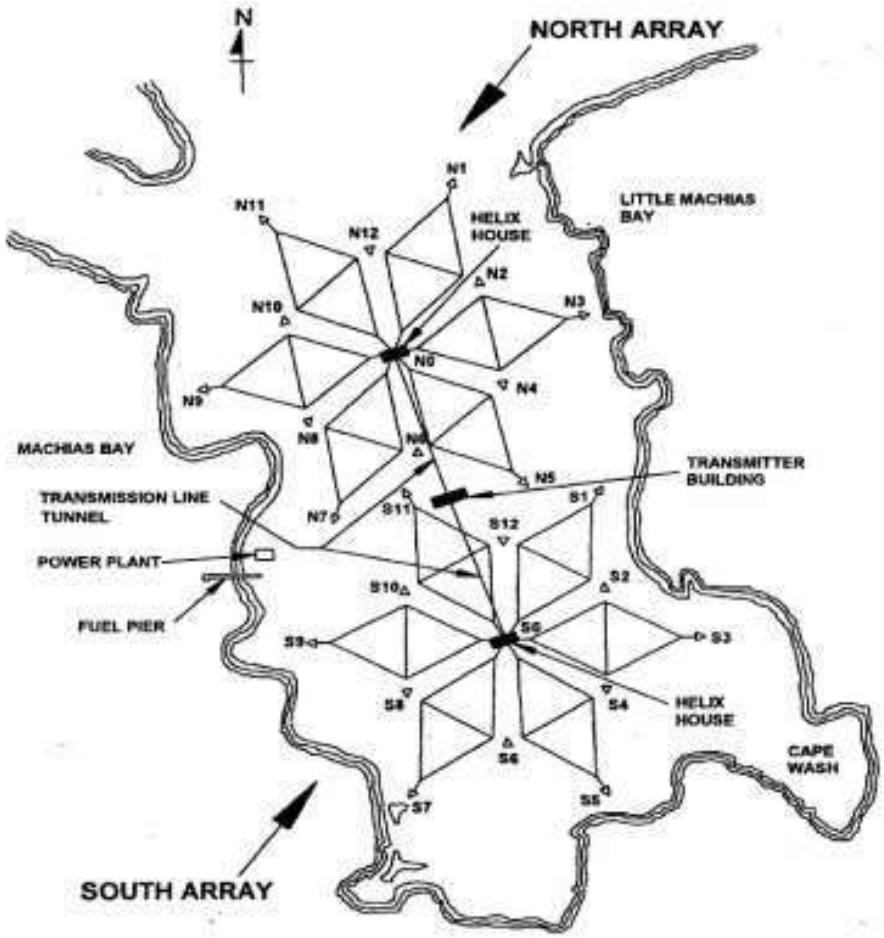


Figure 1. General layout, Cutler Peninsula.



H.A.A.R.P.

High Frequency Active Auroral Research Program

Fairbanks, Alaska

HAARP created by the US Air Force and Naval Research is the worlds largest magnetic broad-casting station and may represent and escalation in electro magnetic wars.



Publicaly HAARP is known to be used for inosospheric reasearch.

It also has the power to control weather and do electro magnetic sweeps that can be used for mind control of large populations.





"Tests of these kinds may cause irreversible damage."

Copyright © 2009 ConspiracyCards®


If You knew what these were?
You would tear every single
one of them!
This is a weapon authorities use
to control population.
It's a microwave transponder and
receiver.
They can read your mind with this.
Google mind control technology
used by secret services

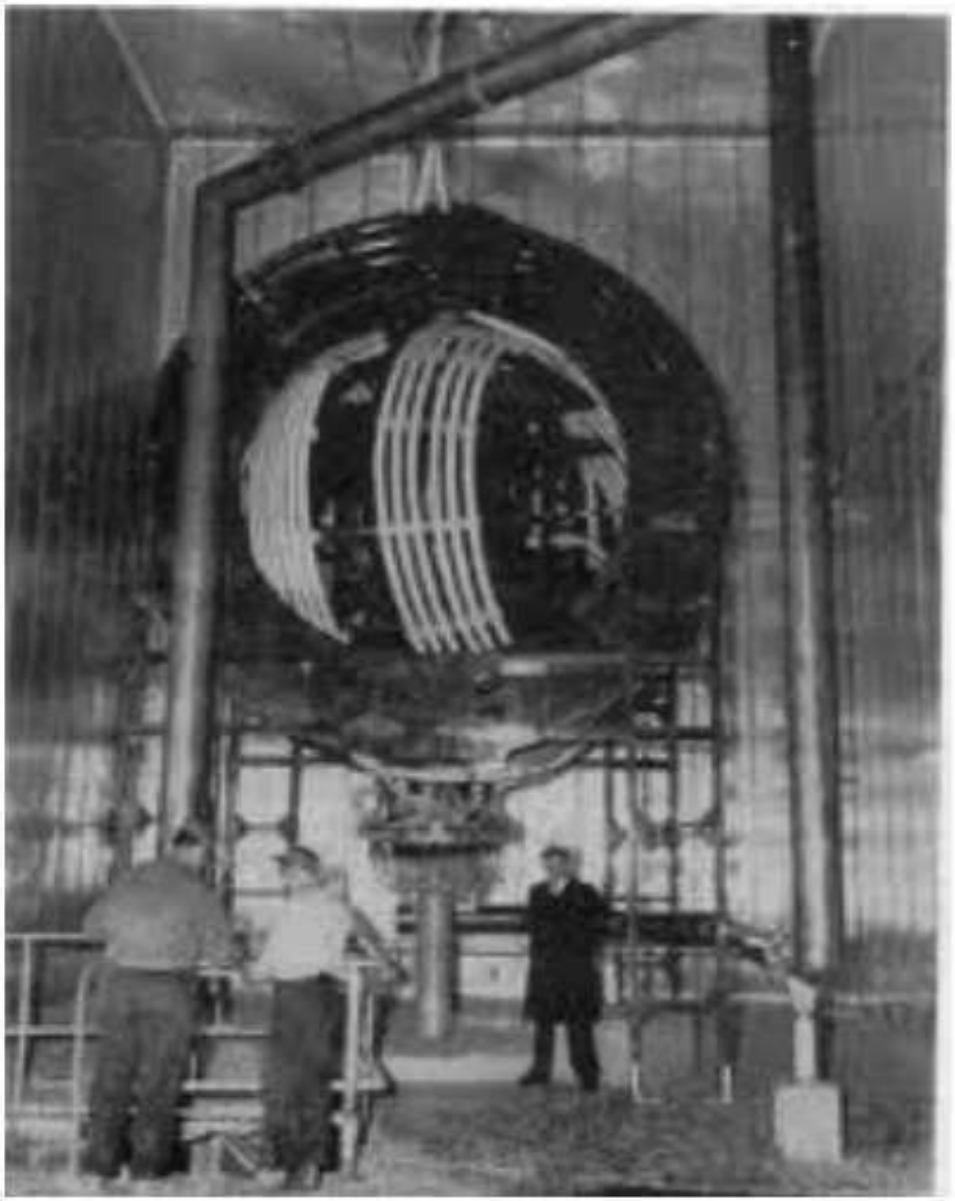

Power Generation Building
and Future Operations Center
48 Element
HF Antenna Array
Temporary
Operations Center
Temporary
Riometer Pad
Aircraft Alert Radar

TUNING NETWORK- HELIX



Ref 8

TUNING NETWORK-VARIOMETER





Ref 5 NAA Wires are 4 inches diameter NSS JP Hawkins

SUBMARINE RADIO RECEIVERS

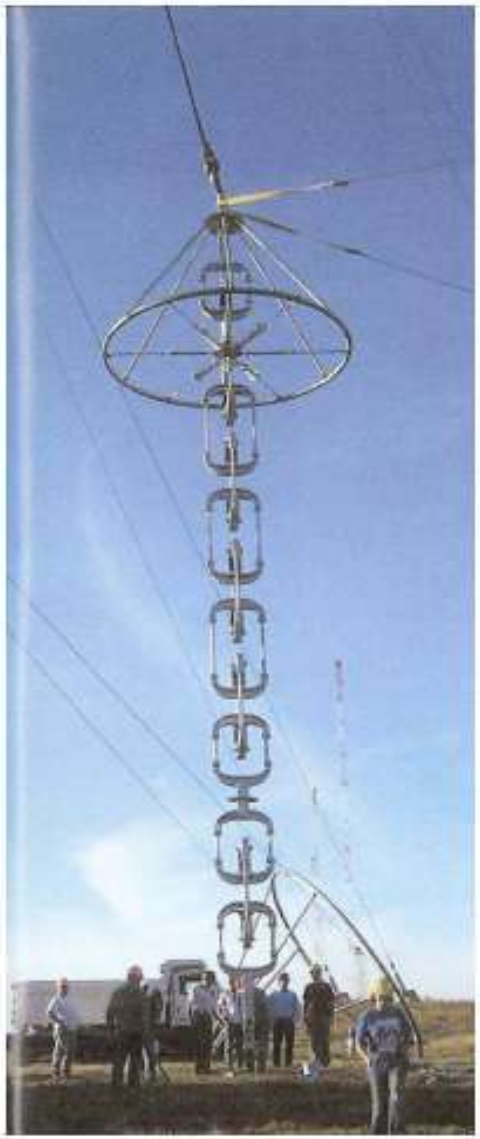


USS Robert E Lee 1966

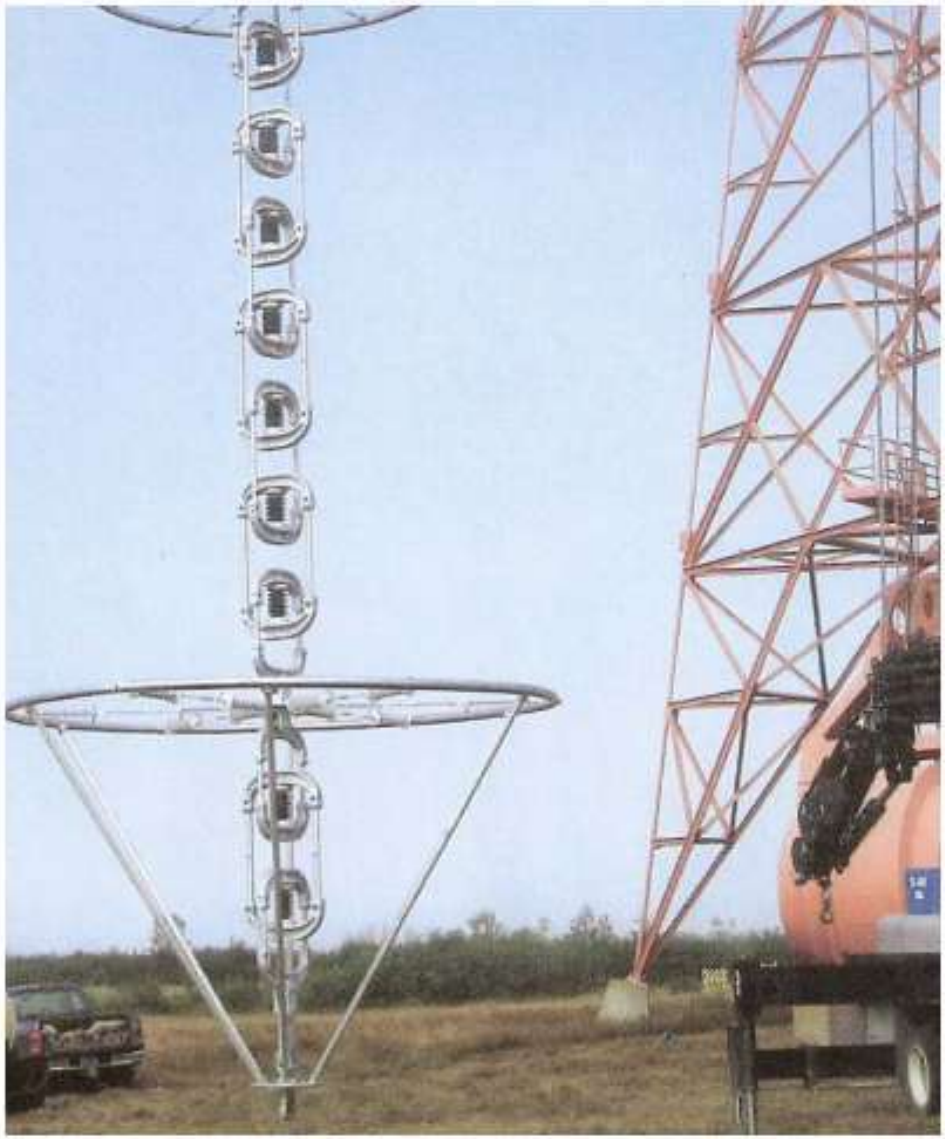


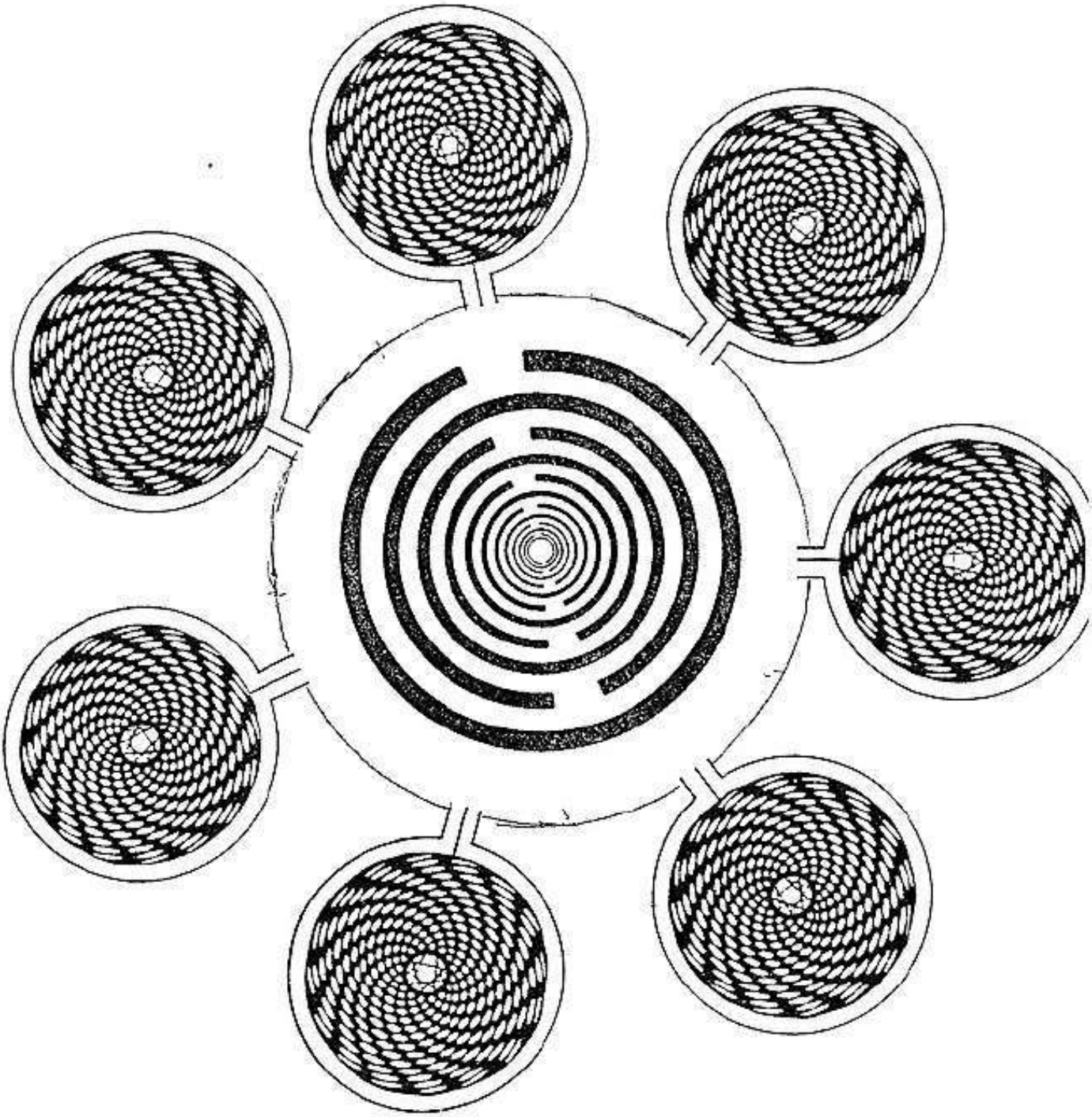
USS Nautilus 1970s

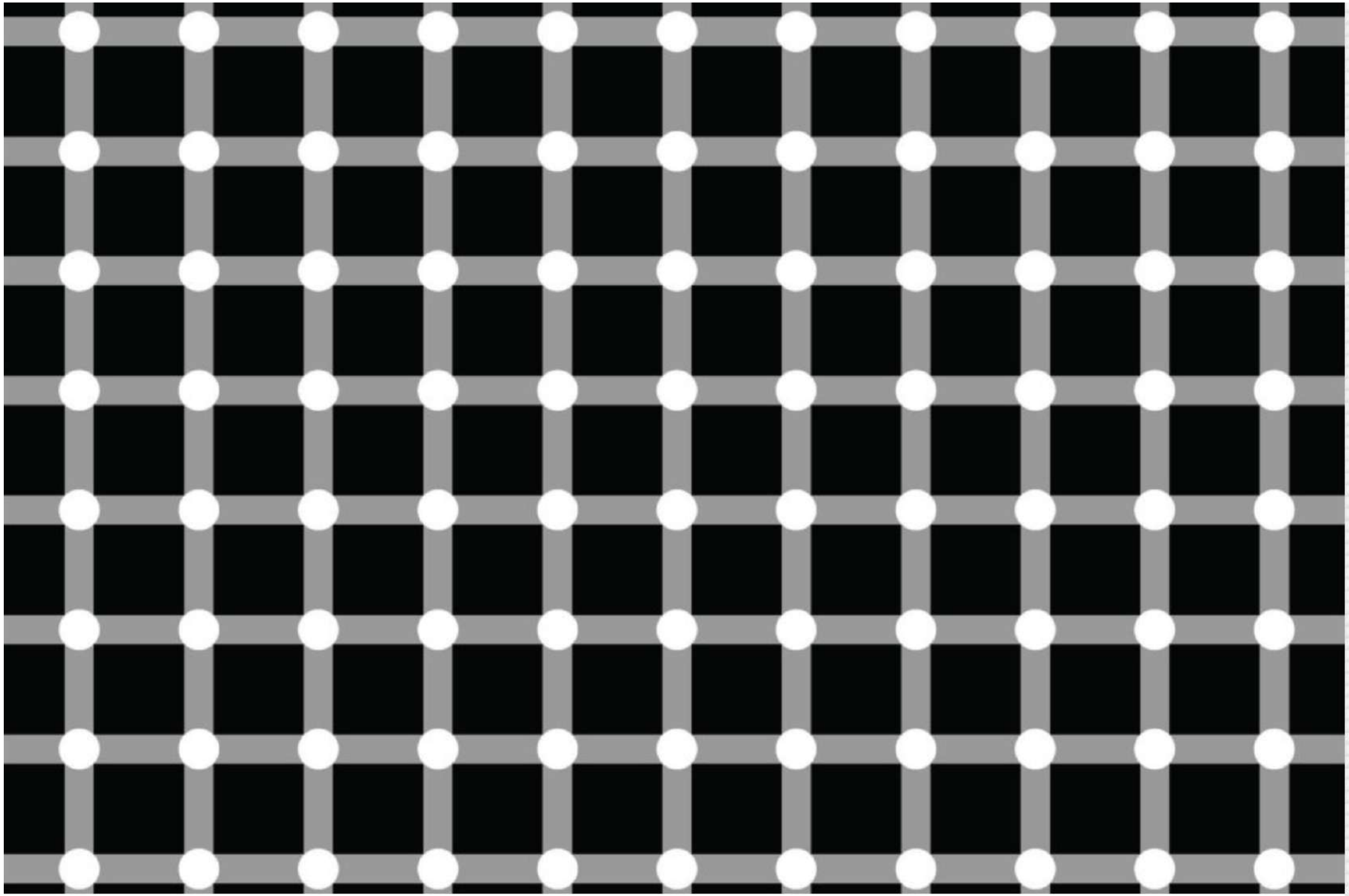
EACH INSULATOR IS 57 FT LONG TO WITHSTAND 250 KV

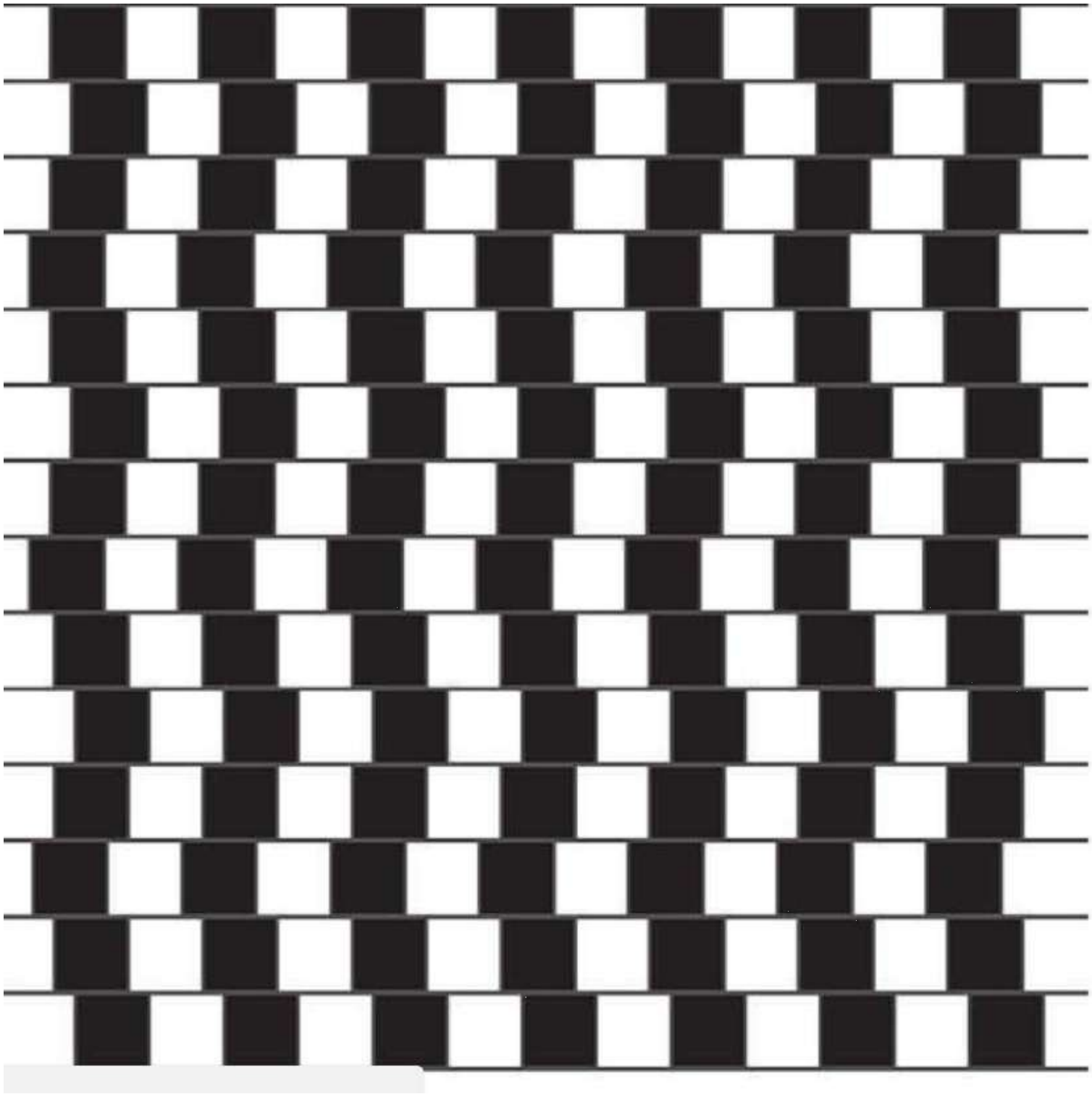


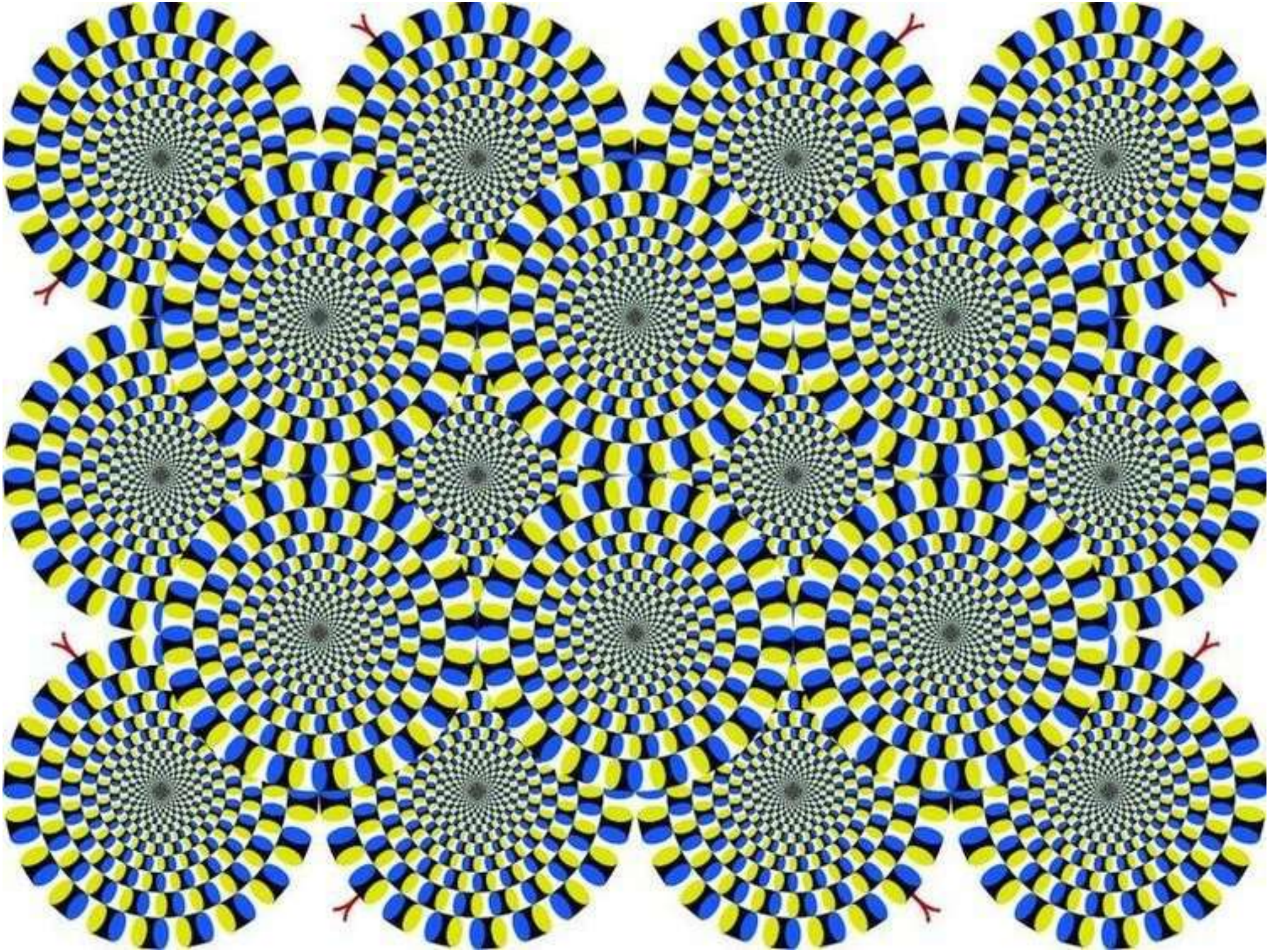
13,000 lbs.

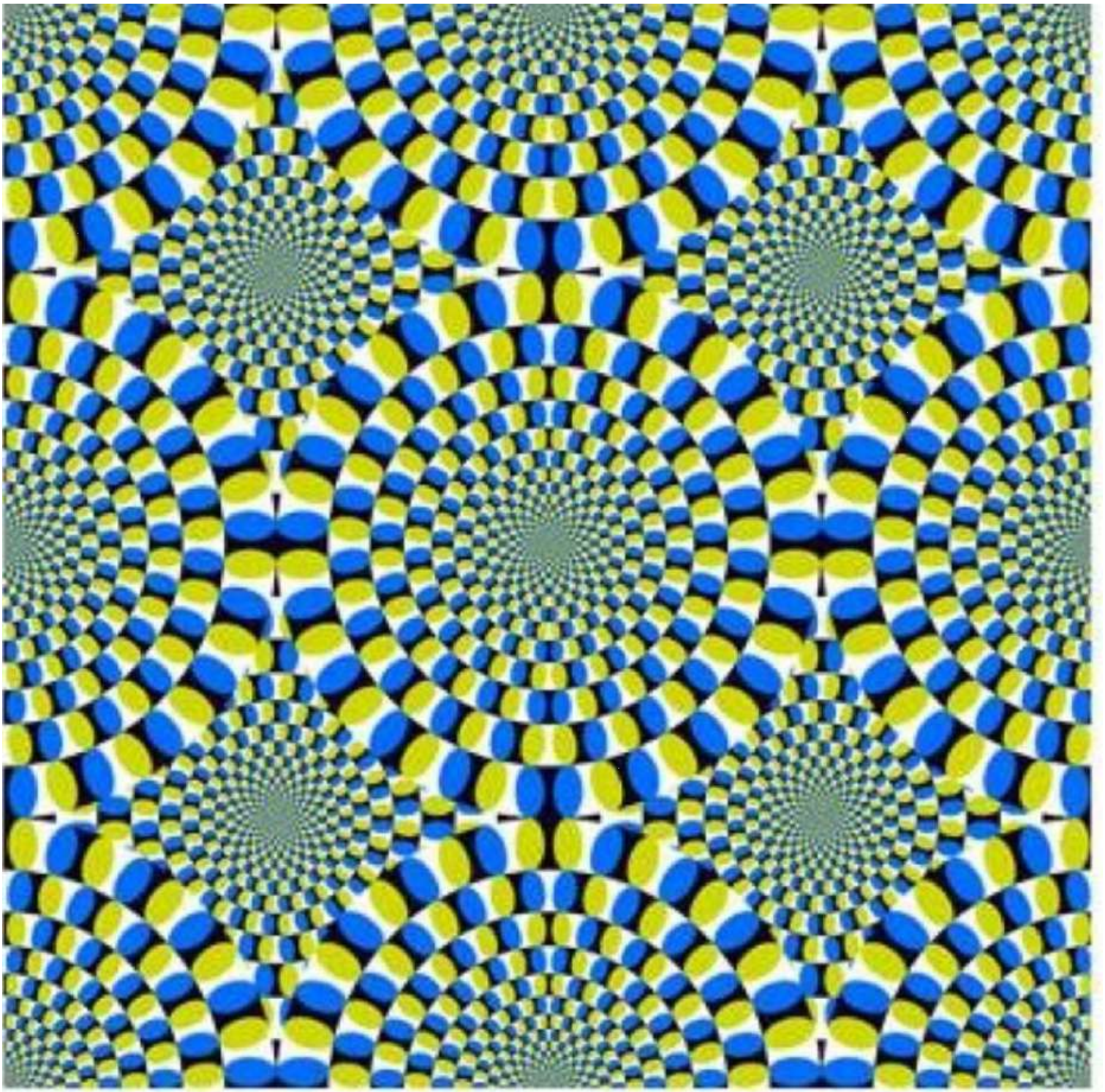


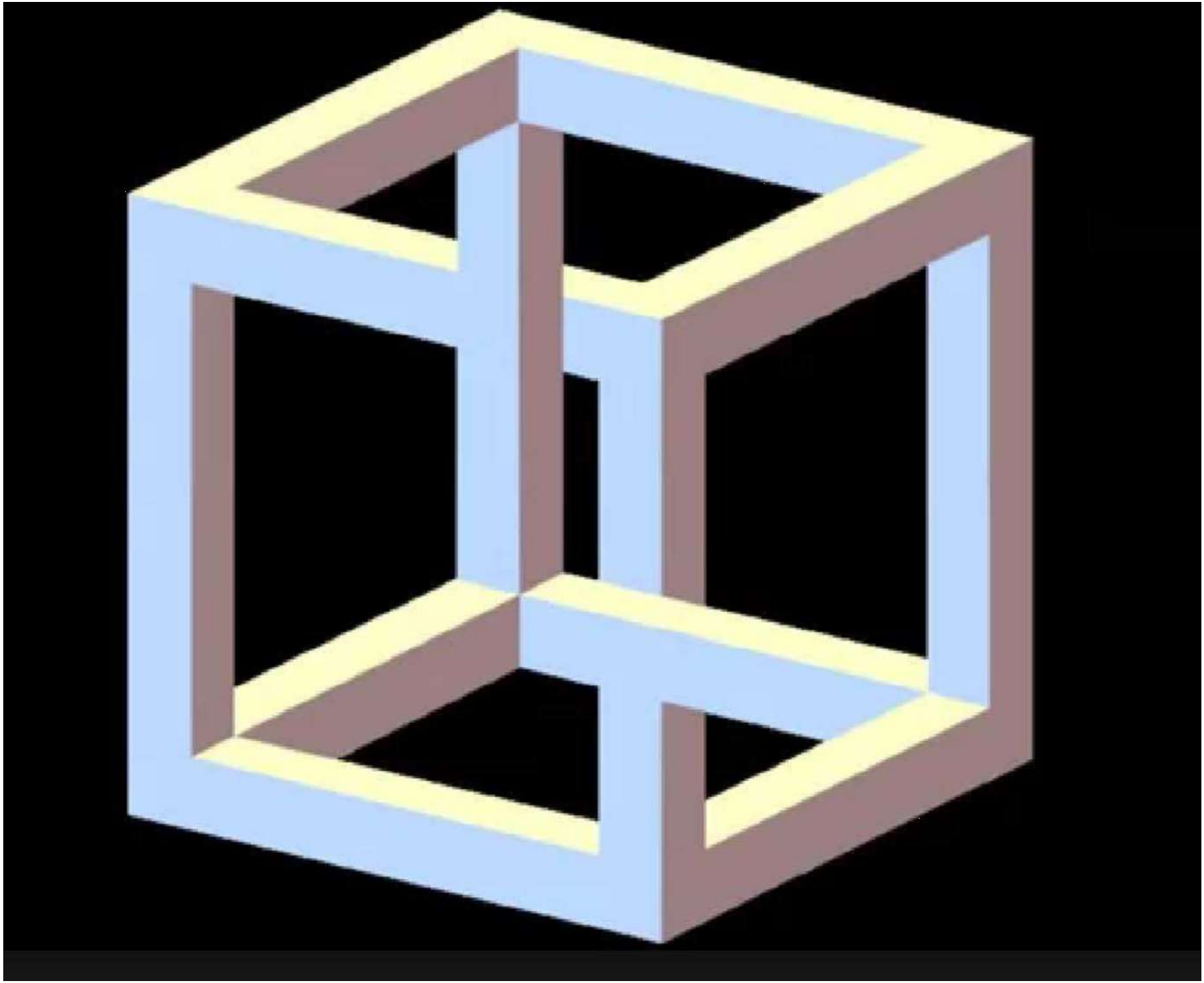


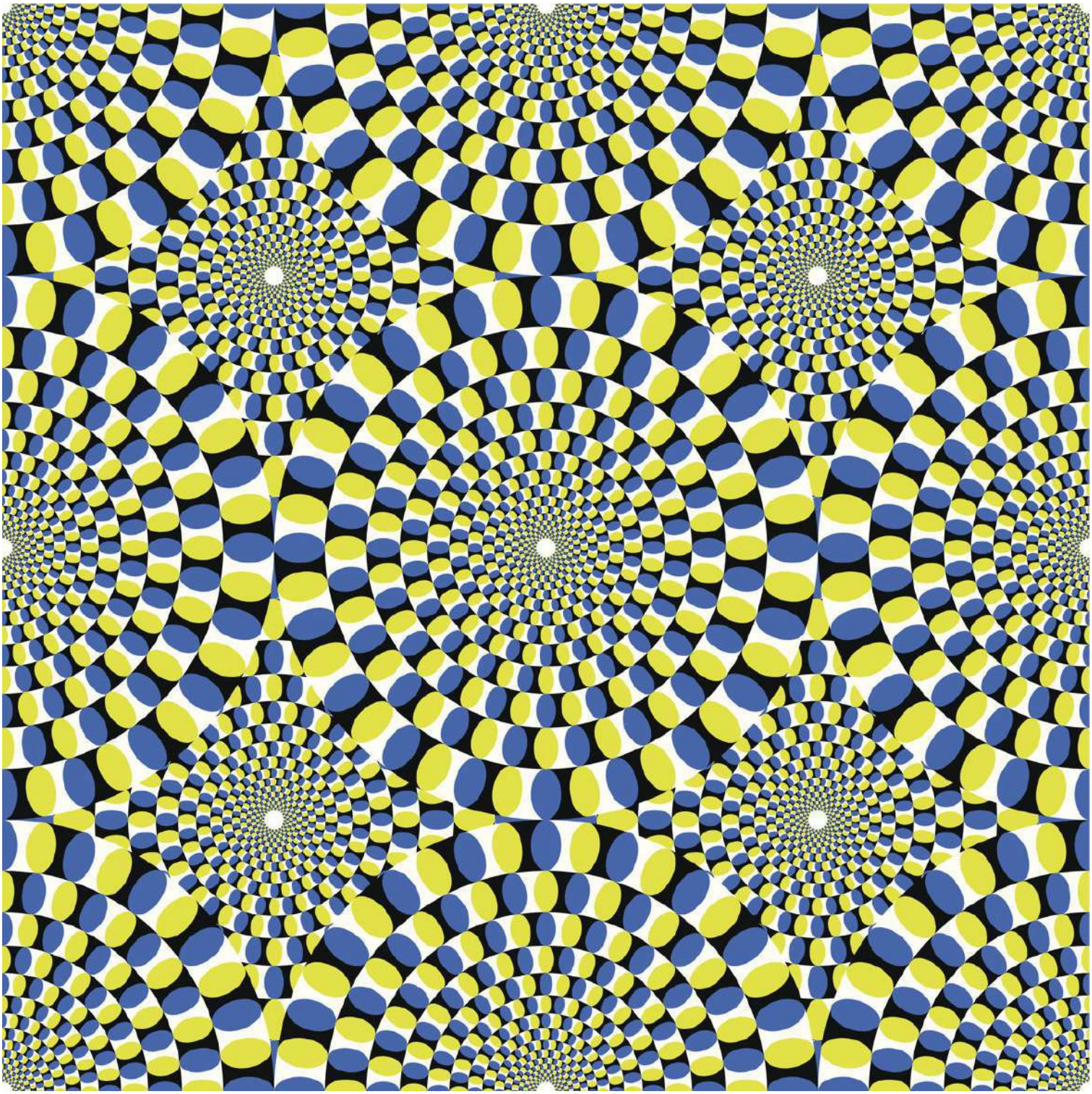


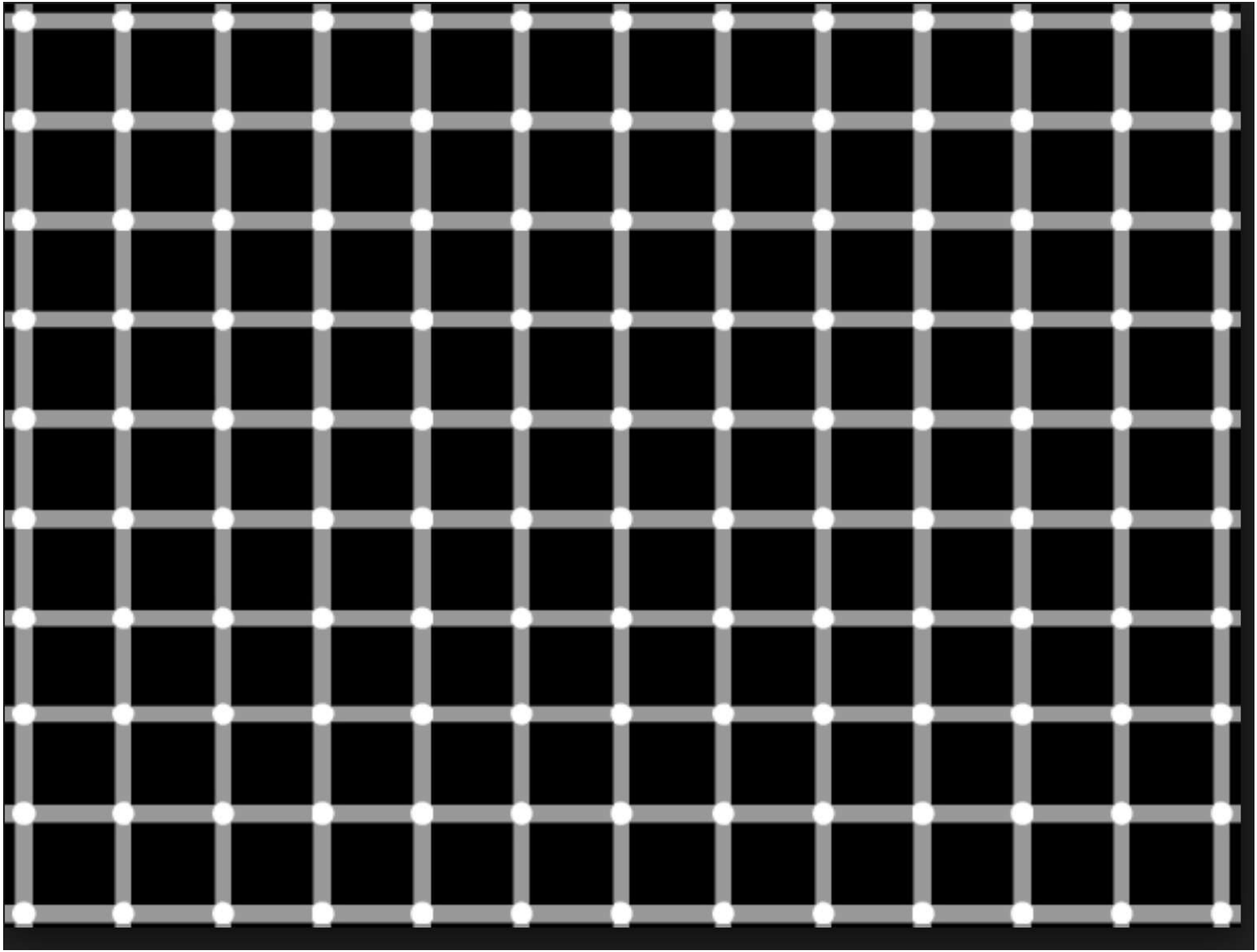


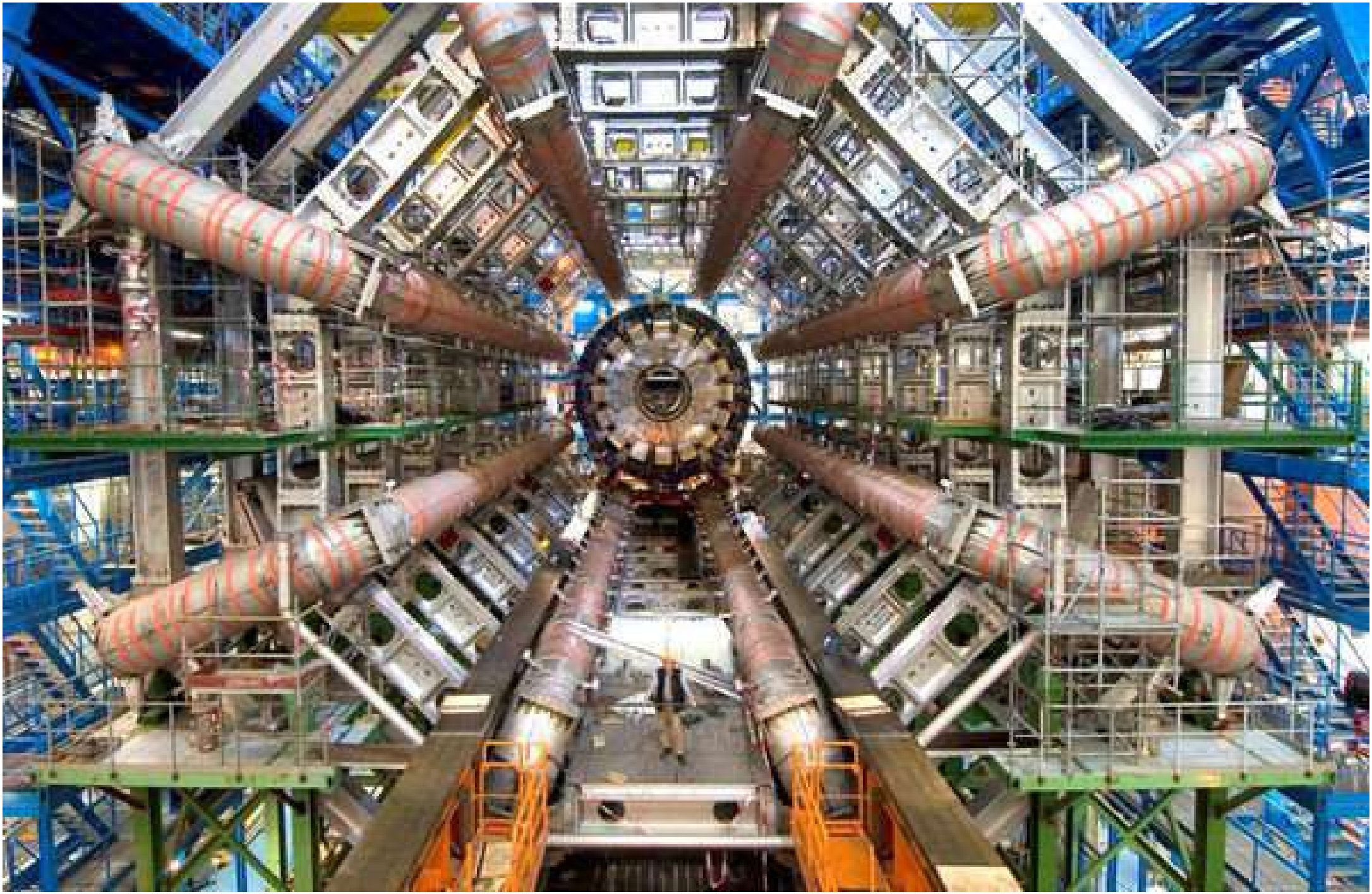


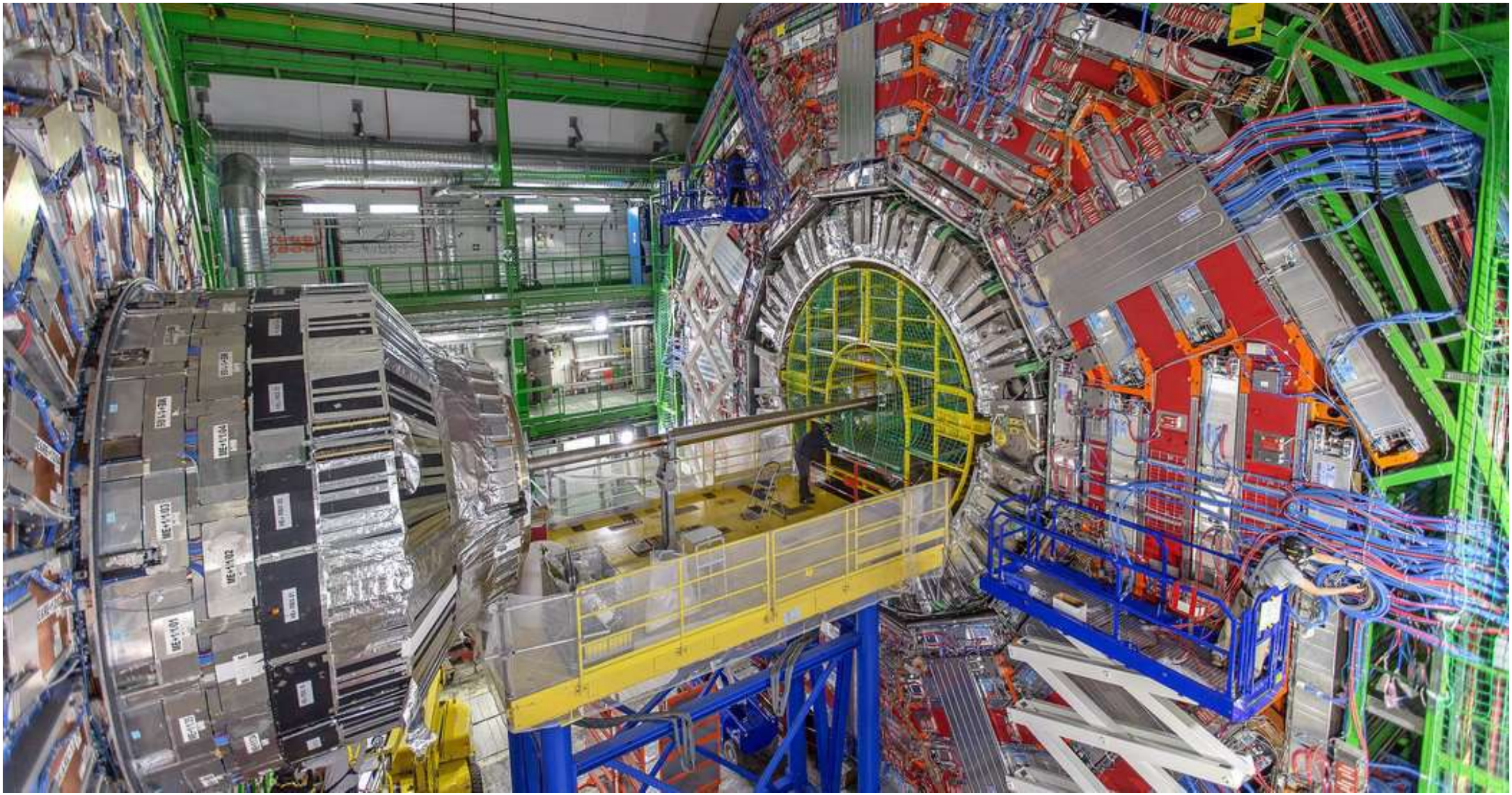


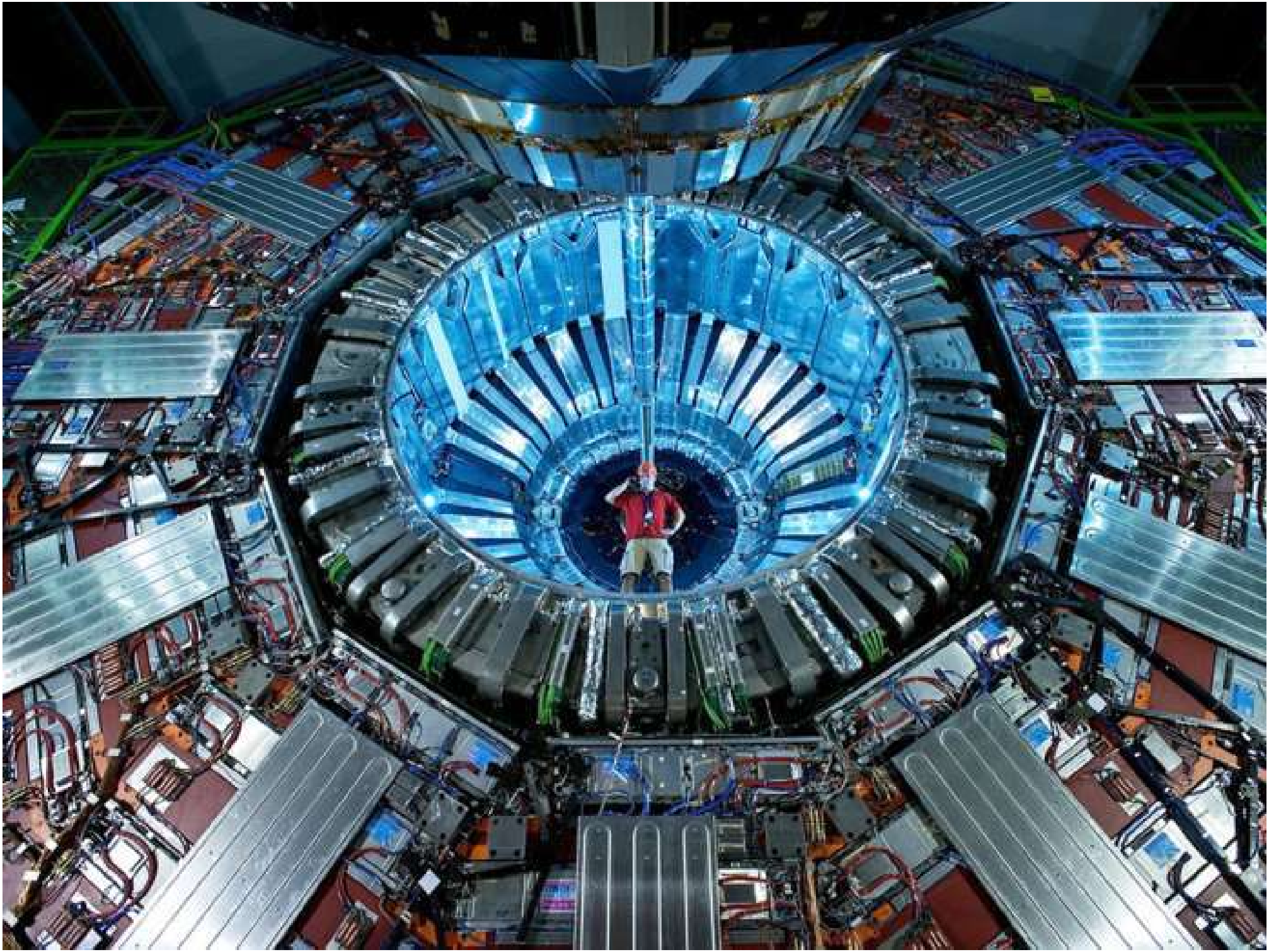




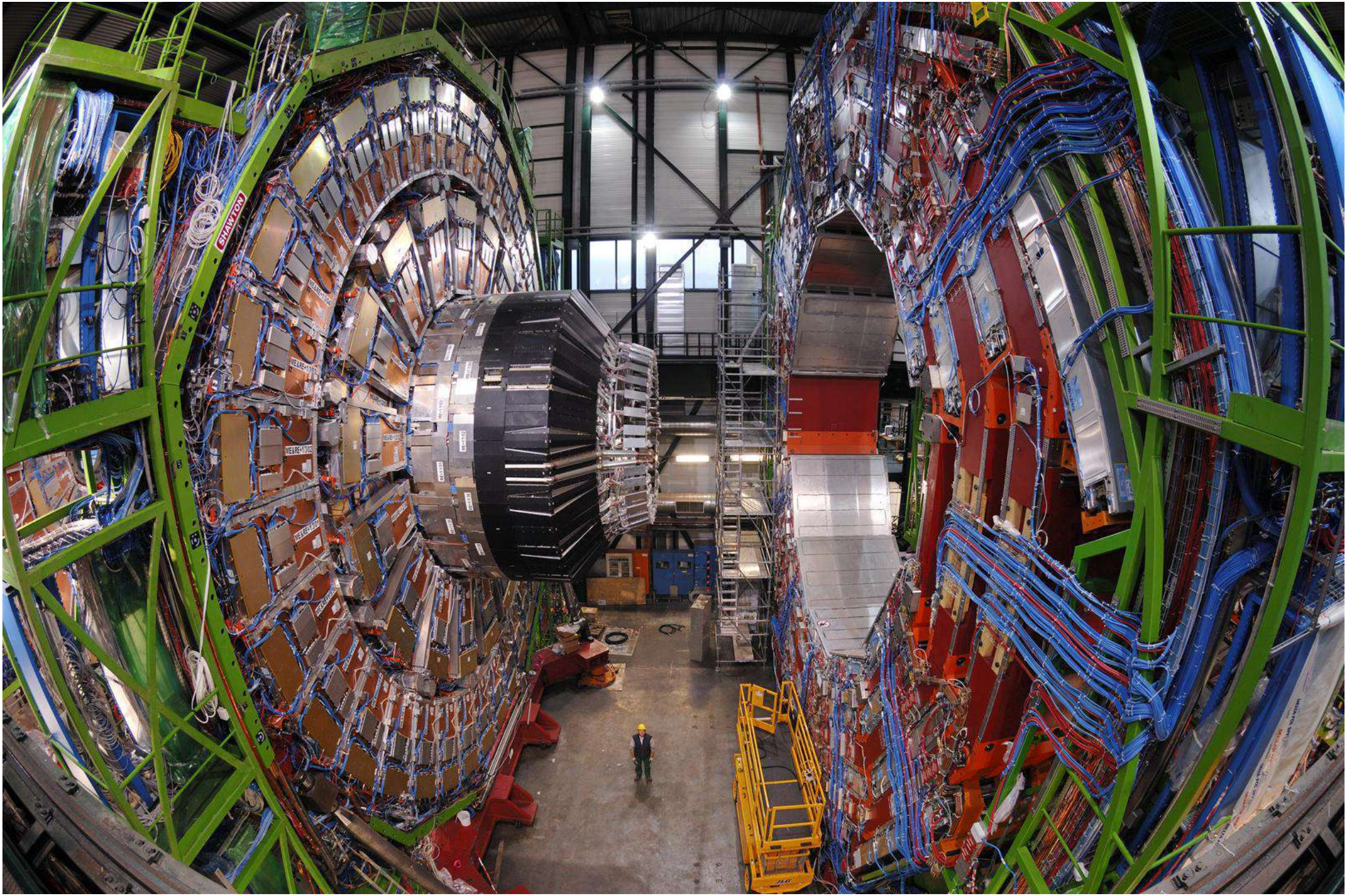


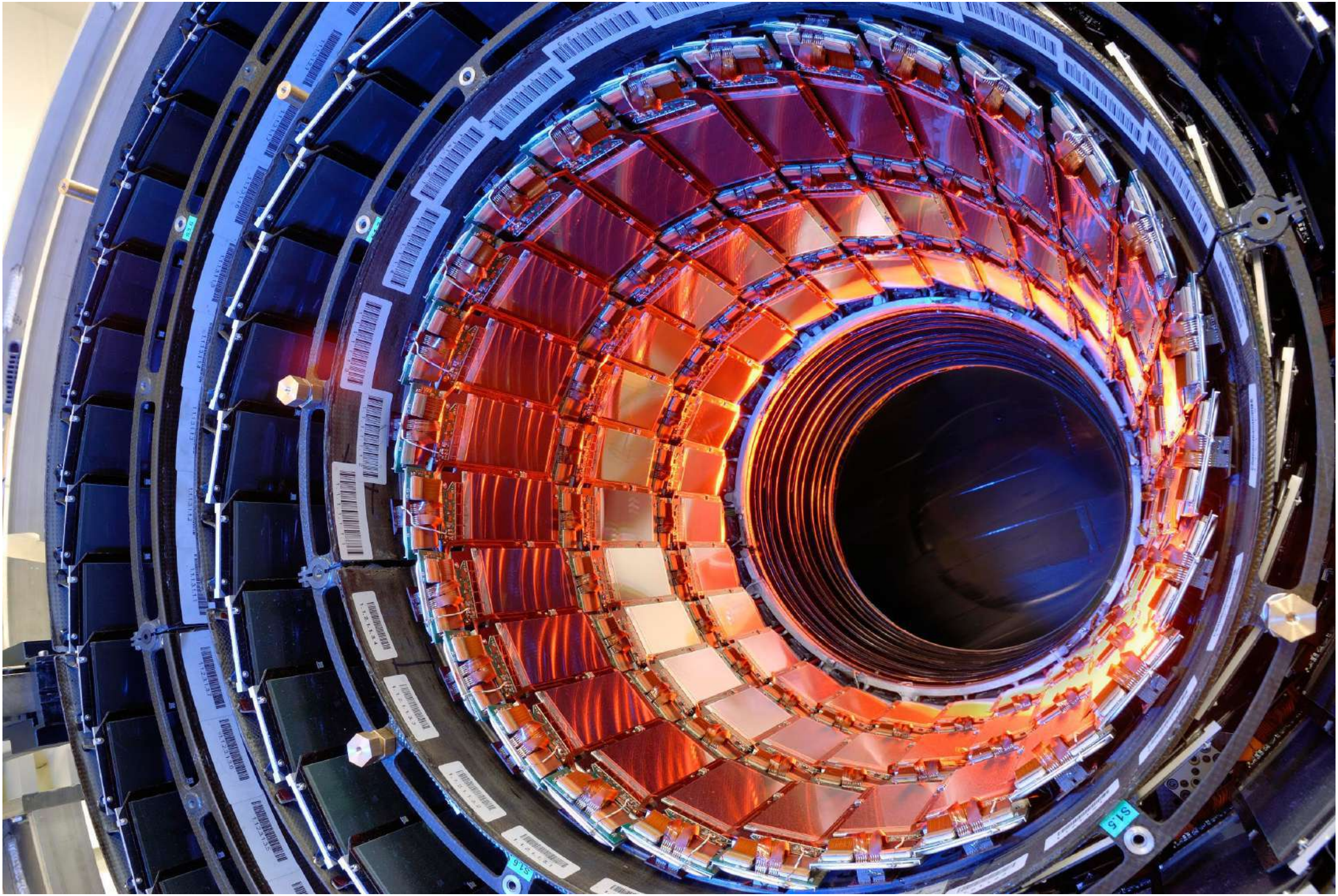


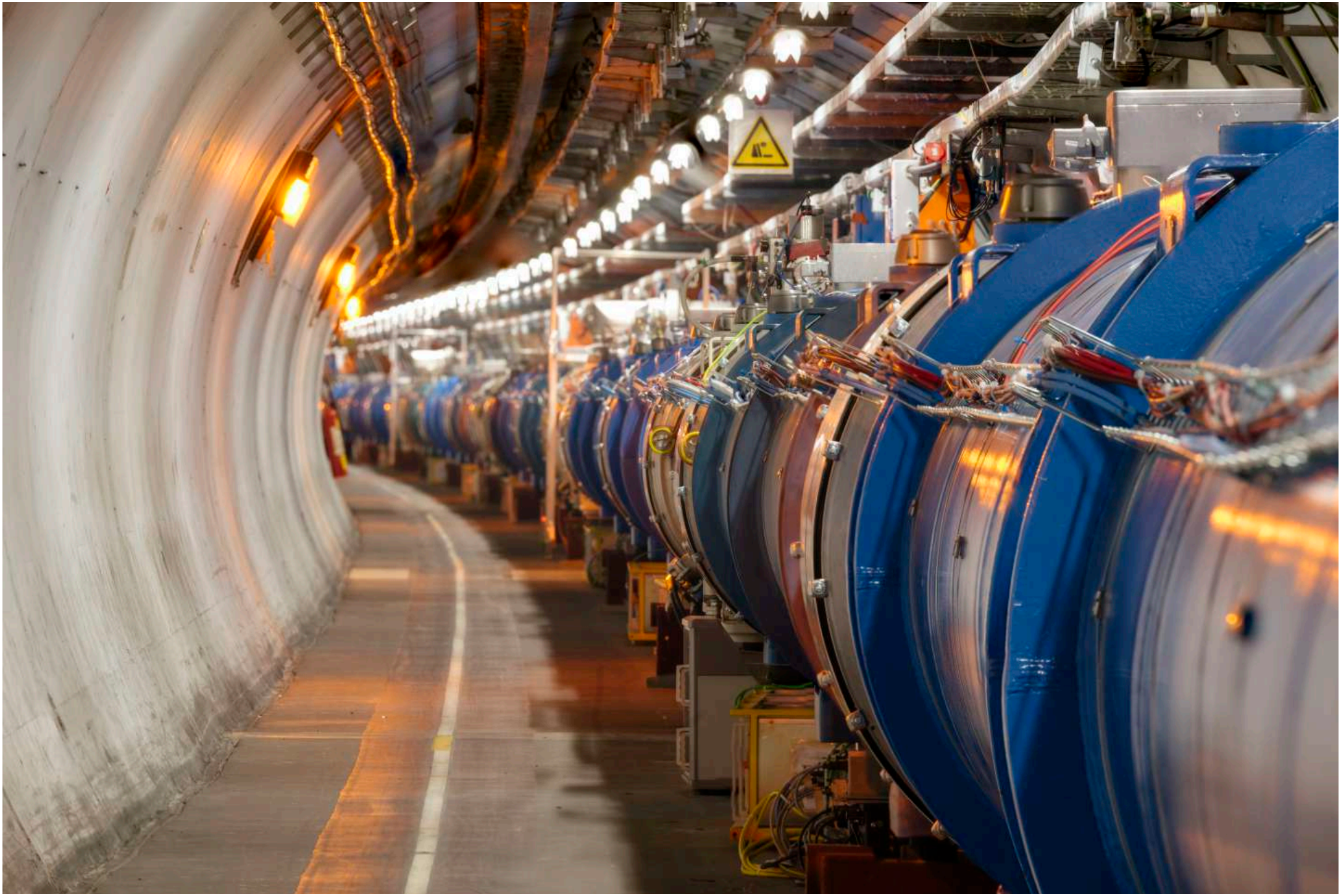




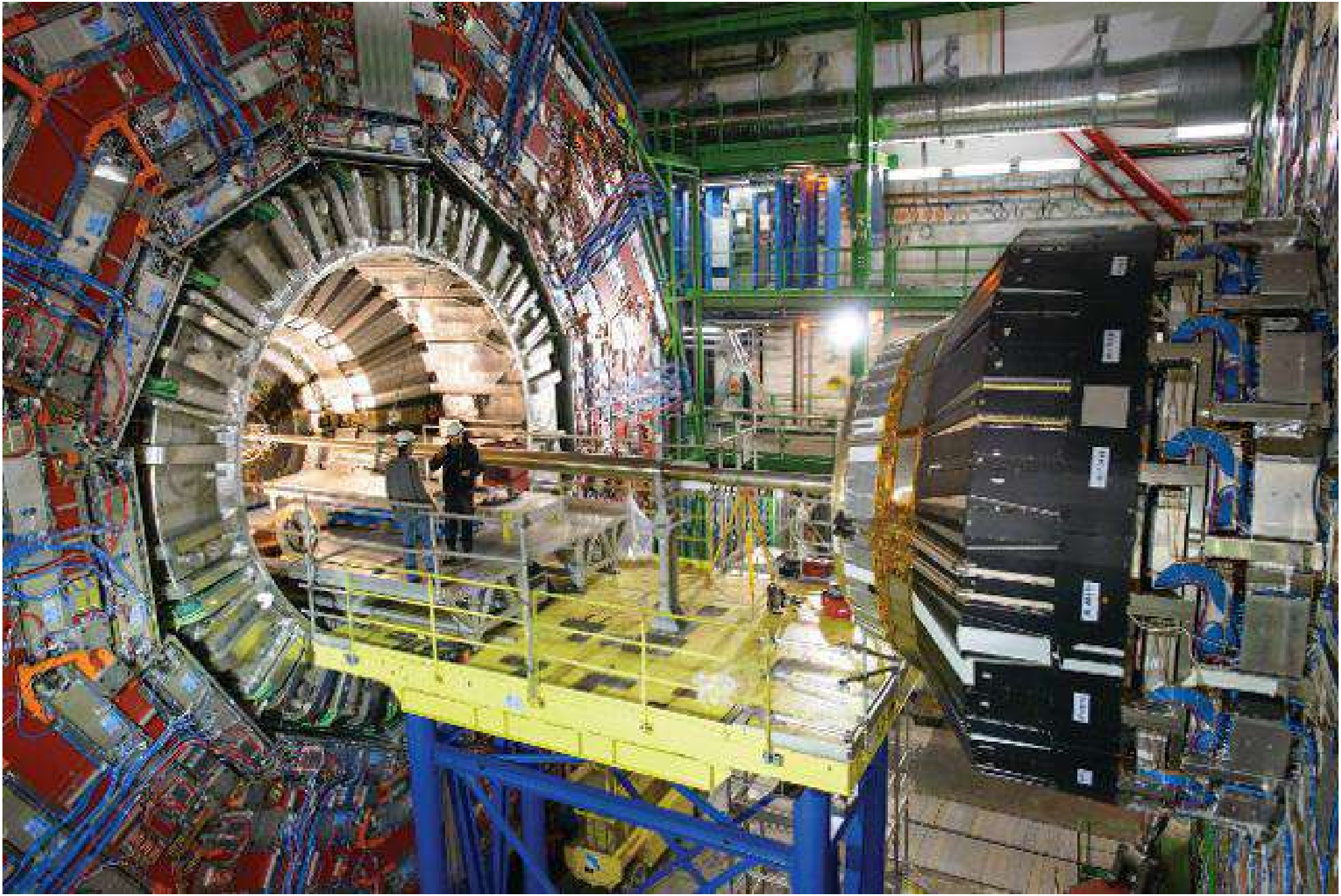



SHAWTON



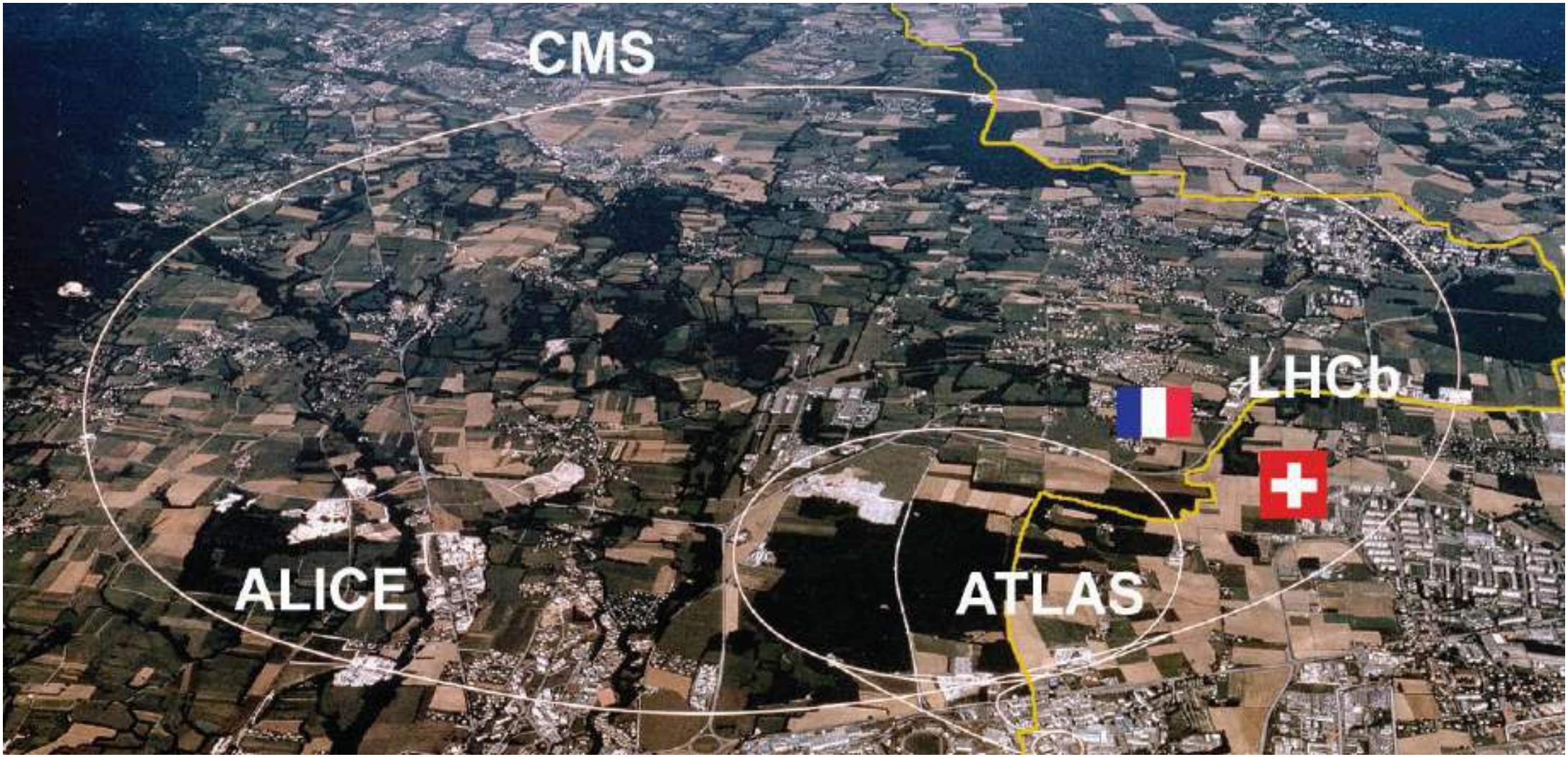


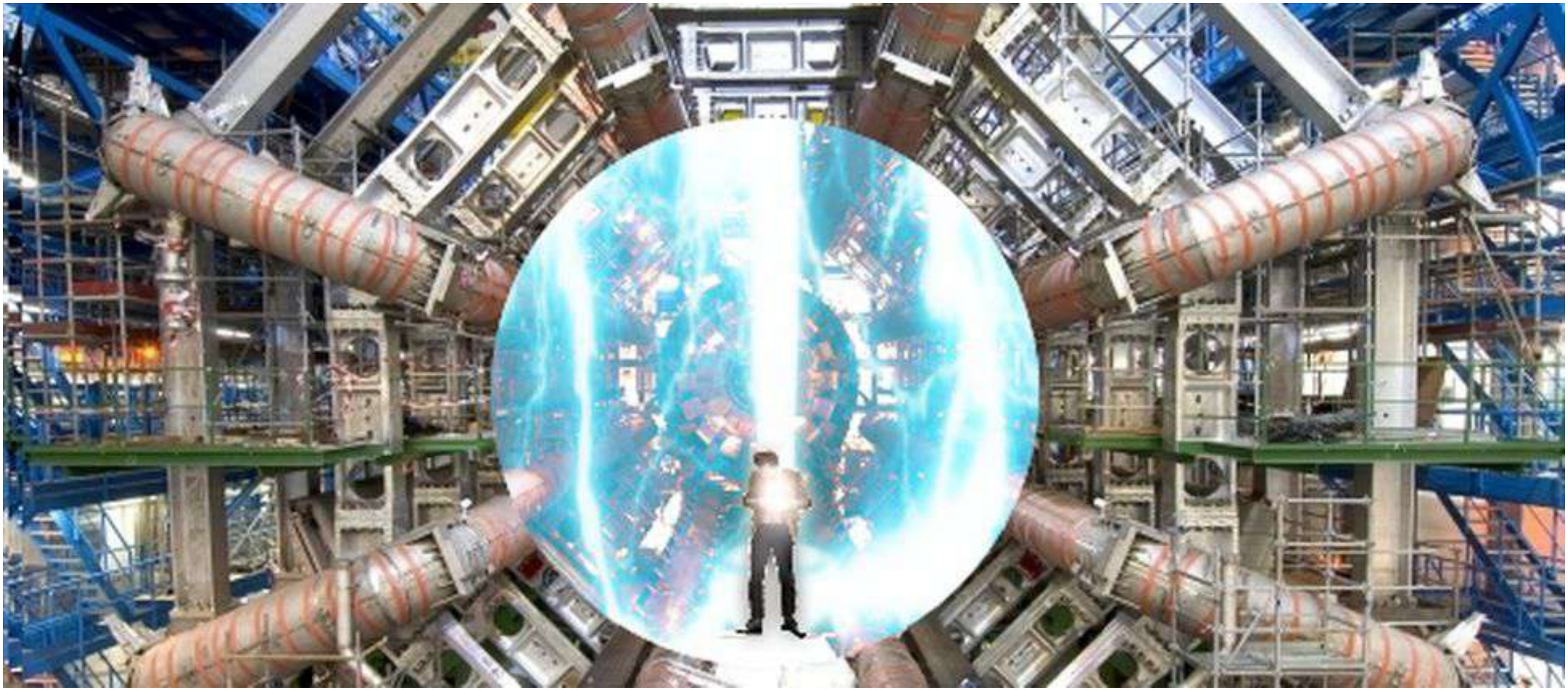


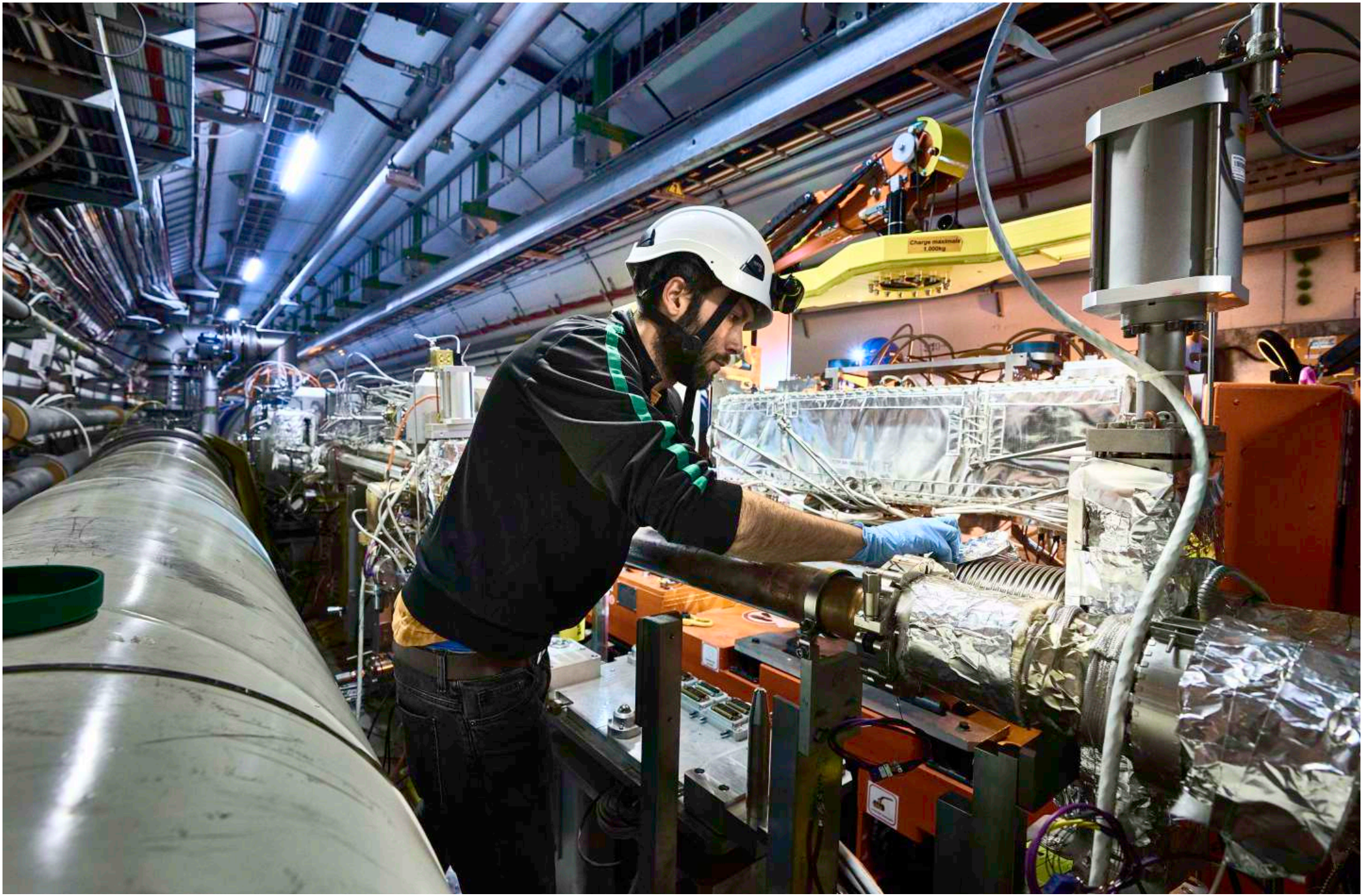


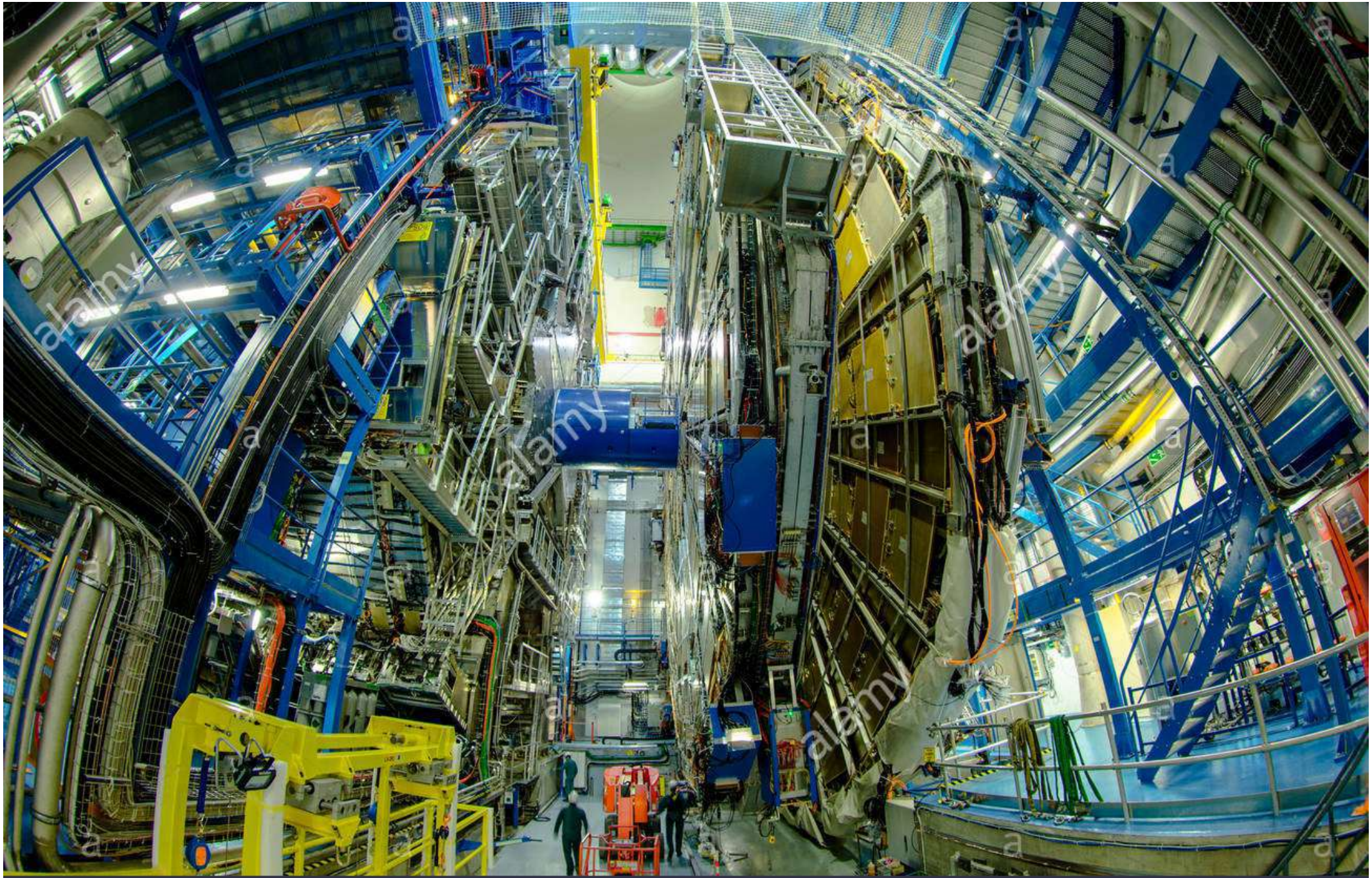





CMS
LHCb
ALICE
ATLAS

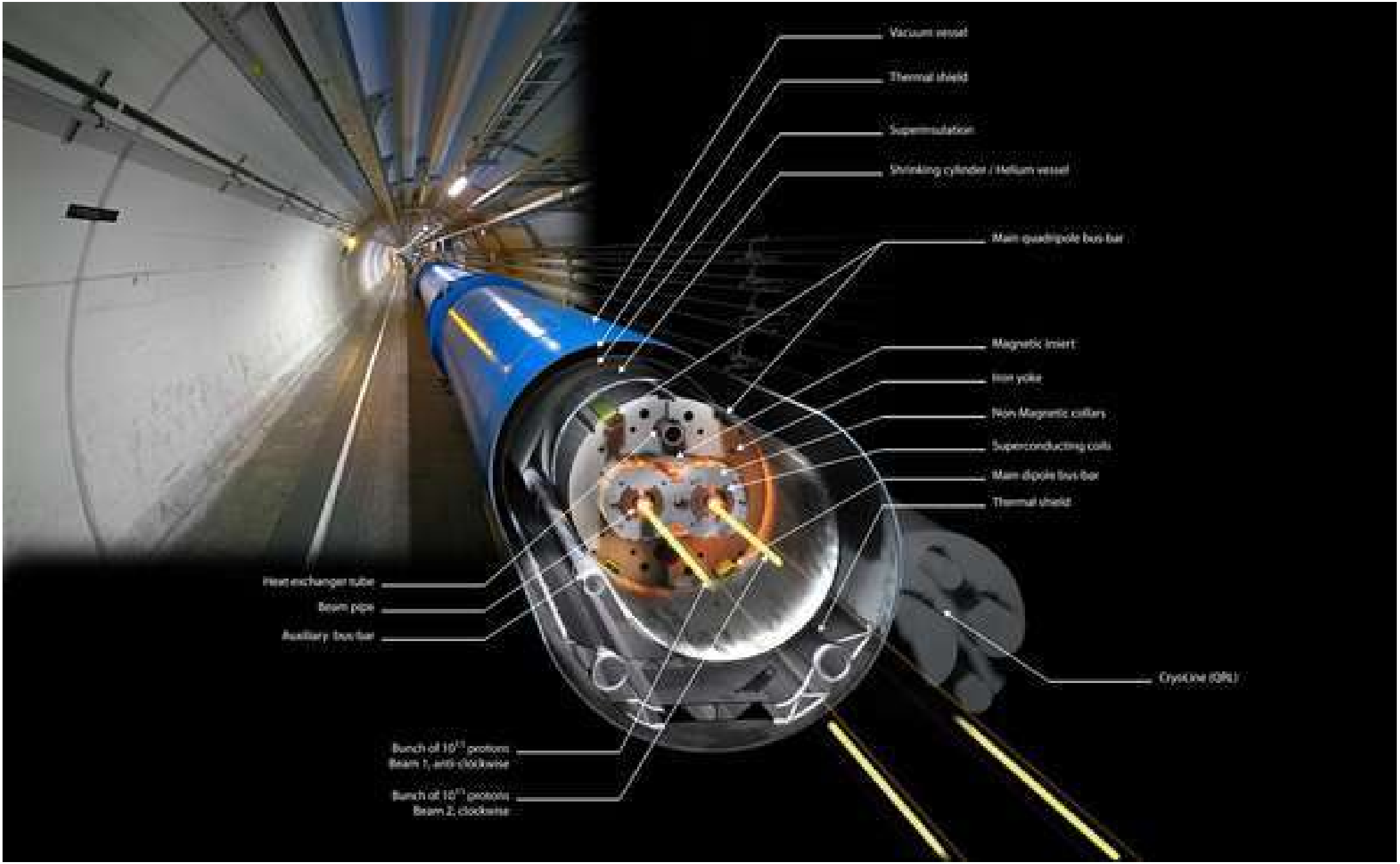



Charge maximale
1.000kg



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KW5CHC
www.alamy.com


Vacuum vessel
Thermal shield
Supermsulation
Shrinking cylinder / Helium vessel
Main quadrupole bus-bar
Magnetic insert
Iron yoke
Non Magnetic collars
Superconducting coils
Main dipole bus-bar
Thermal shield
Heat exchanger tube
Beam pipe
Auxiliary bus-bar
Cryostat (QRL)
Bunch of 10^{11} protons
Beam 1, anti-clockwise
Bunch of 10^{11} protons
Beam 2, clockwise


The
super hadron collider
in Switzerland/France

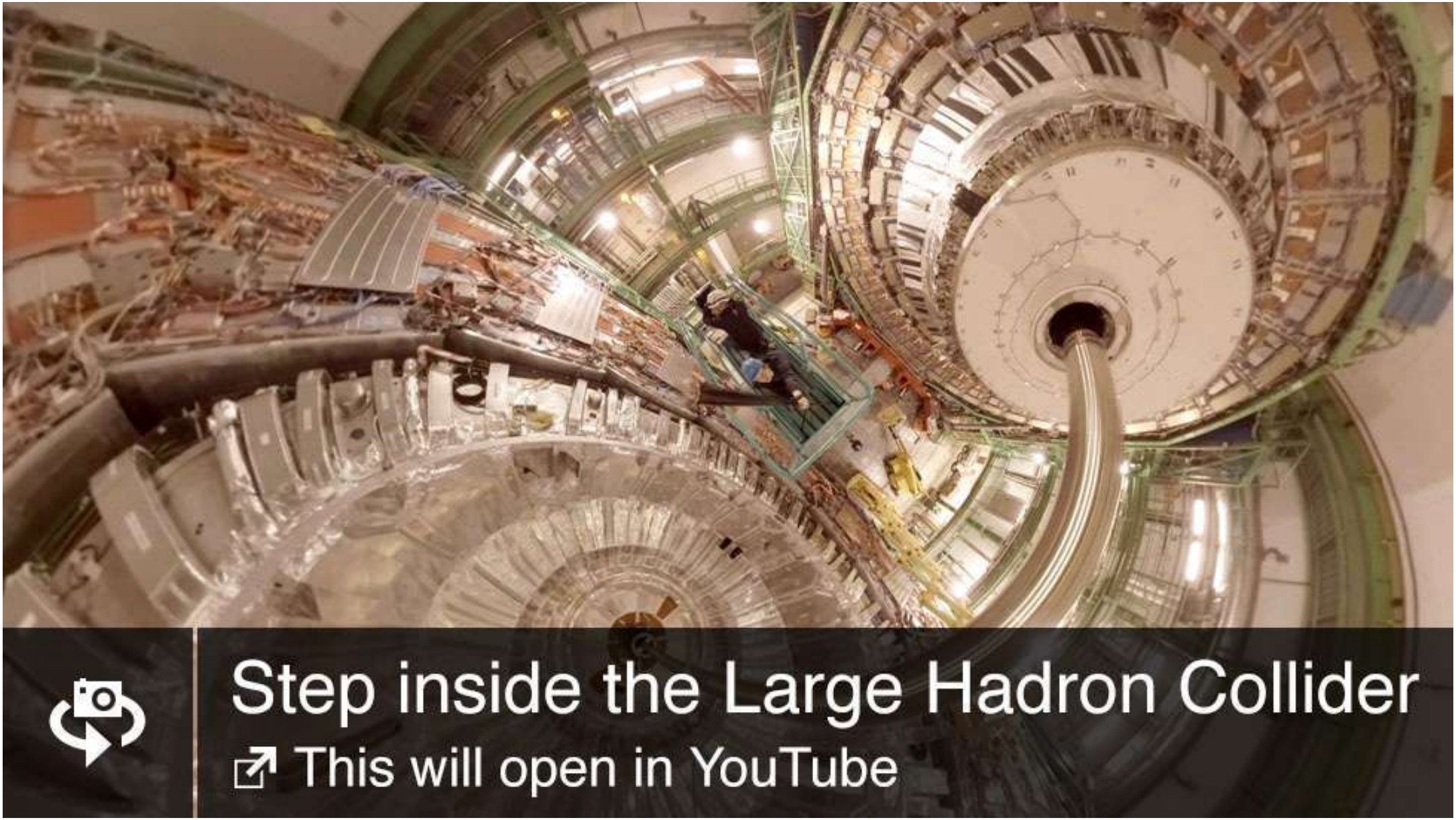

ALICE
CMS
ATLAS
LHCb


Large Hadron Collider
CMS
LHCb
ATLAS
ALICE

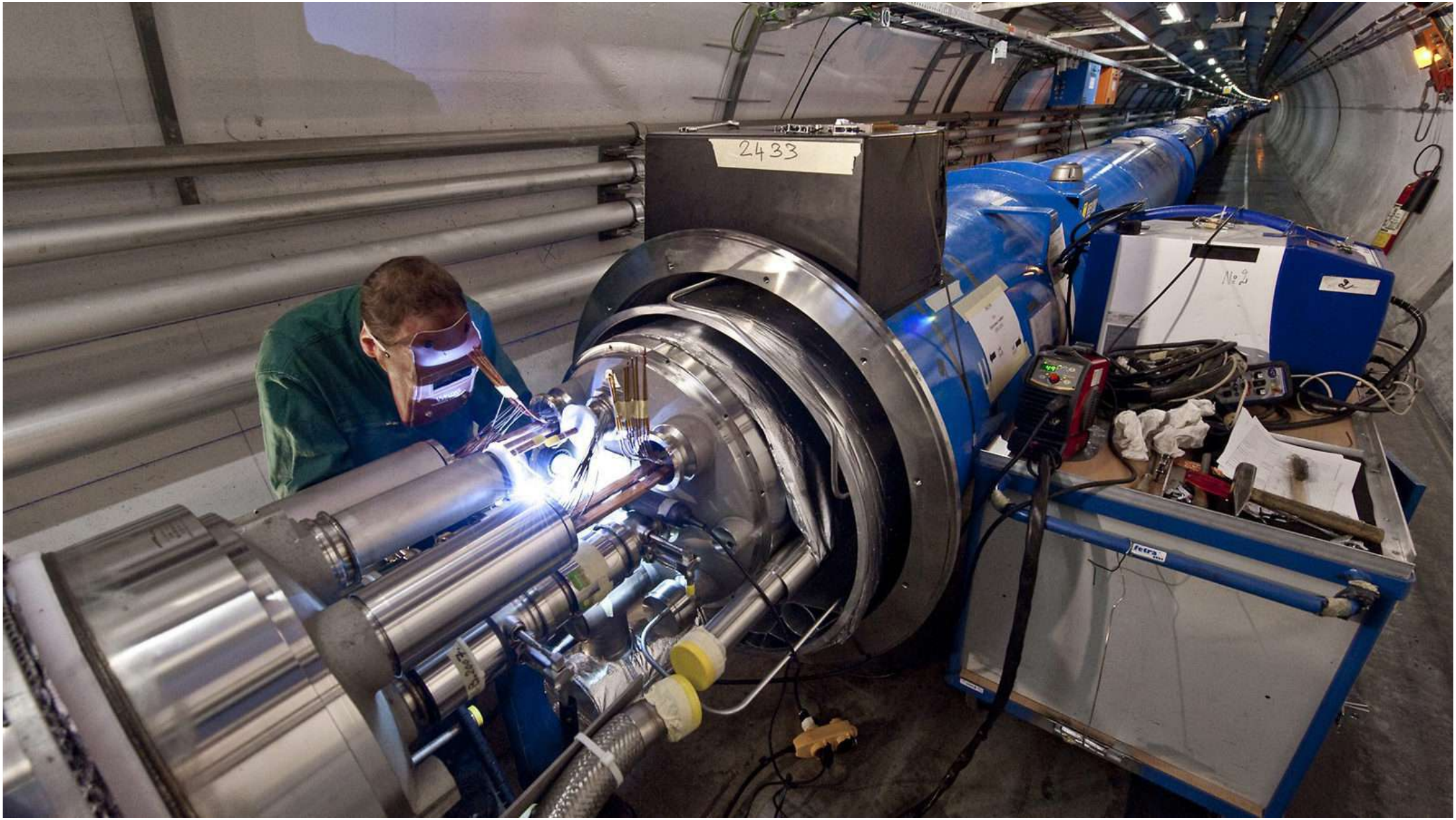


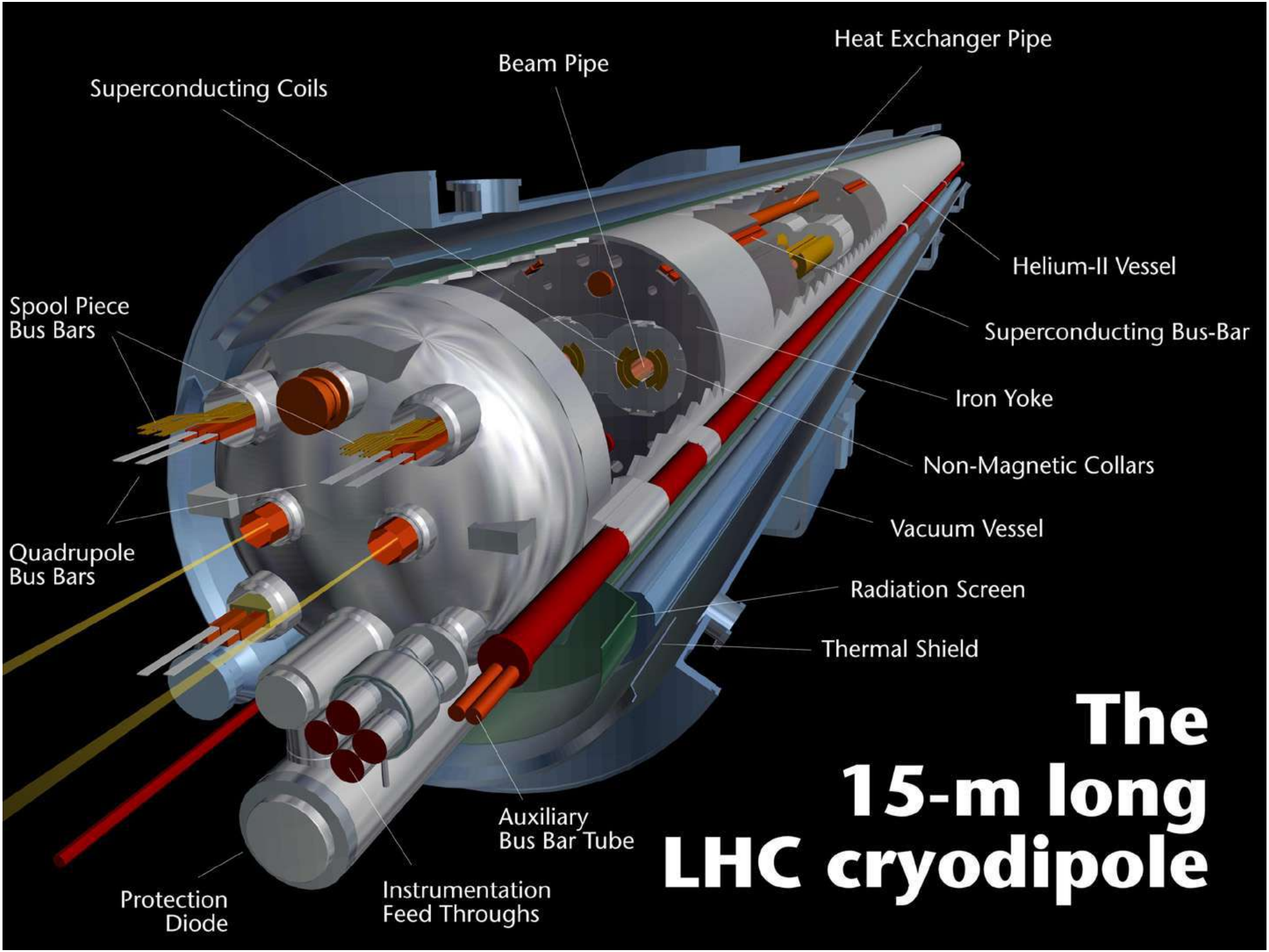


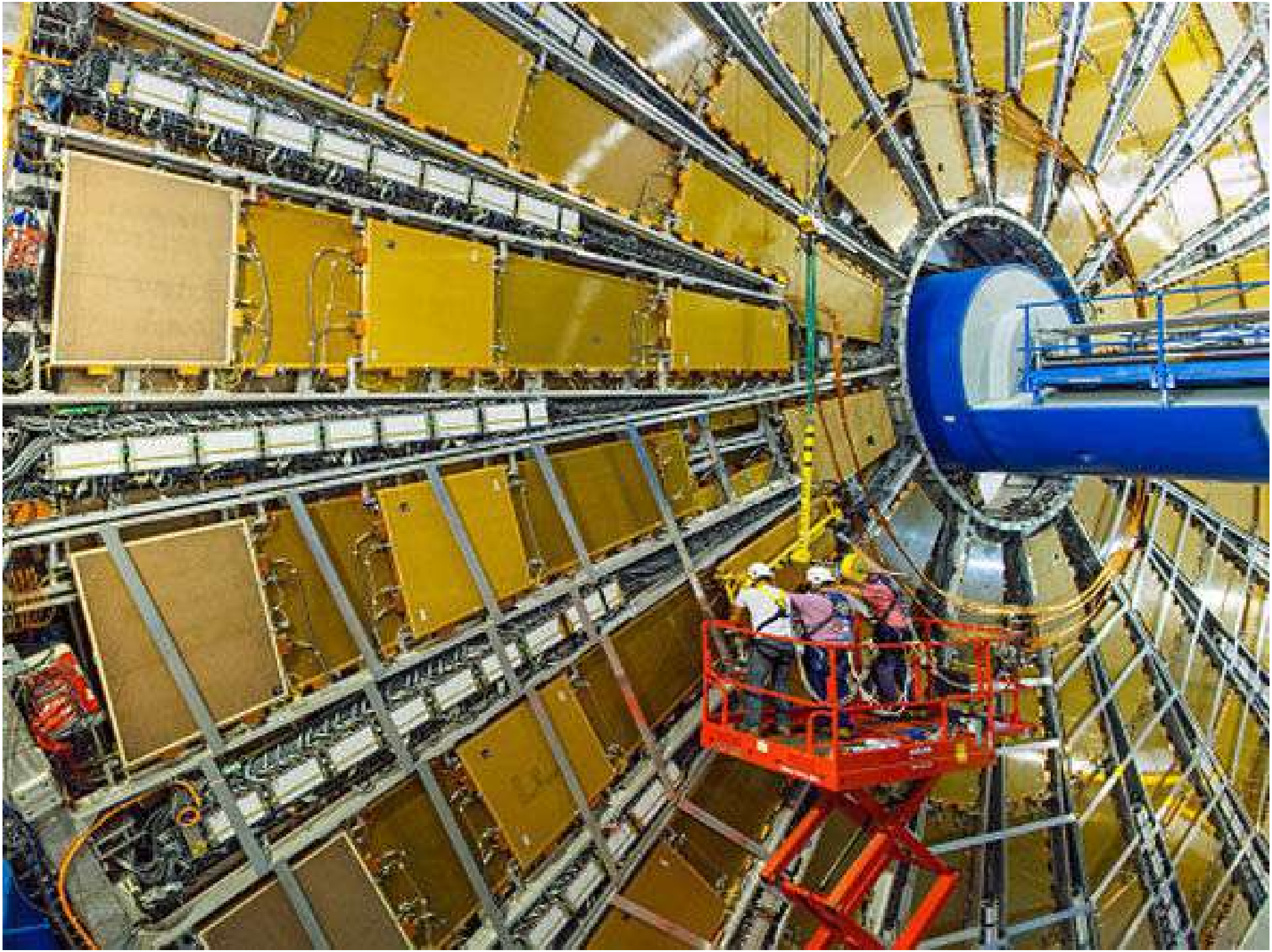

9,600 MAGNETS
DIRECT AND FOCUS THE BEAMS
THROUGH THE TUNNEL
© BBC

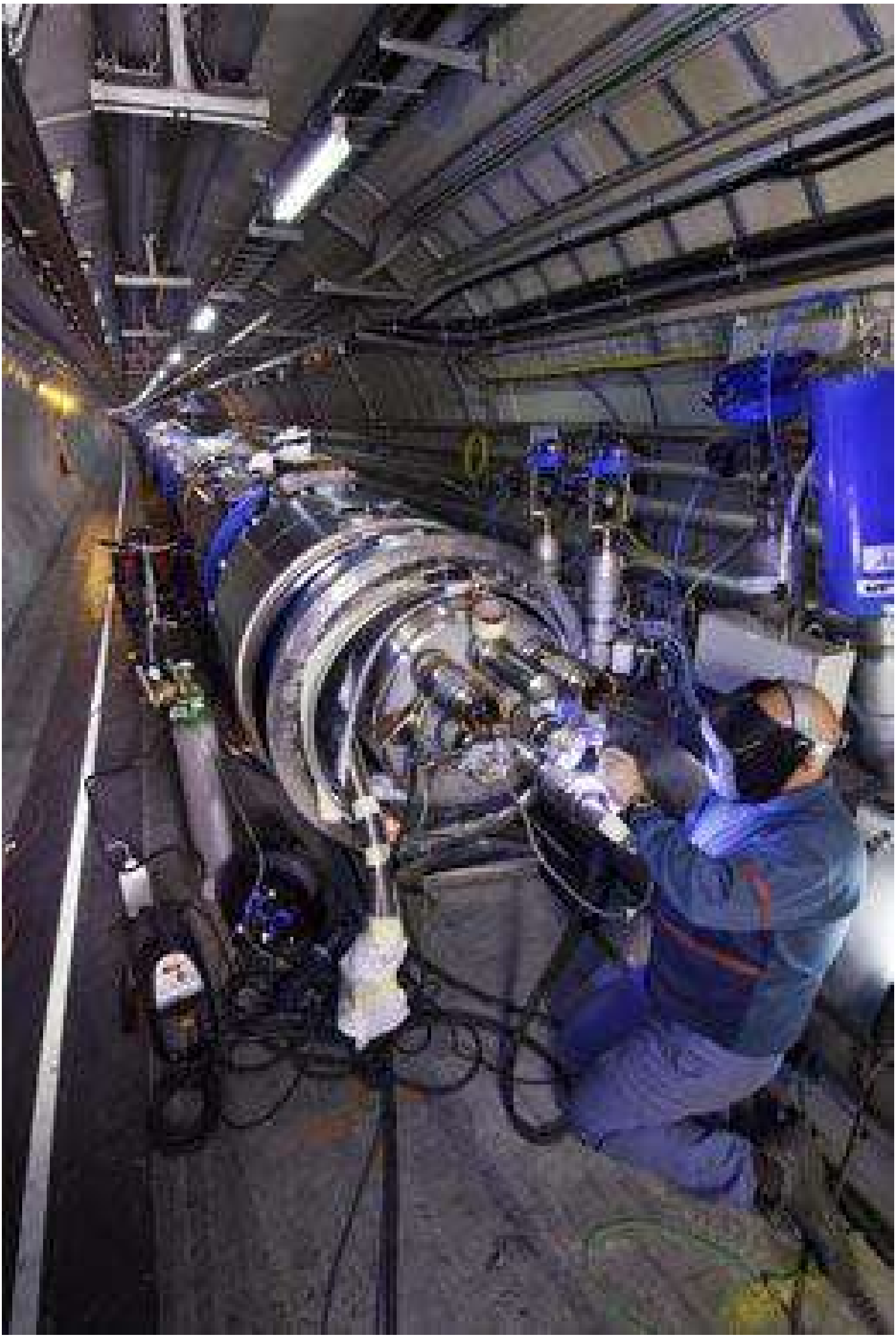

Step inside the Large Hadron Collider
This will open in YouTube

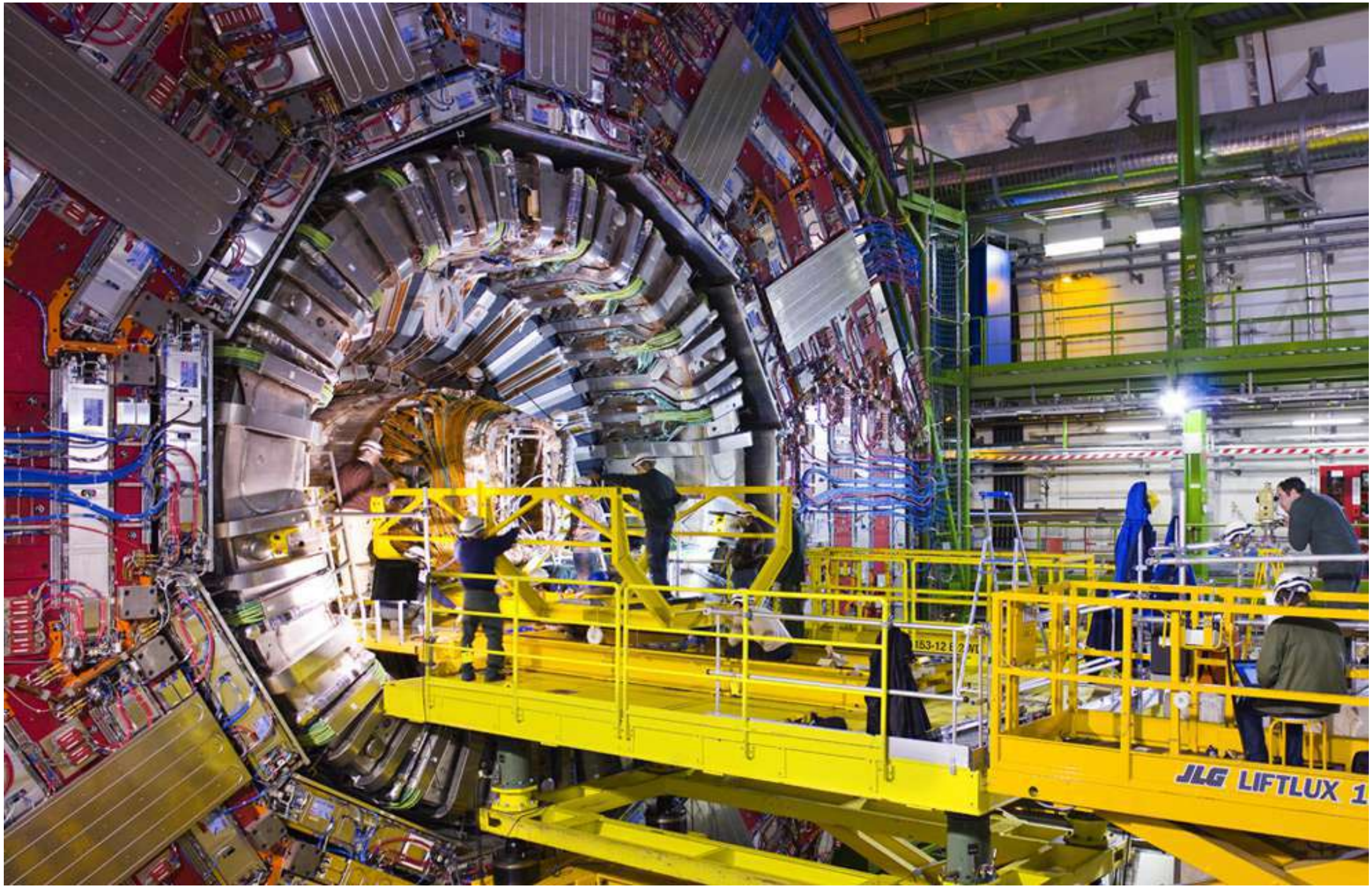



2433


Heat Exchanger Pipe
Beam Pipe
Superconducting Coils
Helium-II Vessel
Spool Piece
Bus Bars
Superconducting Bus-Bar
Iron Yoke
Non-Magnetic Collars
Quadrupole
Bus Bars
Vacuum Vessel
Radiation Screen
Thermal Shield
Auxiliary
Bus Bar Tube
Protection
Diode
Instrumentation
Feed Throughs
The
15-m long
LHC cryodipole






JLG LIFTLUX 1


IK 49935865 B
K11
THE UNITED STATES OF AMERICA
IK 49935865 B
FIVE
DOLLARS


GB 09228931 B
B4
THE UNITED STATES OF AMERICA
TEN
DOLLARS


IJ 75242685 A
J10
THE UNITED STATES OF AMERICA
FIVE
DOLLARS

FOLDING IN A PARTICULAR WAY THE $10,$20,$50,$100 DOLLAR BILLS WILL REVEAL SECRET IMAGERY OF THE 911 ATTACKS ON THE PENTAGON AND THE WORLD TRADE CENTER. ONE SIDE SYMBOLIZES THE TWIN TOWERS AND THE REVERSE SIDE THE PENTAGON.



COINCIDENCE? IT'S REPORTED THESE DENOMINATIONS WERE RE-PRINTED IN 1996 TO SPECIFICALLY INCLUDE NEW HIDDEN DESIGNS. MYSTERIOUSLY REVEALED TO THE PUBLIC ON 911 TO INTENTIONALLY DEMONSTRATE THEIR POWER AND CONTROL.

ConspiracyCards.com © 2008



Try this. Roll it up and add light behind it.

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Written by Imgur

Photos and Comments

1 Photo Comments



$10,000
in $100 bills



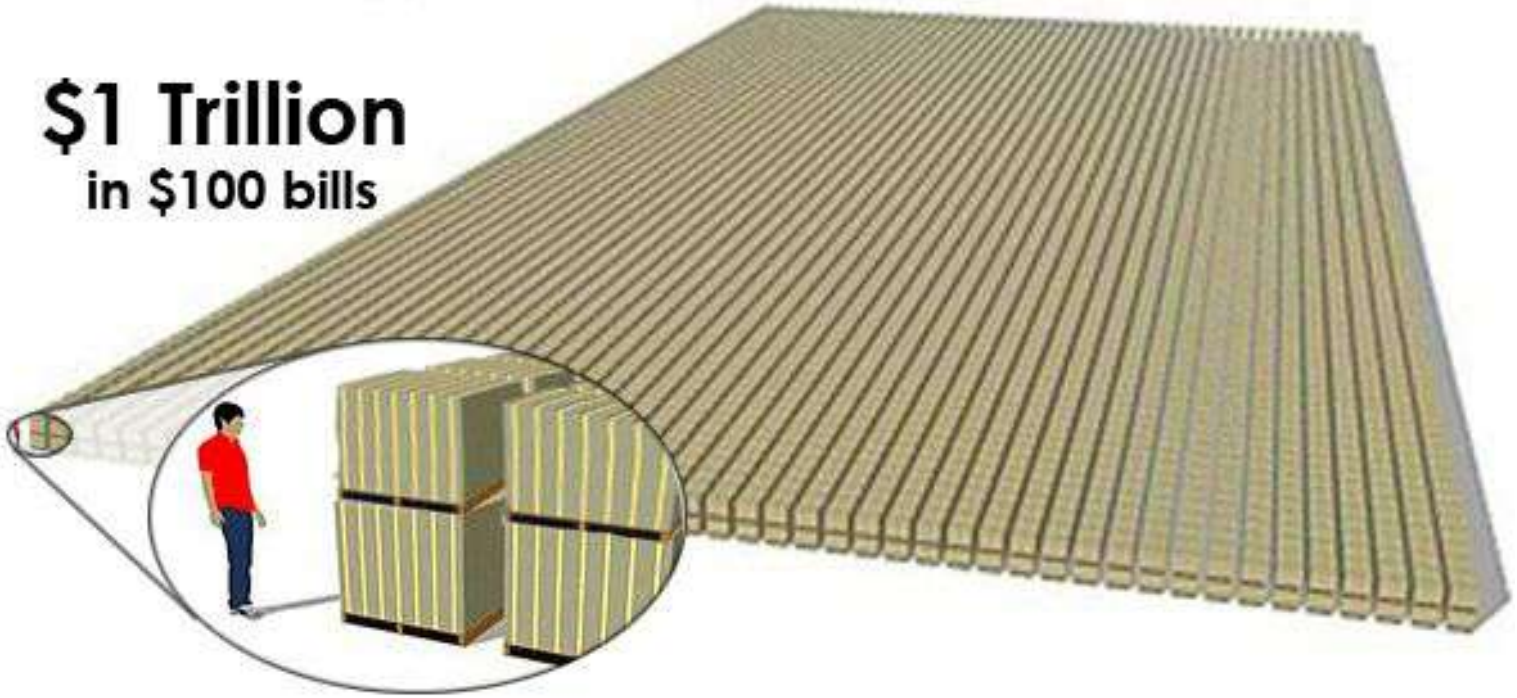
$1,000,000
in $100 bills



$100 Million
in $100 bills



$1 Billion
in $100 bills

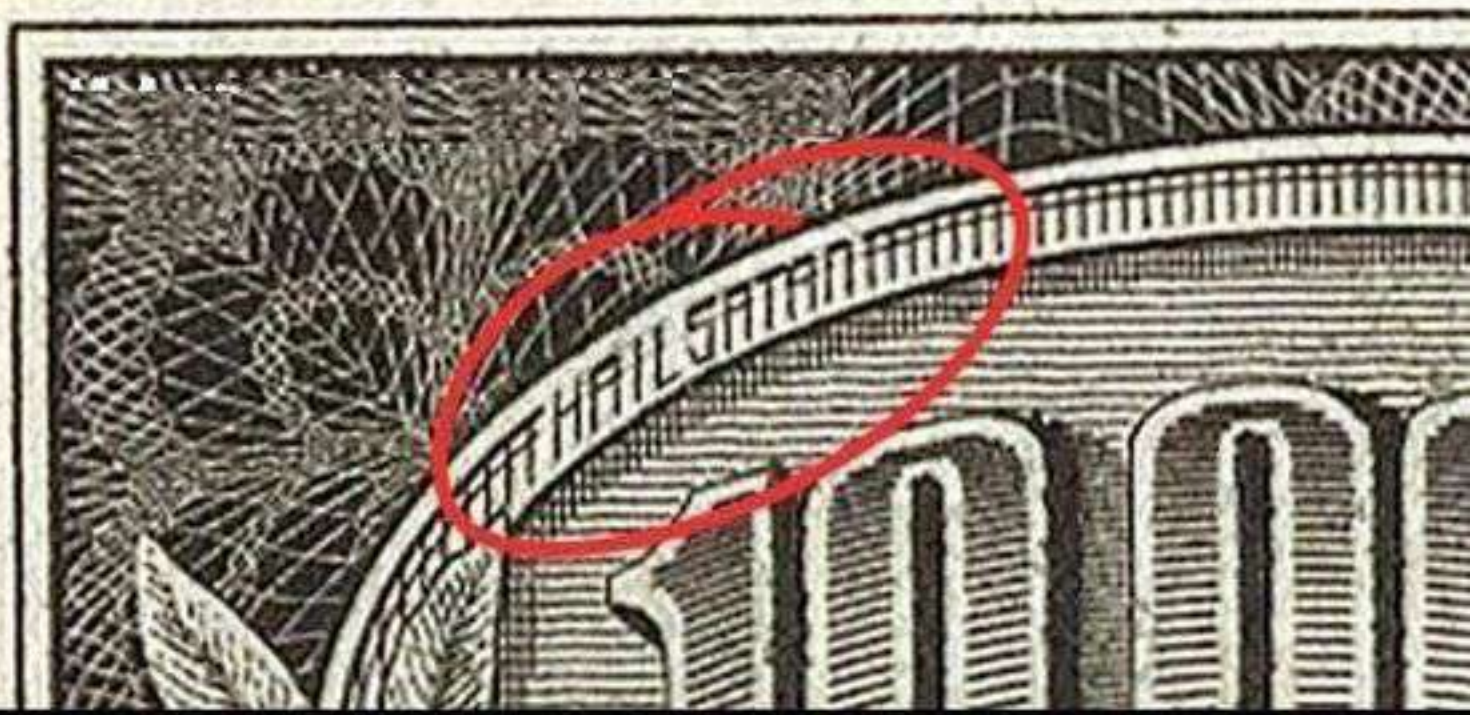


$1 Trillion
in $100 bills

This is the front of a U.S. $10,000 bill,
which was discontinued in 1969...



and otherwise known as the "Hail Satan" bill.



If you have one, you can see it with a magnifying glass.
Look at the upper left "10,000". It's above the "1".

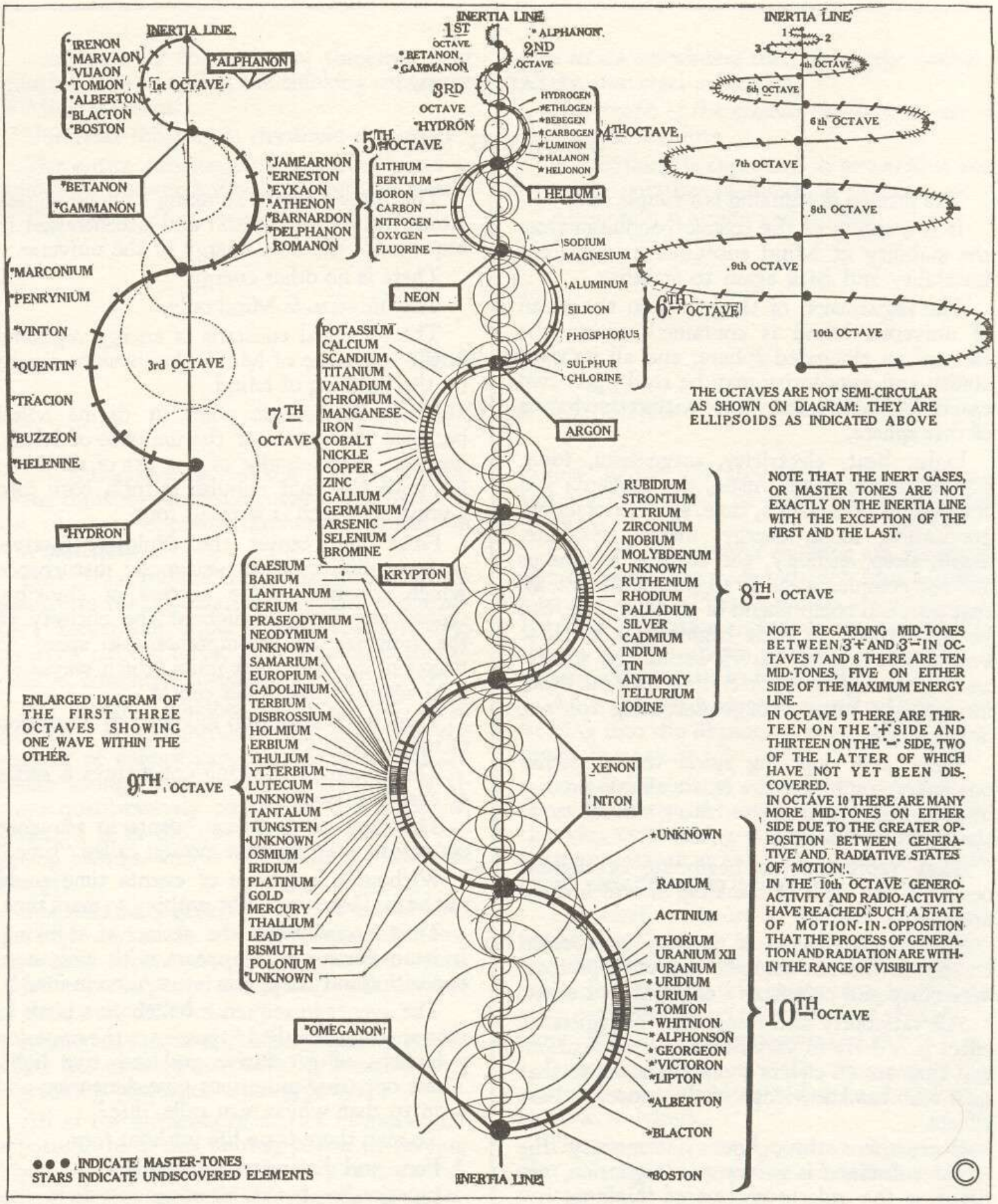
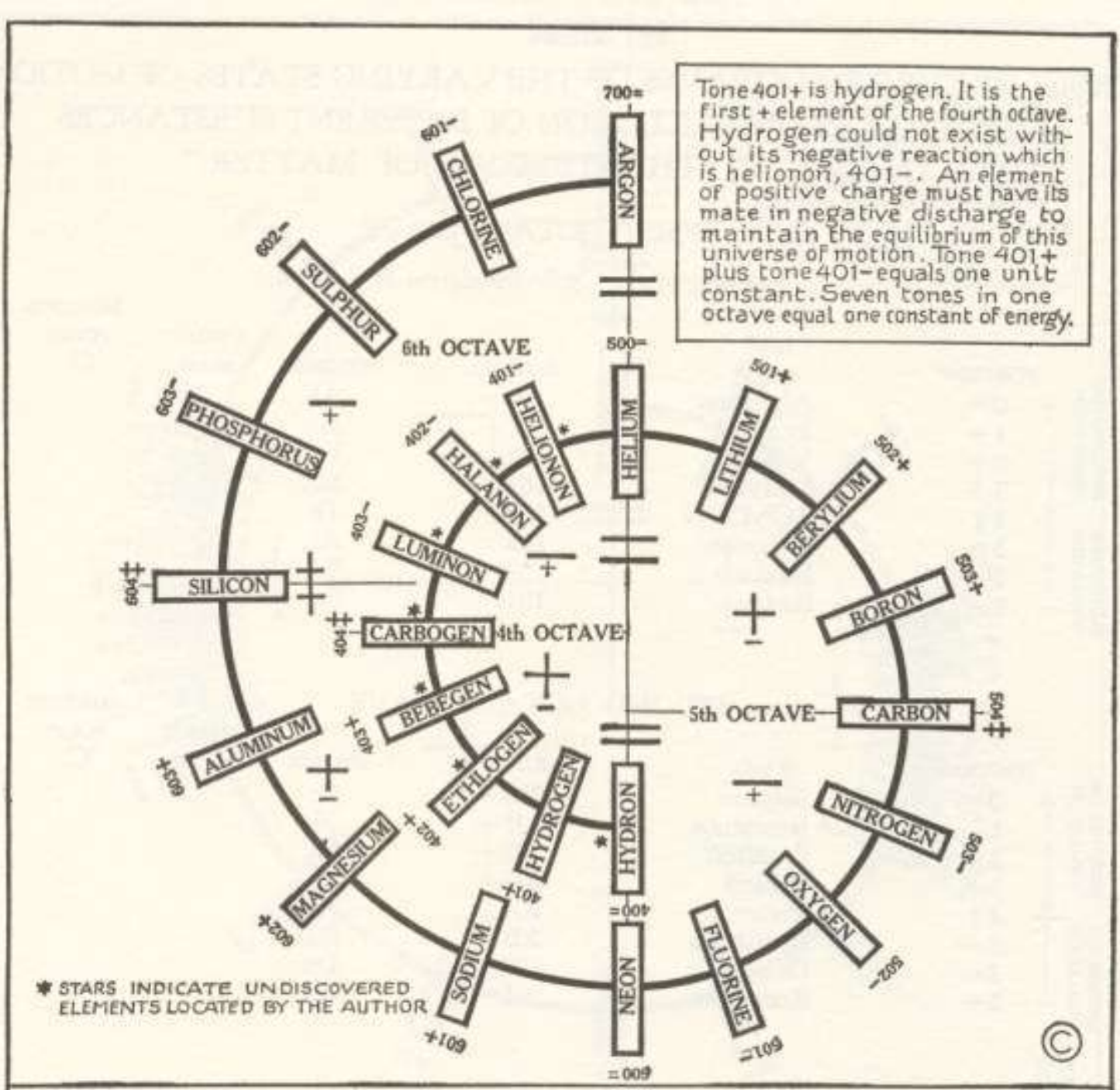
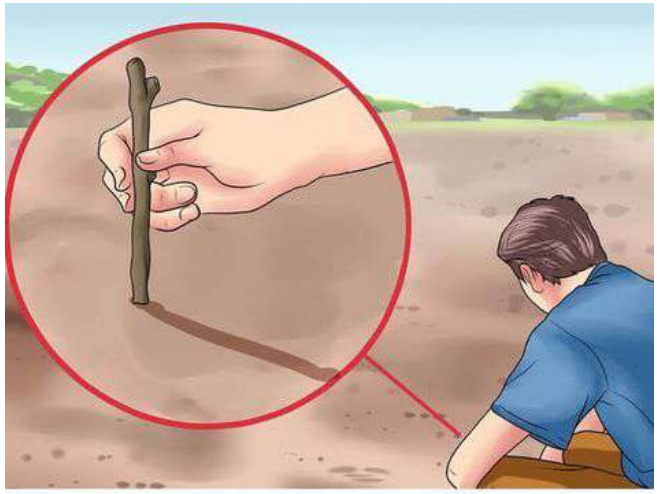


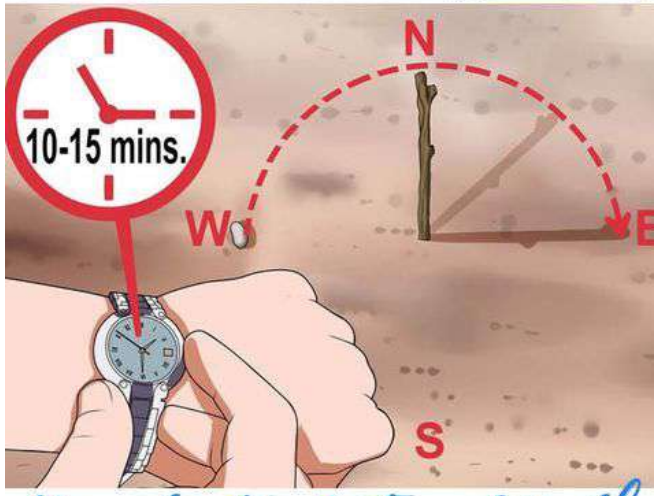
DIAGRAM SHOWING THE TEN OCTAVES OF INTEGRATING LIGHT, ONE OCTAVE WITHIN THE OTHER. THESE TEN OCTAVES CONSTITUTE ONE COMPLETE CYCLE OF THE TRANSFER OF THE UNIVERSAL CONSTANT OF ENERGY INTO, AND THROUGH, ALL OF ITS DIMENSIONS IN SEQUENCE



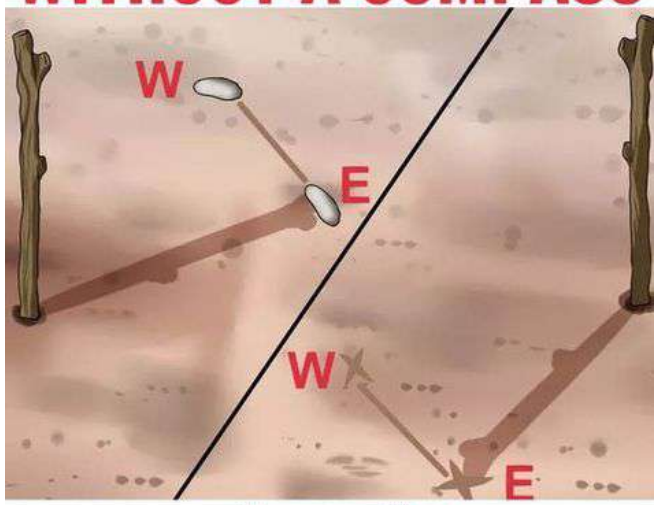
The entire ten octave constant cycle is simply an orderly periodic accumulation of the constant of energy into higher power dimension which reaches its maximum at the fifth octave, and a distribution of that accumulation through the succeeding five octaves. Higher power is accumulated time. The deceleration of speed in rotation of mass is the result of generation. Power is generated by resistance to speed of rotation and acceleration of speed of revolution. Power is thus accumulated from low potential of great axial speed to high potential of great orbital speed. Each element is greater in its mass than its predecessor because of the generative power of electricity which acts as a brake against high axial speed and diverts it into accumulating mass. The elements of matter are an orderly and periodic accumulation and redistribution of energy.

FOURTH, FIFTH AND SIXTH OCTAVES. IN THE FOURTH OCTAVE THE SO-CALLED PHYSICAL UNIVERSE BEGINS WITH BUT ONE OF ITS ELEMENTS KNOWN TO MAN. THE ELEMENT HYDROGEN





How to Find True North WITHOUT A COMPASS







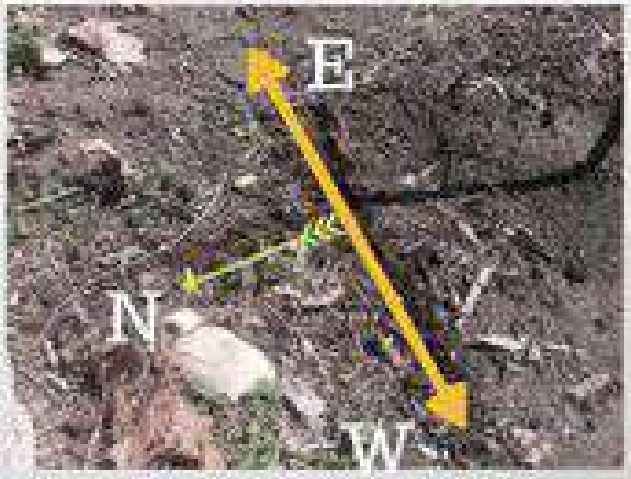
Plunge a stick into the ground to make a shadow



Place a stone at the tip of the shadow



Wait 20 minutes and place a stone at the new point of the shadow. This will give you East and West.



North is decided by the direction that the sun is laying its shadow

Sundial Direction

DID YOU KNOW?

GRAVITY IS A HOAX

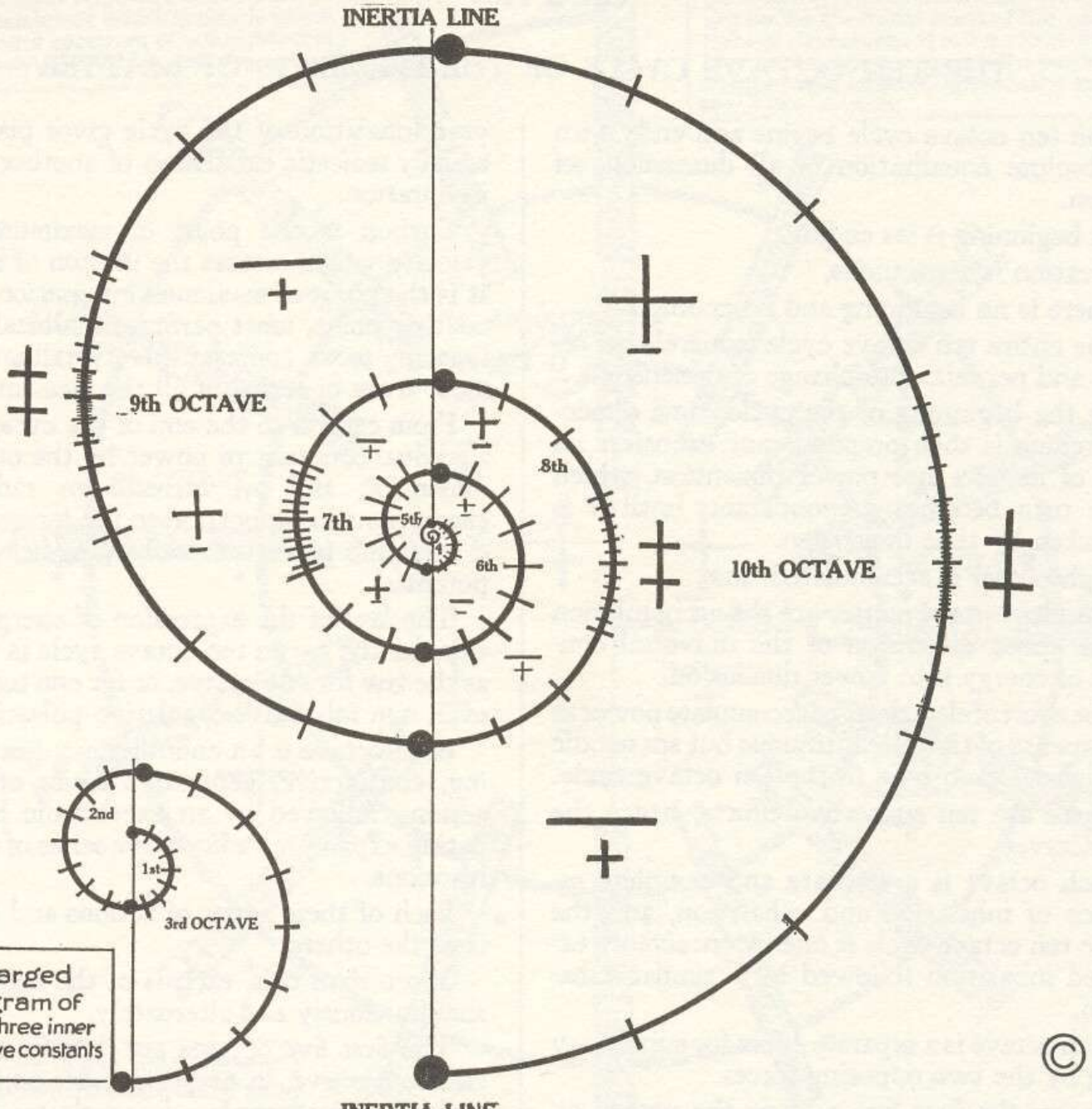


BUMBLEBEES CAN'T FLY? AERODYNAMICALLY, IT IS IMPOSSIBLE FOR THEM TO ACHIEVE FLIGHT. WHAT BUMBLEBEES ACTUALLY DO IS LEVITATE



BUMBLEBEES HAVE A HOLLOW CAVITY NEXT TO THE LARYNX, AND WHEN THEY BEAT THEIR WINGS, THEY START TO RESONATE ENERGY WITHIN THIS CAVITY. ONCE THAT RESONANCE MATCHES THE 7.83Hz RESONANCE OF THE MAGNETIC FIELD (EARTH'S RESONANCY) IT BECOMES A FREE-AGENT, ENCOMPASSED IN AN ELECTROMAGNETIC ENVELOPE AND LEVITATES FROM FLOWER TO FLOWER

The "CREATED" universe of matter is the result of concentration of Mind upon the idea of form and then the generation of power by diverting low potential into centripetal vortices in order to hold the idea of Mind into the appearance of form until form disappears through mental decentration



The universe of matter is a registration of the energy expended by Mind in the effort of thinking. The exact energy of the action of thinking is registered in the electro-positive charging systems, and the reaction of the action is registered in the electro-negative discharging systems. The charging systems are electrically dominated, centripetally closing, contracting systems. The discharging systems are magnetically dominated, centrifugally opening, expanding systems. The low potential speed-time dimension of energy of the highest octave is gradually accumulated into the high potential power-time dimension of the fifth octave. When these two opposing dimensions equalize in the tenth octave the cycle is completed and begins again.

DIAGRAM OF THE TEN OCTAVE CYCLE OF INTEGRATING AND DISINTEGRATING LIGHT UNITS INTO ATOMIC SYSTEMS CALLED THE "ELEMENTS OF MATTER"







WTF fun fact #5874

The Great pyramid of Giza has 8 sides, not 4.




RichardCassaro.com
MEXICO
EGYPT
CAMBODIA













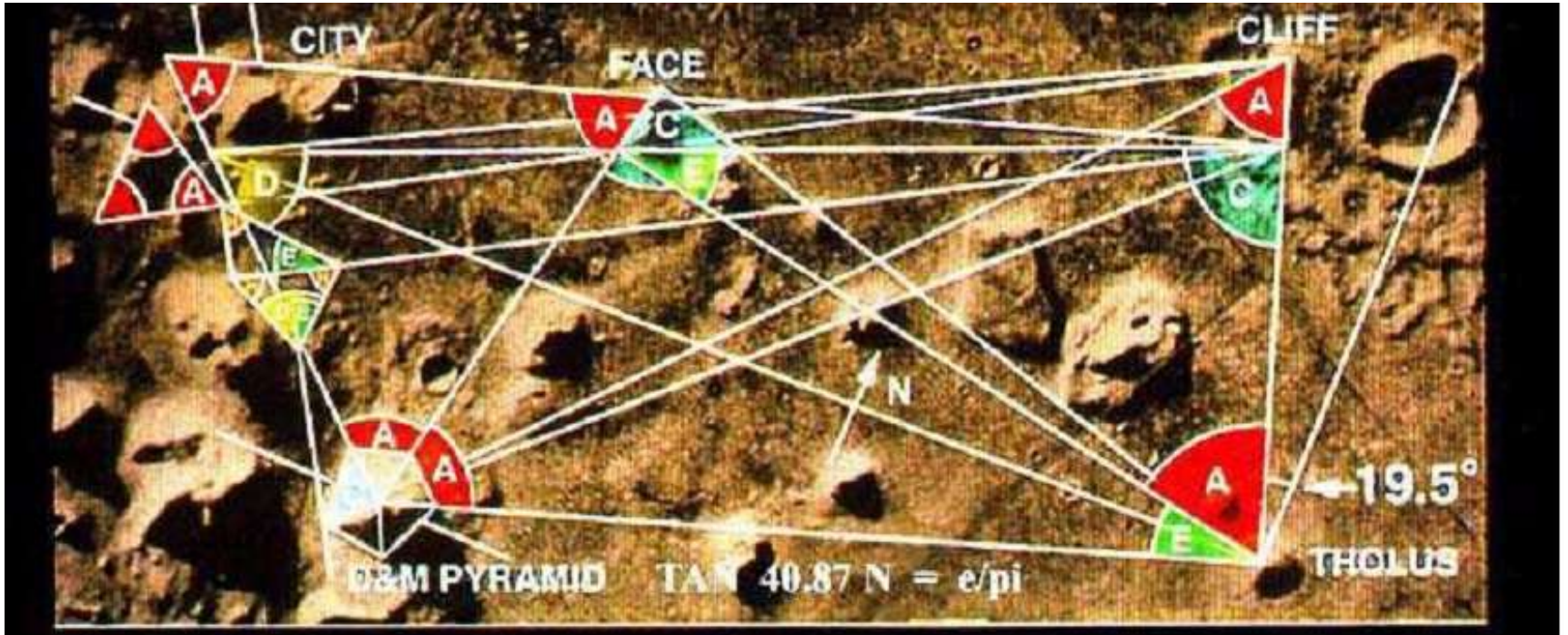









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Angles		Angle Ratios	Trig. Functions
degrees	radians		
A = 60.0	= π/3	C/A = √2	TAN A = √3
B = 120.0	= 2π/3	B/D = √3	TAN B = -√3
C = 85.3		C/F = √3	SIN A = e/π
D = 69.4	= e/√5	A/D = e/π	SIN B = e/π
E = 34.7	= e/π	C/D = e/√5	TAN F = π/e
F = 49.6		A/F = e/√5	COS E = √5/e
G = 45.1		H/G = e/√5	SIN G = √5/π
H = 55.3		C/B = √5/π	SIN C = 1
I = 100.4		D/F = π/√5	TAN G = 1
			TAN I = .2e
			TAN 40.87° N = e/π

(C) 1996 The Enterprise Mission



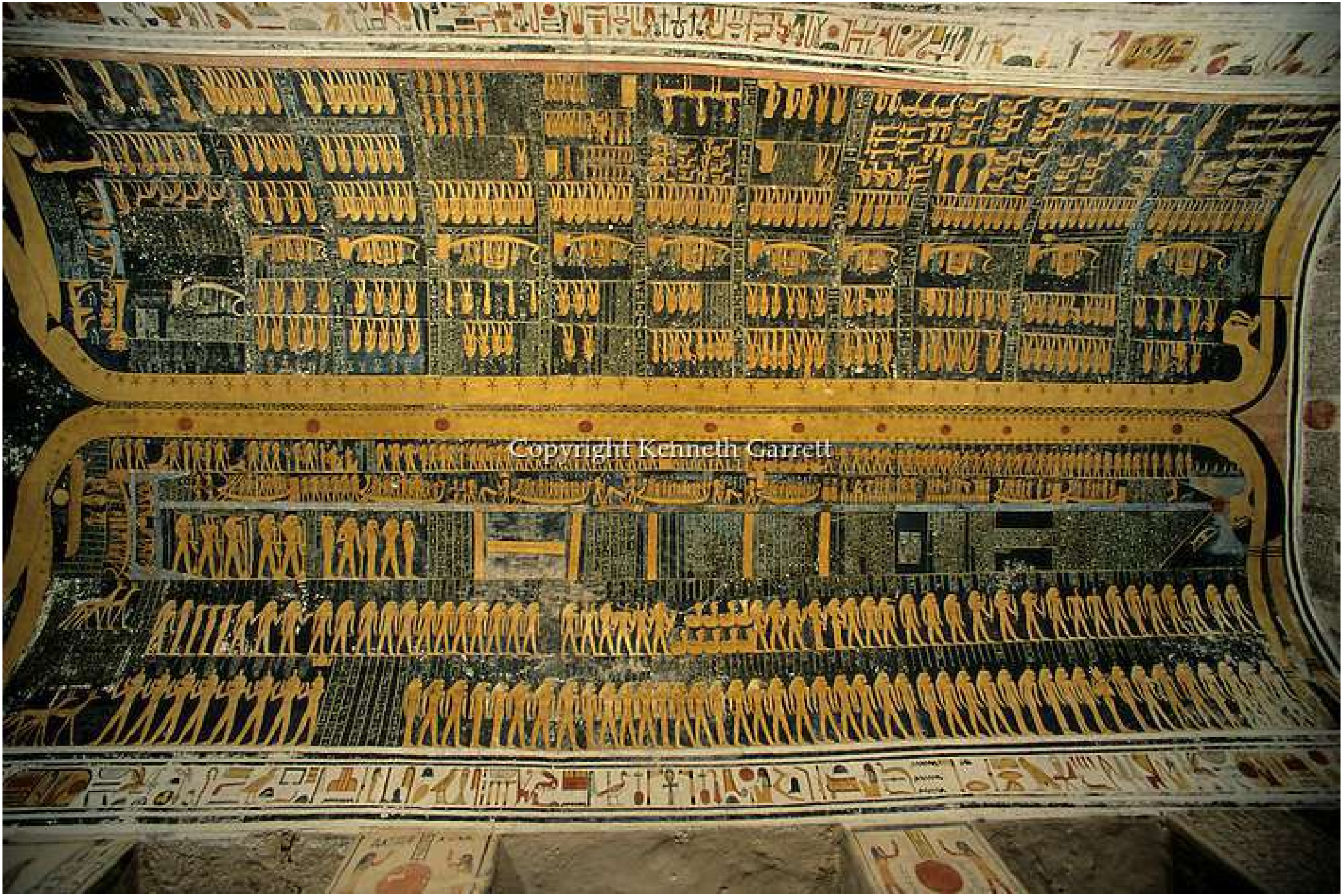

Stay awake at FUNsubstance.com




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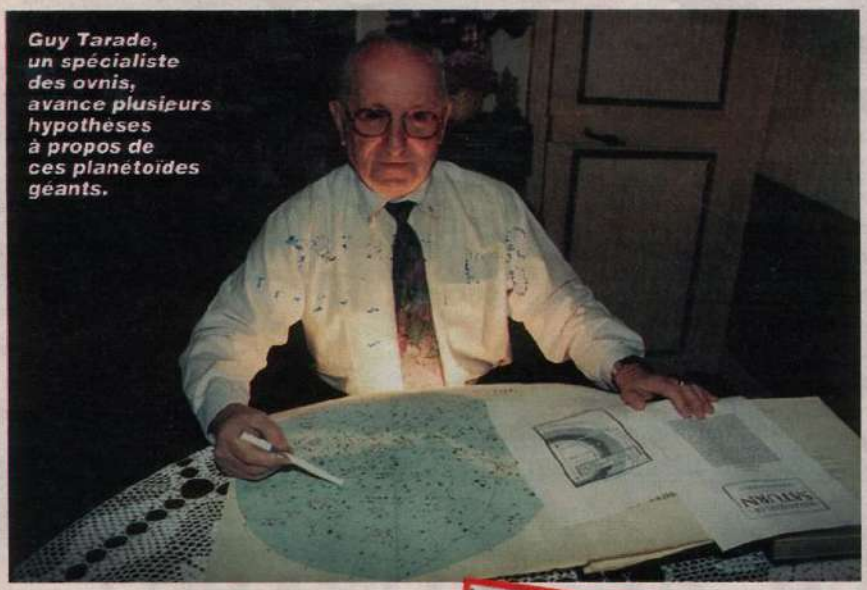


les extraterrestres...

seh et qui ont été détectés récemment à la surface de Mars.

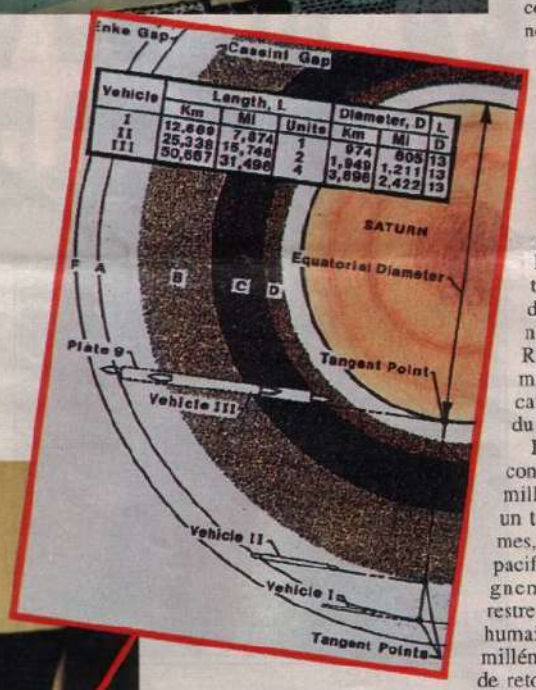
Le plus spectaculaire concerne les preuves matérielles qui ont pu être rapportées sous la forme des photos stupéfiantes de Saturne et de ses anneaux, réalisées sous divers angles par les sondes américaines Voyager 1 et Voyager 2. Sur les clichés et les films transmis à la Terre par ces deux stations automatiques, apparaissent très nettement d'énormes cités volantes qui semblent être encore contrôlées... intelligemment. Il est même possible d'y distinguer de multiples sources lumineuses.

Des données techniques d'un intérêt considérable ont bien été publiées, dès les années 80, à l'issue des missions spatiales des Voyager 1 et 2, d'après certains résultats obtenus par leurs



Guy Tarade, un spécialiste des ovnis, avance plusieurs hypothèses à propos de ces planétoïdes géants.

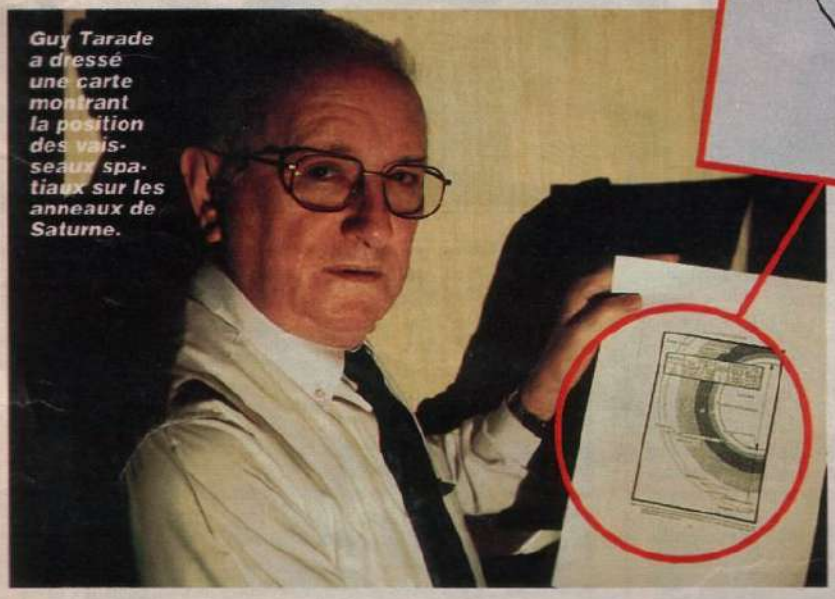
Un cataclysme, survenu il y a treize mille ans, les aurait obligés à fuir la Terre à bord d'arches de Noé volantes...



...struments de bord. Mais la NASA a jalousement préservé le secret pendant plus de quinze ans à propos d'autres documents analysés au moyen d'un microscope à enregistreur et à pouvoir lumineux. **Là sont apparus de gigantesques appareils spatiaux saturniens, étrangement inhabituels dans leur apparence et leurs dimensions colossales.**

relatifs à l'espace qualifiés de non hostiles ».

Or, des engins de cette taille, ont estimé les responsables de la NASA – qui peuvent se tromper lourdement, en l'occurrence –, ne peuvent qu'être considérés comme « hostiles ». Et, à ce titre, leur existence ne devrait et n'aurait pas dû être révélée. Une cinquan-



Guy Tarade a dressé une carte montrant la position des vaisseaux spatiaux sur les anneaux de Saturne.

... et leurs descendants, nos lointains cousins, surveilleraient notre planète depuis trois gigantesques astronefs basés dans la banlieue céleste de Saturne

En face de ces monuments de l'espace, indéniables preuves d'une superintelligence extraterrestre, les scientifiques américains ont préféré respecter « l'acte de l'Espace » signé en 1958 au plan mondial. Ce traité stipule que « le public ne doit être informé que de faits

taine d'initiés ont alors été fermement invités à garder le silence. Depuis, quinze années se sont écoulées et une autre philosophie est née chez certains de ces scientifiques qui se sont décidés à parler.

En publiant son ouvrage, *Les Anneaux de Saturne* (non encore été édité en France), le docteur Norman R. Bergrun a choisi de mettre un terme au secret, plaçant ainsi sous un nouvel éclairage l'irritant mystère des « soucoupes volantes ». Il répond aussi à certaines questions fondamentales posées par « l'Union européenne des chercheurs pour le Droit de savoir », coordonnée depuis Villeneuve-Loubet, près de Nice, par Claude Chapeau, un ancien chercheur du CNRS.

Porte-parole de cette association qui collecte en temps réel sur Internet et Compuserve des informations en provenance du monde entier, l'écrivain ufologue niçois Guy Tarade analyse diverses hypothèses à propos de ces planétoïdes géants qui servent sans doute de bases aux ovnis surgissant de plus en plus fréquemment dans le ciel terrestre.

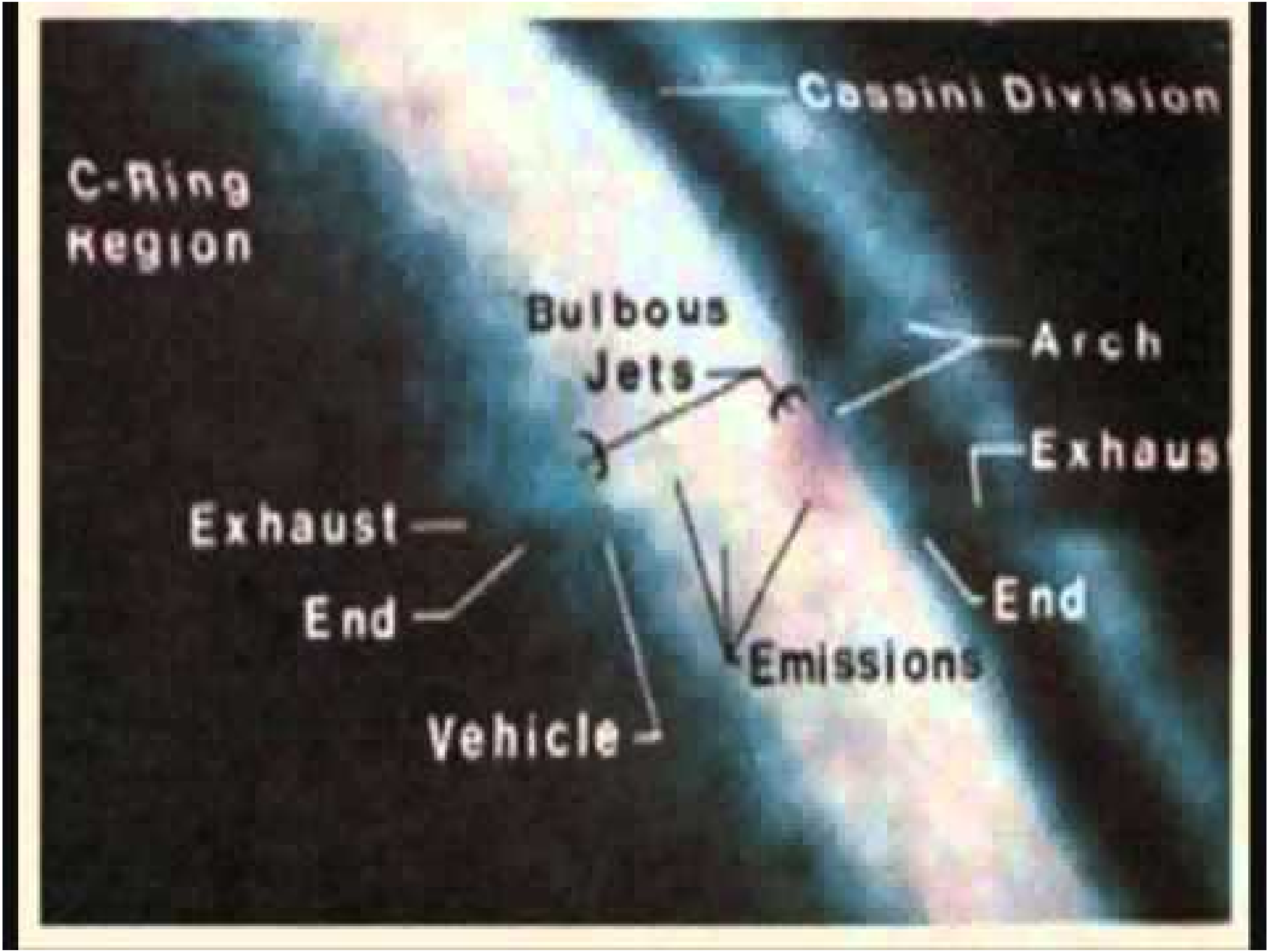
« Que se passerait-il si une de ces gigantesques "îles volantes" quittait le voisinage de Saturne pour venir se mettre en orbite autour de notre planète ? »

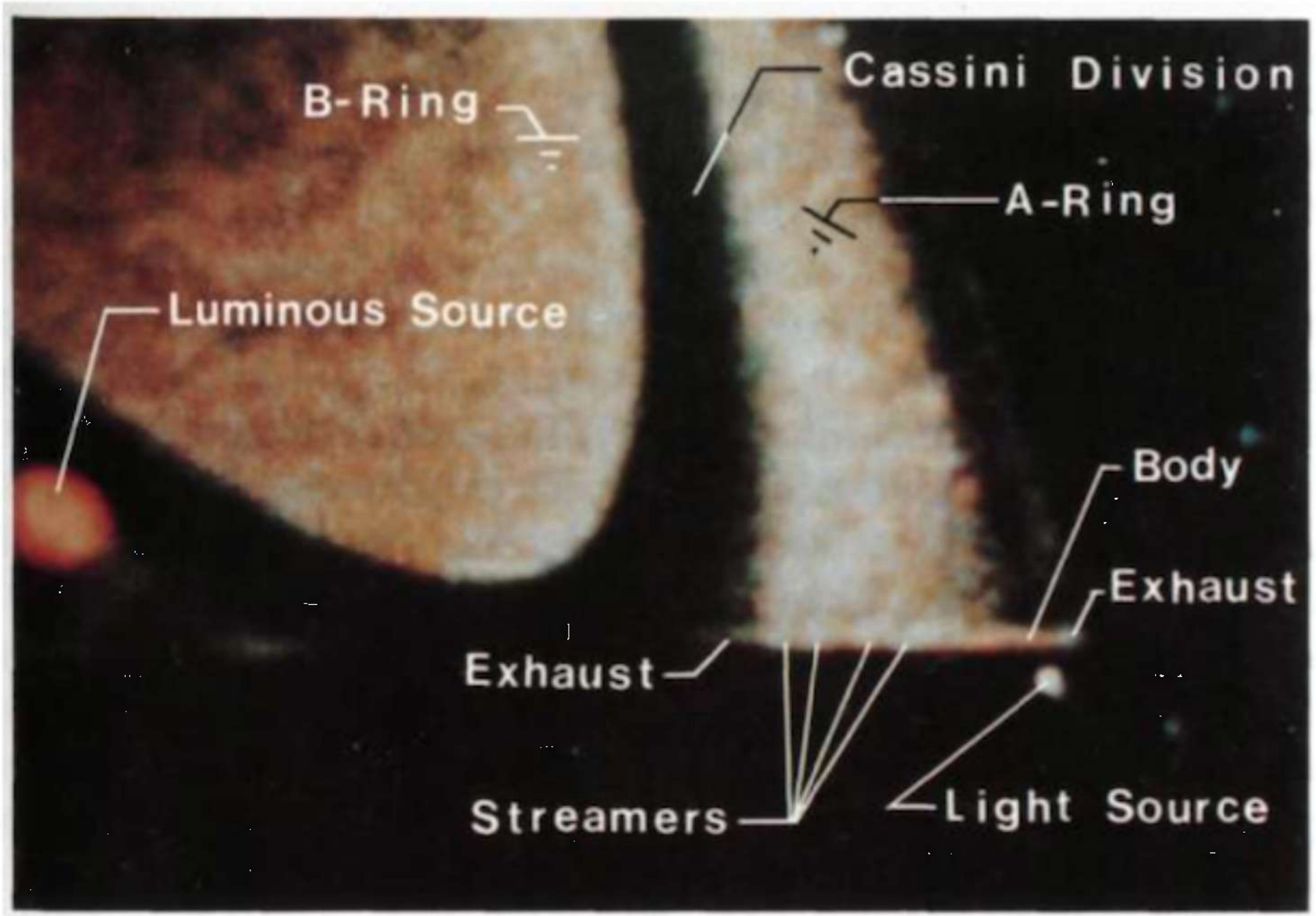
Pas de doute : une terrible panique s'emparerait des populations, confrontées par voie de conséquence à des cataclysmes ne laissant que peu de chances de survie à l'espèce humaine !

Mais fort heureusement, tel ne semble pas devoir être notre très proche avenir. Même si certaines prophéties laissent présager une apocalypse, préludant elle-même à un renouveau pastoral pour l'humanité (*). On pense notamment au fameux quatrain de Nostradamus, celui qui annonce l'arrivée d'un « Grand Roy d'Effrayeur » appelé à se manifester avec son cortège de catastrophes à la date fatidique du 28 juillet 1999.

D'autres pensent, tout au contraire, que l'aube du troisième millénaire pourrait bien marquer un tournant positif pour les hommes, établissant enfin des contacts pacifiques et richissimes en enseignements avec des « para-terrestres ». Des êtres issus d'une race humaine exilée depuis des déluges millénaires sur d'autres planètes et de retour pour guider à temps l'humanité contemporaine vers d'autres valeurs. Comme pour répondre à Gérard de Nerval, poète visionnaire qui annonçait : « Ils reviendront ces dieux que tu pleures depuis toujours. Le temps va ramener l'ordre des anciens jours... »

(*) *Le Grand Monarque. La dernière prophétie de Nostradamus*, par Guy Tarade.


Cassini Division
C-Ring
Region
Bulbous
Jets
Arch
Exhaust
Exhaust
End
End
Emissions
Vehicle

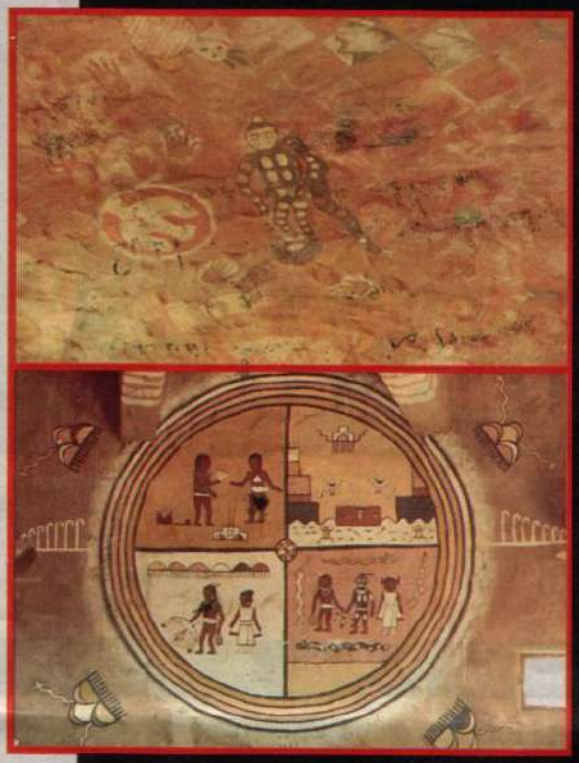


5: Efflux from along the length of a slender body, exhausting at both ends, generates the A-ring.

L'actualité insolite
par Jacques Legal

Nos ancêtres,

❑ Cette découverte est tellement importante que la NASA avait préféré la tenir secrète : trois gigantesques vaisseaux spatiaux auraient été repérés dans les anneaux de Saturne, de l'autre côté de notre système solaire ! L'un de ces astronefs a un diamètre voisin de celui de la Terre et un autre mesure plus de cinquante mille kilomètres de long. De plus, le ballet des ovnis serait géré depuis ces mégastations de l'espace par des « para-terrestres », prêts à nous venir en aide.



Ces dessins rupestres précolombiens, datant de seize mille ans et représentant des personnages avec des combinaisons spatiales et des engins interplanétaires, tendraient à démontrer que l'existence des extra-terrestres était déjà connue à cette époque.

Jusqu'ici la NASA avait gardé le secret...

Une photo qui n'aurait jamais dû sortir des archives de la NASA et qui représente Saturne et ses anneaux sur lesquels on distingue très nettement la silhouette de trois astronefs géants.

MISES à jour aux Etats-Unis par deux éminents scientifiques – le docteur Walter Vincenti, professeur d'aéronautique et d'astronautique à l'université de Stanford, et le docteur Norman R. Bergrun, auteur du livre *Ringmakers of Saturn* –, les révélations d'une présence d'engins volants autour de Saturne sont pour le moins troublantes. Et de penser que l'impressionnante mise en scène du film *Independence Day* est encore bien en deçà d'une réalité sans doute suspendue dans l'espace saturnien depuis des millions d'années.

On a, certes, du mal à imaginer que de tels continents artificiels flottent dans la banlieue céleste de Saturne. D'immenses planétoïdes conçus à l'évidence par des êtres dont le savoir technologique dépasse de très loin les actuelles connaissances humaines.

"Para-terrestres"

Cela rejoint la thèse soutenue par le professeur Gérard Demarcq, professeur honoraire de géologie et de paléontologie à l'université de Lyon, qui s'apprête à publier un ouvrage intitulé *La Terre, origine des extraterrestres : la théorie des para-terrestres*. D'après lui, ces para-terrestres ne seraient autres que de « grands ancêtres de l'homme » et les descendants d'une ancienne civilisation très avancée dans le domaine de la technologie spatiale. Le professeur Demarcq estime qu'« il est tout à fait concevable que, voilà une trentaine de milliers d'années, ait pu se développer une lignée humaine intellectuellement très avancée ».

Au lieu de s'orienter, comme les hommes préhistoriques, vers l'utilisation des énergies et des matériaux terrestres, ils se seraient immédiatement intéressés à la physique. Notamment aux forces électro-magnétiques et gravitationnelle. C'est ce qui les aurait conduits, avec la découverte de la propulsion magnéto-hydro-dynamique, vers la construction de vaisseaux spatiaux ultra-performants.

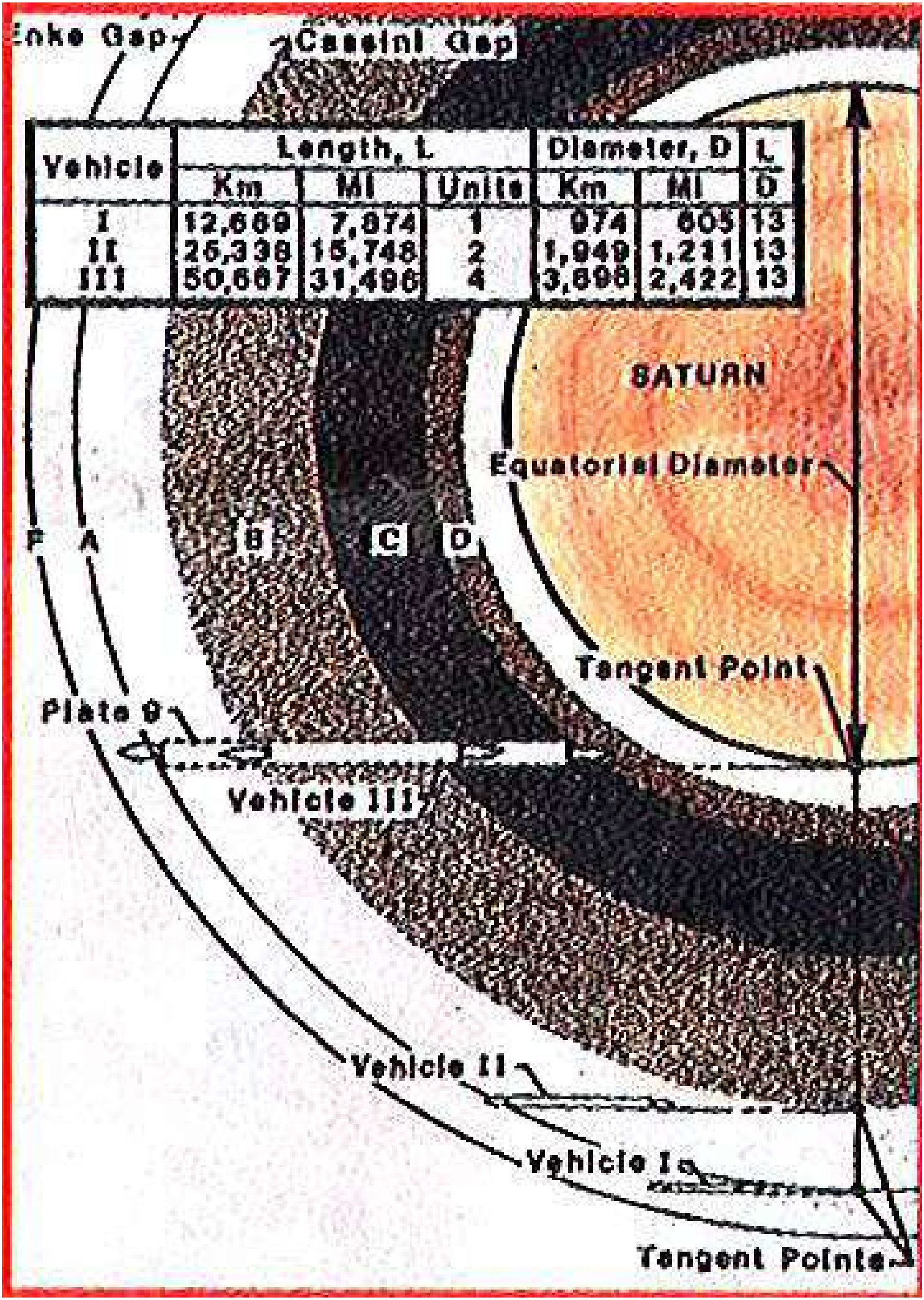
On trouve ainsi une explication aux nombreux dessins rupestres précolombiens, datés de plus de seize mille ans et représentant des personnages avec leurs combinaisons spatiales et descendant d'engins semblant provenir de l'espace.

Au moment d'un déluge résultant d'une fonte planétaire des glaces, il y a treize mille ans, ces visiteurs « para-terrestres », contraints de déménager leurs bases au sol, auraient pu s'enfuir à bord de véritables arches de Noé volantes, semblables aux astéroïdes qui flottent encore aujourd'hui dans les anneaux de Saturne.

Ils auraient aussi pu créer d'autres bases sur diverses planètes et y laisser des traces aussi étonnantes que des vestiges de sphinx et de pyramides, en tous points semblables à ceux de Ghi-



Norman Bergrun The Ringmakers Of Saturn



Vehicle	Length, L			Diameter, D		L/D
	Km	Mi	Units	Km	Mi	
I	12,669	7,874	1	974	605	13
II	25,338	15,748	2	1,949	1,211	13
III	50,667	31,496	4	3,898	2,422	13

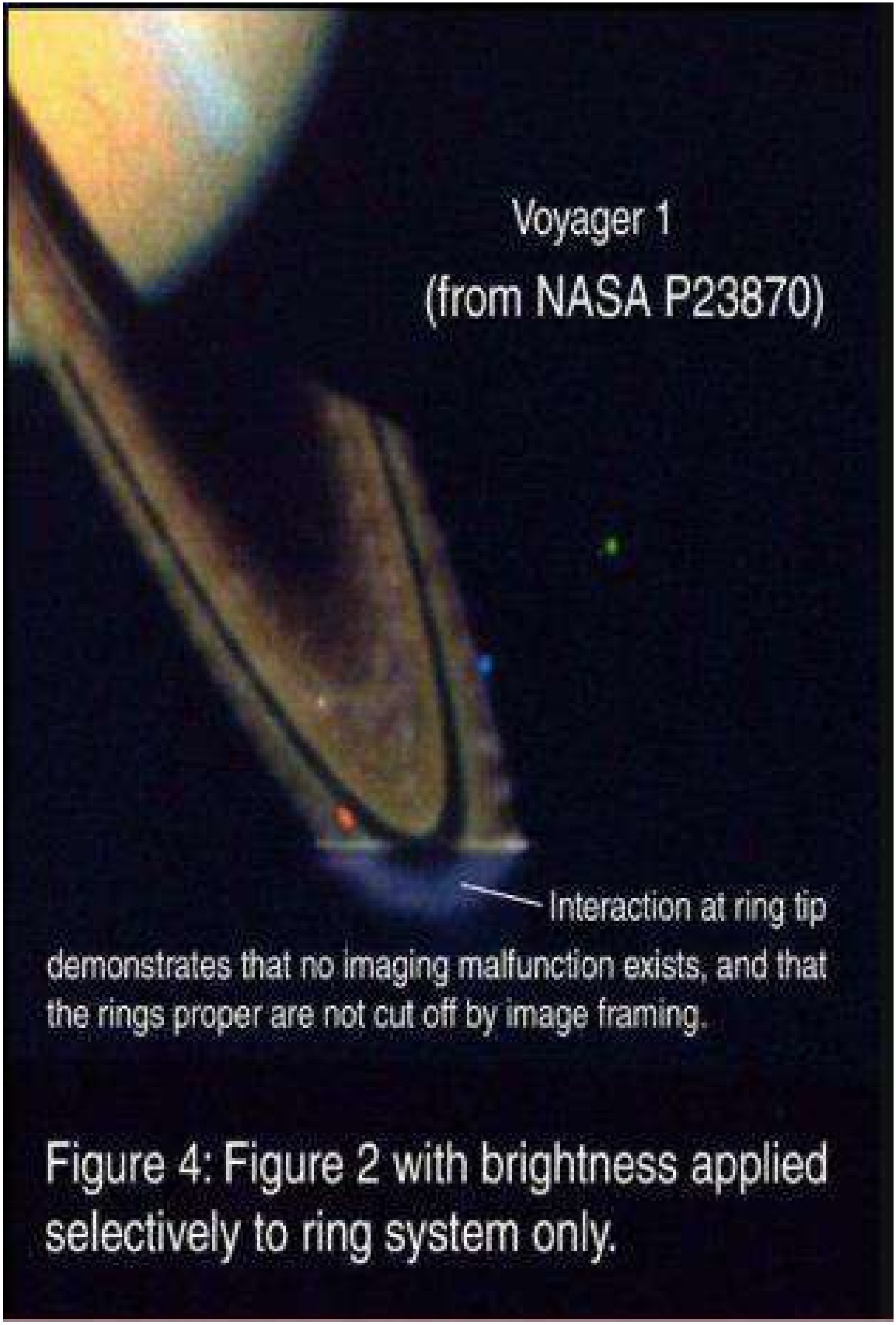


Figure 4: Figure 2 with brightness applied selectively to ring system only.





Alena with laser gun in front of the Meier's office. 6.7.1988.
Meier, Semyase's center of the silver star.

The hole in the tree trunk that Meier claims was caused by the laser gun. Credit: UFO Photo Archives





Meier holding the alleged extraterrestrial laser gun. Credit: UFO Photo Archives

Photo analysis aside, Korff and other skeptics have suggested that the UFOs in Meier's photos are simply models. It was not extraordinary in the pre-Photoshop days of the 1970s for someone to hoax a UFO photo by photographing models, Frisbees, hubcaps, and other physical objects. And while some Meier supporters are quick to contend that it would be impossible for a one-armed man to stage UFO photos, Meier himself admits to taking pictures of UFO models. Burned photos of these models were allegedly found in Meier's trash can by Martin Sorge, who at one time was Meier's friend. As with many details of the Meier story, there are divergent accounts of this incident. While some accounts claim that Meier's children created models of the UFOs, other accounts credit Meier with creating the models. In *UFO . . . Contact from the Pleiades*, Stevens explains, "When I asked about the models of the spaceships he readily admitted trying to model them even though they did not come out well. He even tried photographing the models and the result was so bad that he threw the pictures away."

But a different account is presented by Guido Moosbrugger in *And Yet . . . They Fly!*:

> One day in 1975, Semjase loaned Billy a model of her beamship for a short period to take a few pictures of it and then be returned. On the basis of these snapshots, Billy planned to construct his own model spacecraft, but this plan never came to fruition. A serious mishap occurred to the negatives of these model photographs—they slipped off the office tabletop into a wastepaper basket and were not found until after the entire contents had landed in a fireplace. Kalliope, Billy's wife, discovered the more or less burned negatives in the ashes and handed them over to one of the group members to be restored, if possible.

It is interesting to note that Billy and Kalliope divorced, and she has since stated in interviews with Korff and Swiss UFO researcher and author Luc Burgin that Meier hoaxed his UFO photos and fabricated the tales of extraterrestrial encounters. However, this contradicts her previous statements that Meier's contacts were real and that she, herself, witnessed events with Billy.

Select Meier photos have received far more skepticism than others. Among those are photos that Meier allegedly took during his travels through space and time with the extraterrestrials. Some of these photos show dinosaurs that Meier allegedly took on the planet Neber. But some researchers, like the Independent Investigations Group, contend that the dinosaurs in these photos are simply illustrations from a book that was published in 1972 titled *Life Before Man*, which was written by Zdenek V. Spinar. The illustrated dinosaurs in this book do appear to be identical to the dinosaurs in the Meier photos.

Another highly criticized set of photos purports to show Asket and Nera aboard a beamship. The women in these photos have been identified as Michelle DellaFave and Susan Lund, who were members of the Golddiggers—a singing and dancing troupe that appeared on the Dean Martin Variety Show. According to a letter posted to the FIGU website by Meier in May 1998, the extraterrestrial Ptaah informed Meier that the photographs of Asket and Nera were actually of their American doubles. Meier went on to explain that the "Men in Black" had intercepted his film, found look-alikes for Asket and Nera, took pictures of them, and substituted these false images for the originals of the Asket/Nera photos. And, he claims the "Men in Black" performed this same trickery with most of his early photos.

One lesser-known Meier photo shows Meier standing in the middle of what appears to be a ring of fiery light. This picture appears in Moosbrugger's book, *And Yet . . . They Fly!*, and is explained to be an "energy belt" of "burning static electricity" emanating from Quetzal's ship above Meier, which does not appear in the photo. Meier's arm is extended over his head in the photo, allegedly holding a microphone to record the sound of Quetzal's ship. Multiple researchers have pointed out that the ring of fire in this photo looks suspiciously identical to steel wool being swung overhead by someone.



Alleged photograph of Asket. Credit: UFO Photo Archives



Still photo from the Dean Martin Variety Show of the members of the Golddiggers, allegedly the source of Meier's photo of Asket. Credit: Greg Garrison Production/NBC

Aside from his photographs, Meier furnishes other evidence to corroborate his claims of extraterrestrial contact, including metal samples, and even an extraterrestrial weapon. Meier gave these metal samples to Stevens, and Stevens had these samples tested by various labs. According to Stevens, tests showed that the elements in the samples were "put together in a very unusual way from normal Earth technology," and that most of the elements studied showed "un-Earthly characteristics." Dr. Marcel Vogel, a chemist, performed several tests on the metals. But according to Kal Korff, Dr. Vogel says the claims made in Stevens's book contradict his opinions. According to Moosbrugger, analysis was also conducted by a metallurgist from the University of Arizona who, "examined one of the metal fragments and analyzed it as a simple 'cooking pot metal' or cheap cast metal alloy used to produce such things as tin soldiers."

Meier claims that an extraterrestrial woman, Alena, left a ray gun with him, but cautioned him not to fire it. Unable to resist the temptation, Meier fired the weapon at a nearby fruit tree, burning a hole completely through the trunk of the tree. Meier showed the tree to Stevens, who took photos of the hole in the tree, and examined it with his finger. But to Stevens, the internal wood of this hole did not appear to have been burned.

Conclusion

The information provided in this article barely scratches the surface of the decades-long Billy Meier story. Meier claims to have much more evidence, including audio recordings, UFO films, and tomes of transcripts from his encounters that are filled with extraterrestrial wisdom. Meier even asserts that, because of his claims, there have been multiple assassination attempts on his life! From this brief overview, it is easy to see why the Billy Meier story is so controversial, and, without a doubt, the most polarizing case in the history of ufology.

The Billy Meier Photo Debate

Independent Investigations Group (IIG) is a group dedicated to investigating paranormal claims. In fact, on their website, www.iigwest.com, IIG offers "$50,000 to anyone who can prove paranormal abilities under scientific testing conditions," and states that, "Of those who have completed a test, not a single one has yet demonstrated any paranormal powers." Notably, IIG has paid particular attention to the Billy Meier UFO case and describes in its online reports how Meier's evidence "can be created by non-extra-terrestrial means."

In its investigations, IIG has specifically recreated many of the UFOs that appear in Meier's photographs, using common household items from the time period of Meier's photographs, such as storage container lids, Christmas ornaments, food platters, and pressure cooker lids. In an attempt to debunk Meier's theories and show how a one-armed man during pre-Photoshop days could create photographs of saucer-shaped objects in the sky, IIG demonstrates how clear fishing line on a pole and creative photography can create the image of a UFO in the sky. IIG's ability to mimic Meier's photos, however, does not necessarily prove that Meier's photos are fakes.



A beamship photographed by Meier Credit: UFO Photo Archives

In response to the debunking of one of Meier's most controversial photos known as the "Wedding Cake UFO," Michael Horn, the proclaimed "Authorized American Media Representative for the Billy Meier Contacts," provides an argument as to why the photo is real on his website, www.thefly.com. In defense of Meier's photographs, Horn provides various photographs showing how certain camera and focus angles are impossible to recreate, and contends that this demonstrates that Meier's photos are real. Horn also says there are many unanswered questions that skeptics would have to address in order to substantiate their accusations, such as, "Where was the model made and concealed?"; "Who in Meier's area possesses the specialized skills required for this precision level of manufacture, at any size?"; "How [were the models] suspended at 30 [feet] by a one-armed man"; and "Why hasn't [anyone] come forward to show that they made and/or now have [the models]?"

IIG posted on its website an alleged email correspondence between representatives of IIG and Horn regarding the Meier case. From the looks of it, the debate between IIG and Horn will surely continue, as will the debate between the Meier believers and skeptics alike.









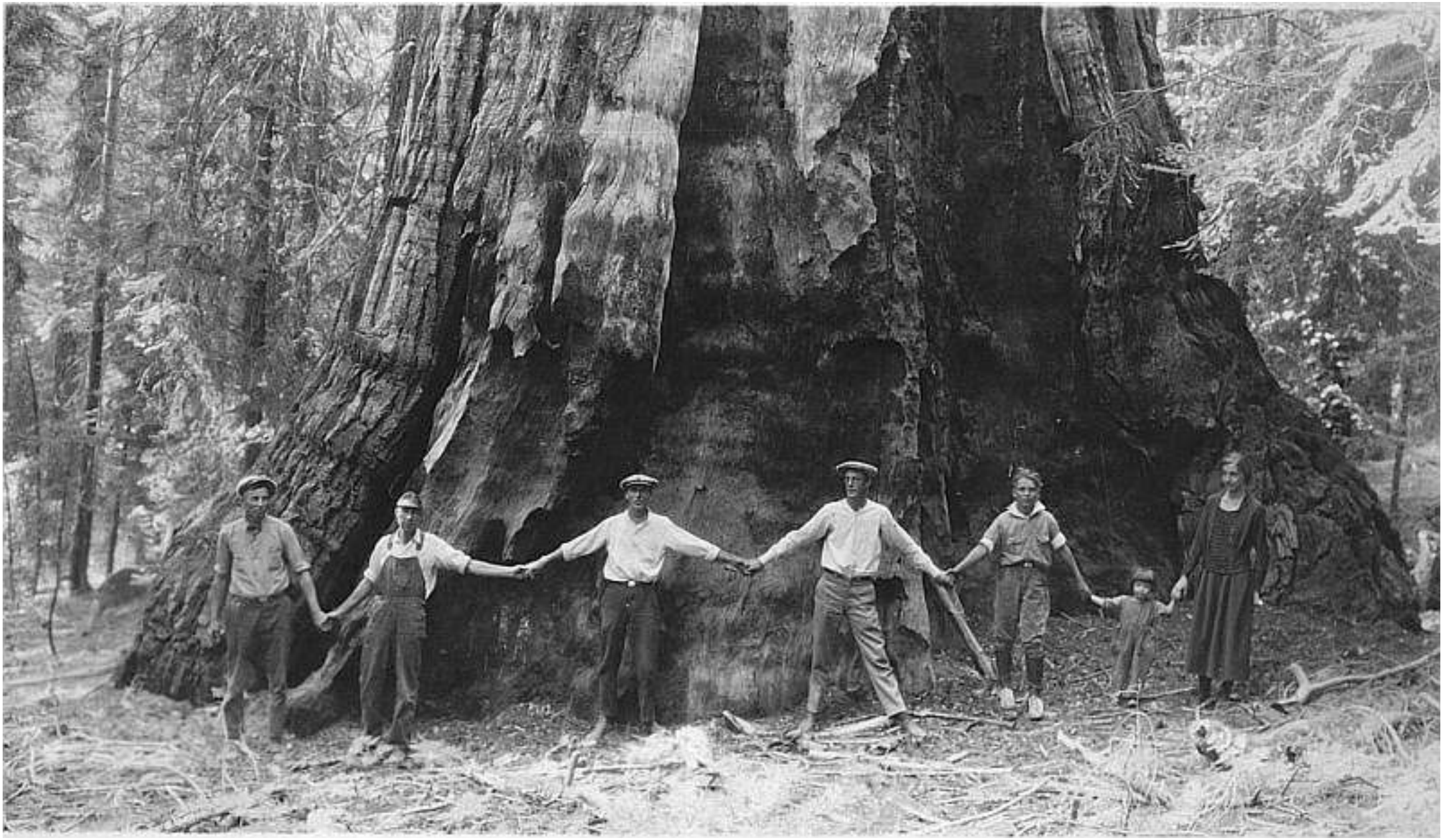
coolthingoftheday:

> *Pterocarpus angolensis*, or wild teak, looks like a perfectly normal tree until it's wounded. When you cut into it, it dribbles long trails of dark red liquid down its trunk. For this reason, wild teak has come to be known as **bloodwood**.
>
> This phenomenon is caused by tannin, a naturally occurring polyphenol found in plants, seed, bark, wood, leaves, and fruit skins. Regular plants typically contain about 12-20% tannin - wild teak sap contains about 77%.













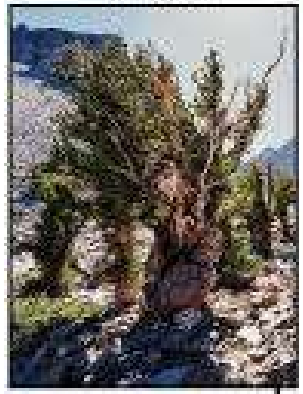



Grandidier's Baobab


Dragon Blood Tree


Jacaranda

Bristlecone pine
5,062 years old
North America
White Mountains, California



Fitzroya (Alerce)
3,622 years old
South America
Andes Mountains, Chile



Atlas cedar
1,025 years old
Africa
Morocco



Bosnian pine
1,075 years old
Europe
Greece

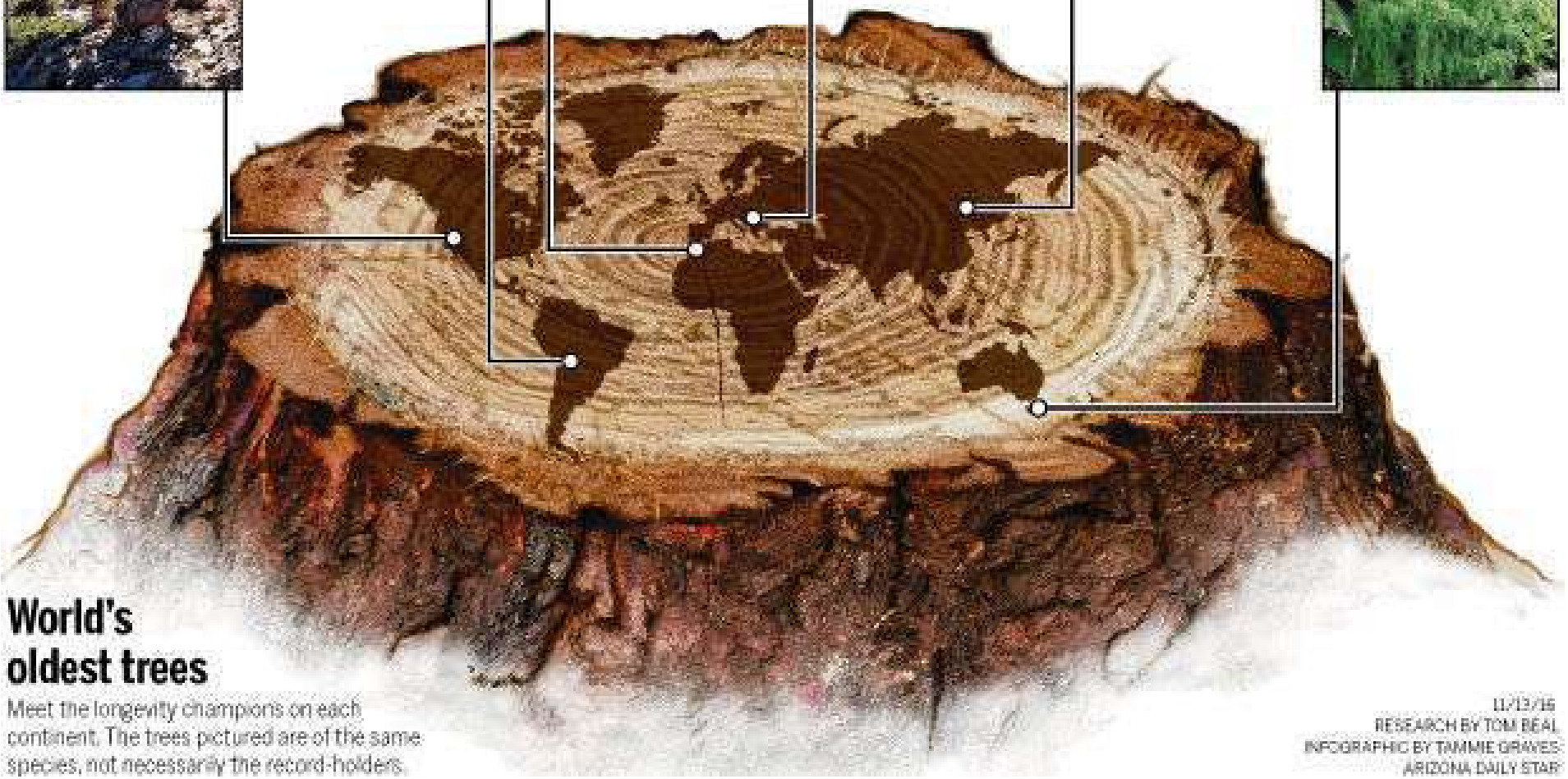


Siberian larch
750 years old
Asia
Mongolia



Huon pine
1,114 years old
Australia/Oceania
Tasmania





World's oldest trees

Meet the longevity champions on each continent. The trees pictured are of the same species, not necessarily the record-holders.

11/13/16
RESEARCH BY TOM BEAL
INFOGRAPHIC BY TAMMIE GRAYES
ARIZONA DAILY STAR






林后




THE BIGGEST
17
DRAGO MILENARIO
0:07 / 7:58
CC
HD



The bloodwood tree(Pterocar

pinterest.com

The bloodwood tree(Pterocarpus angolensis - Go

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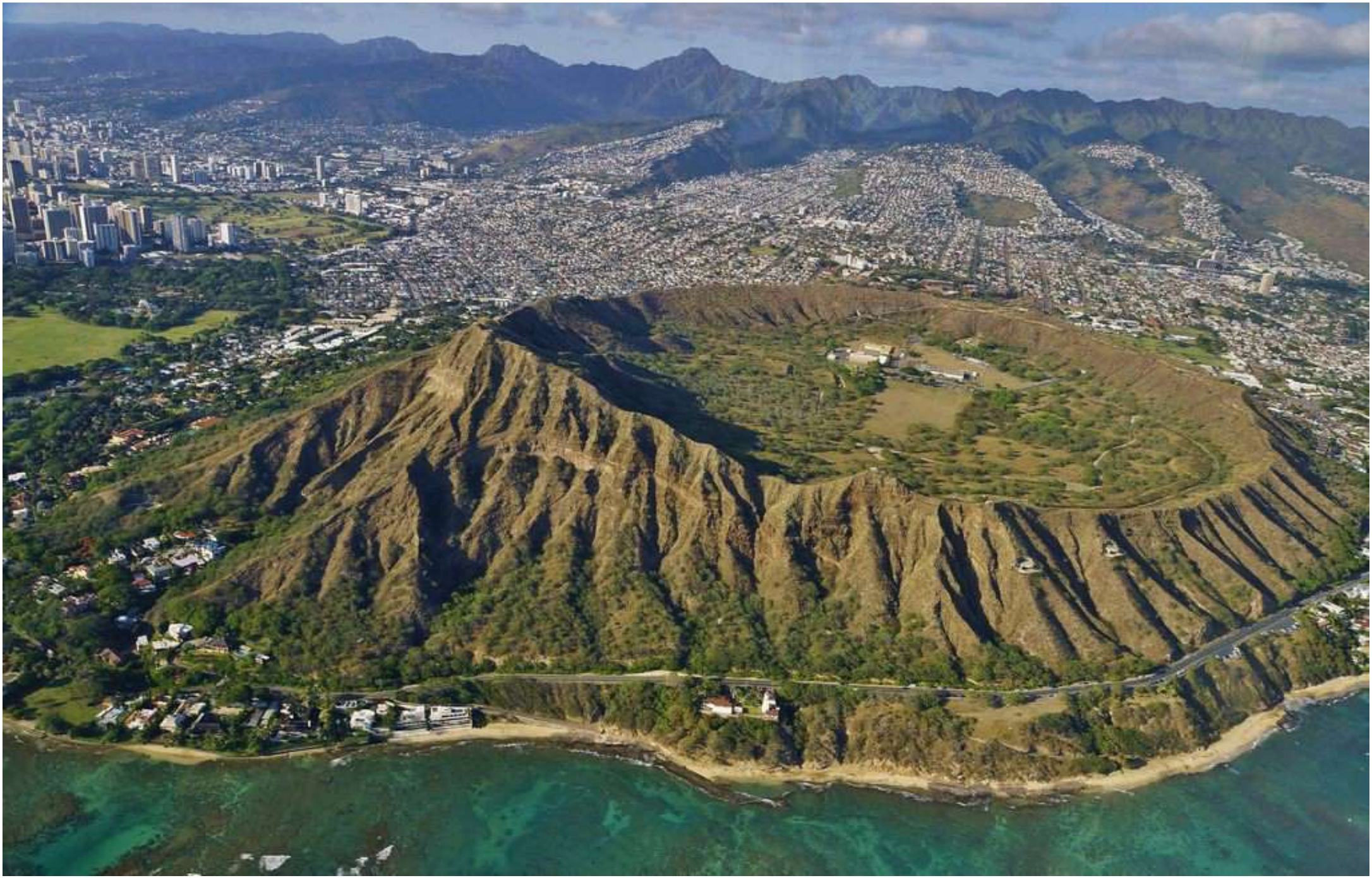






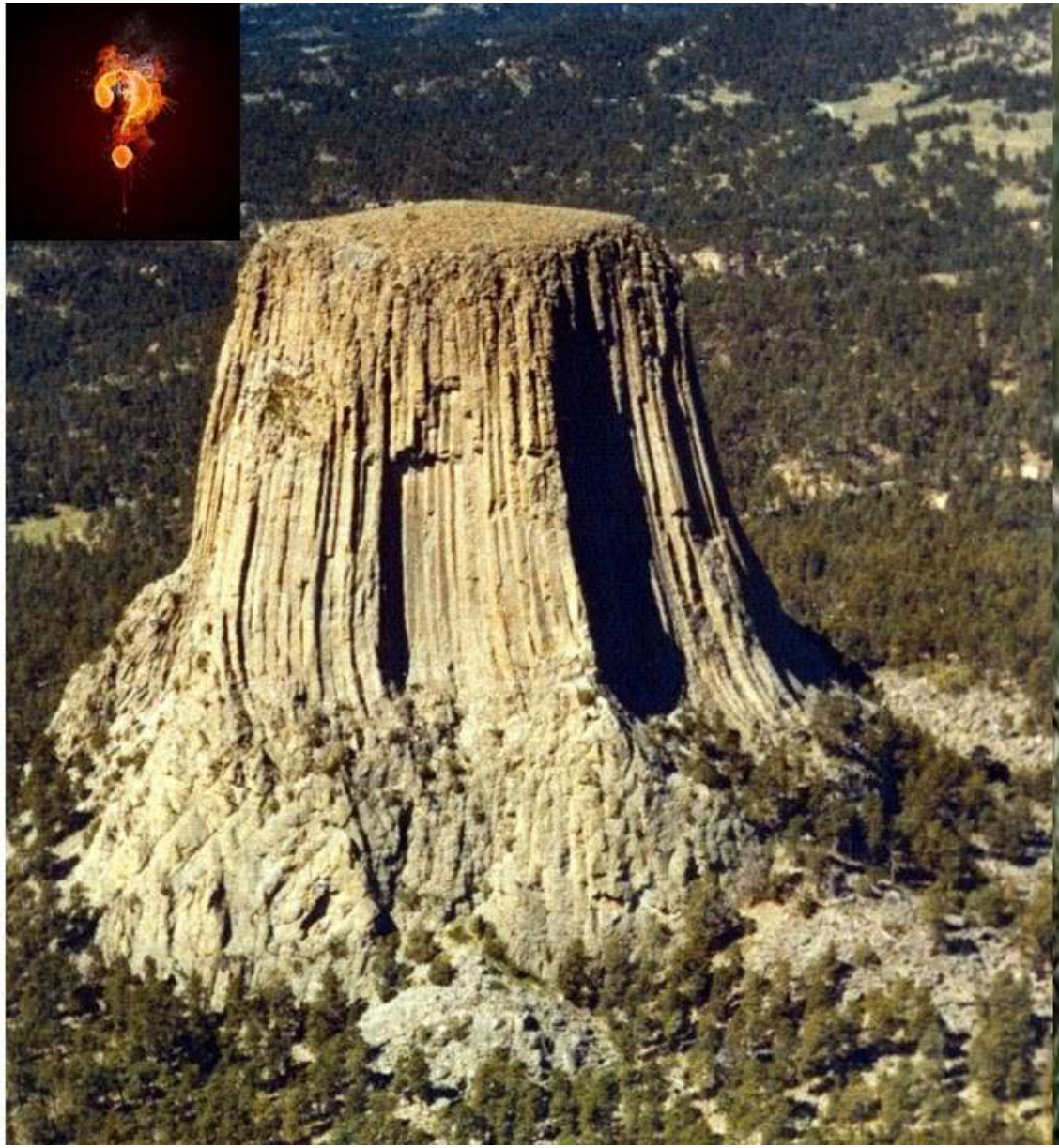


N.L'Khalfaoui©



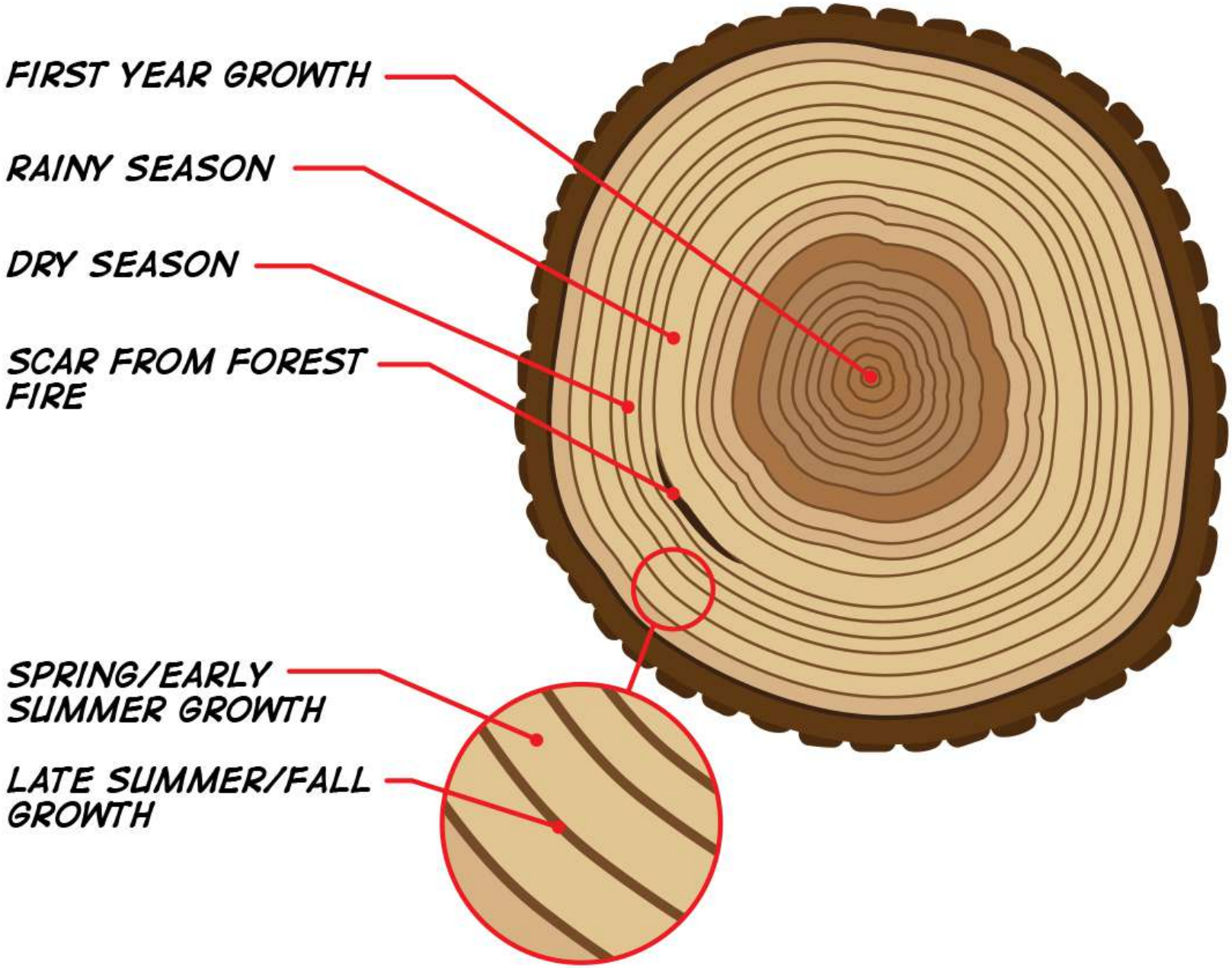

(c) Garrett Fisher



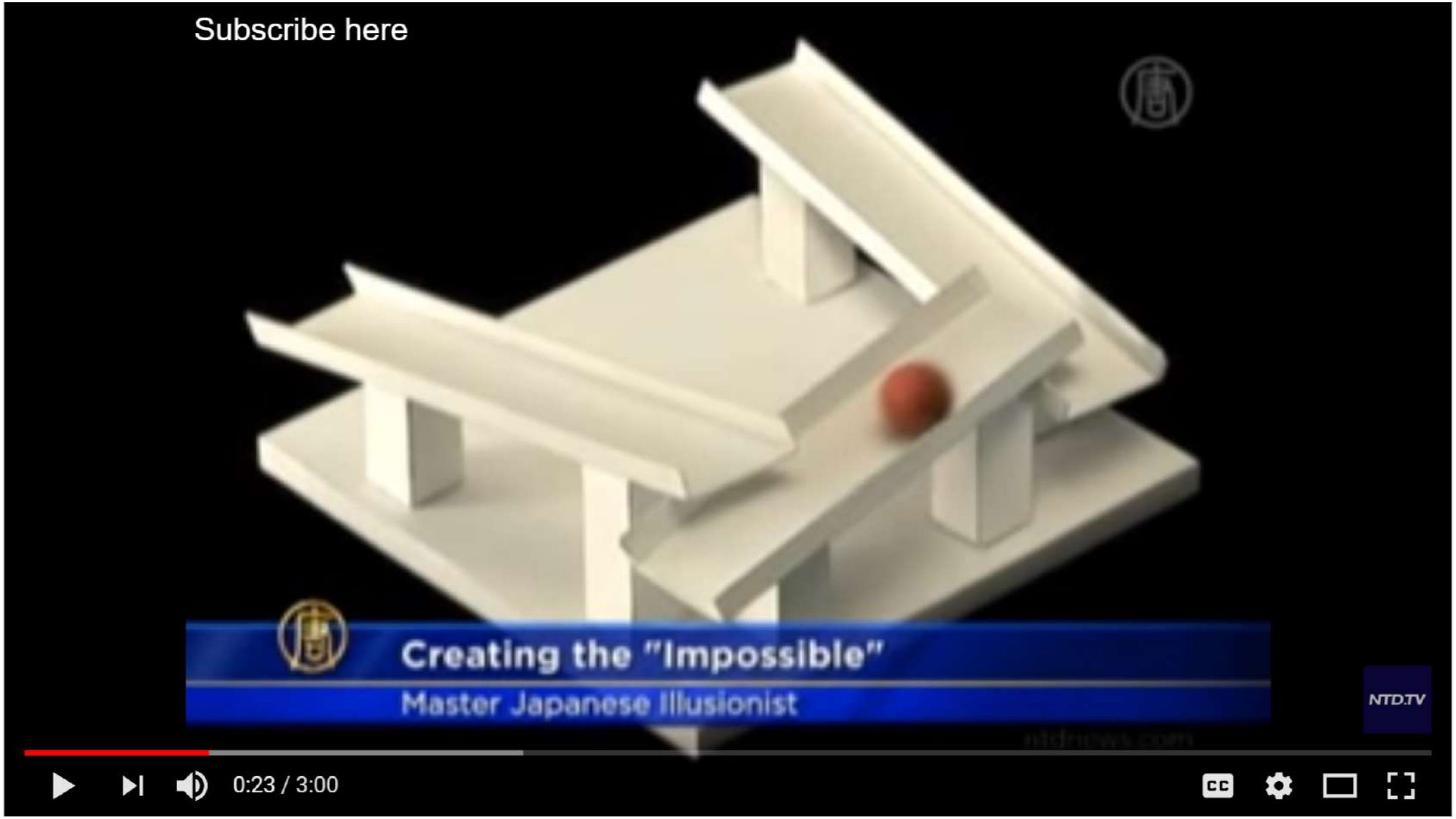






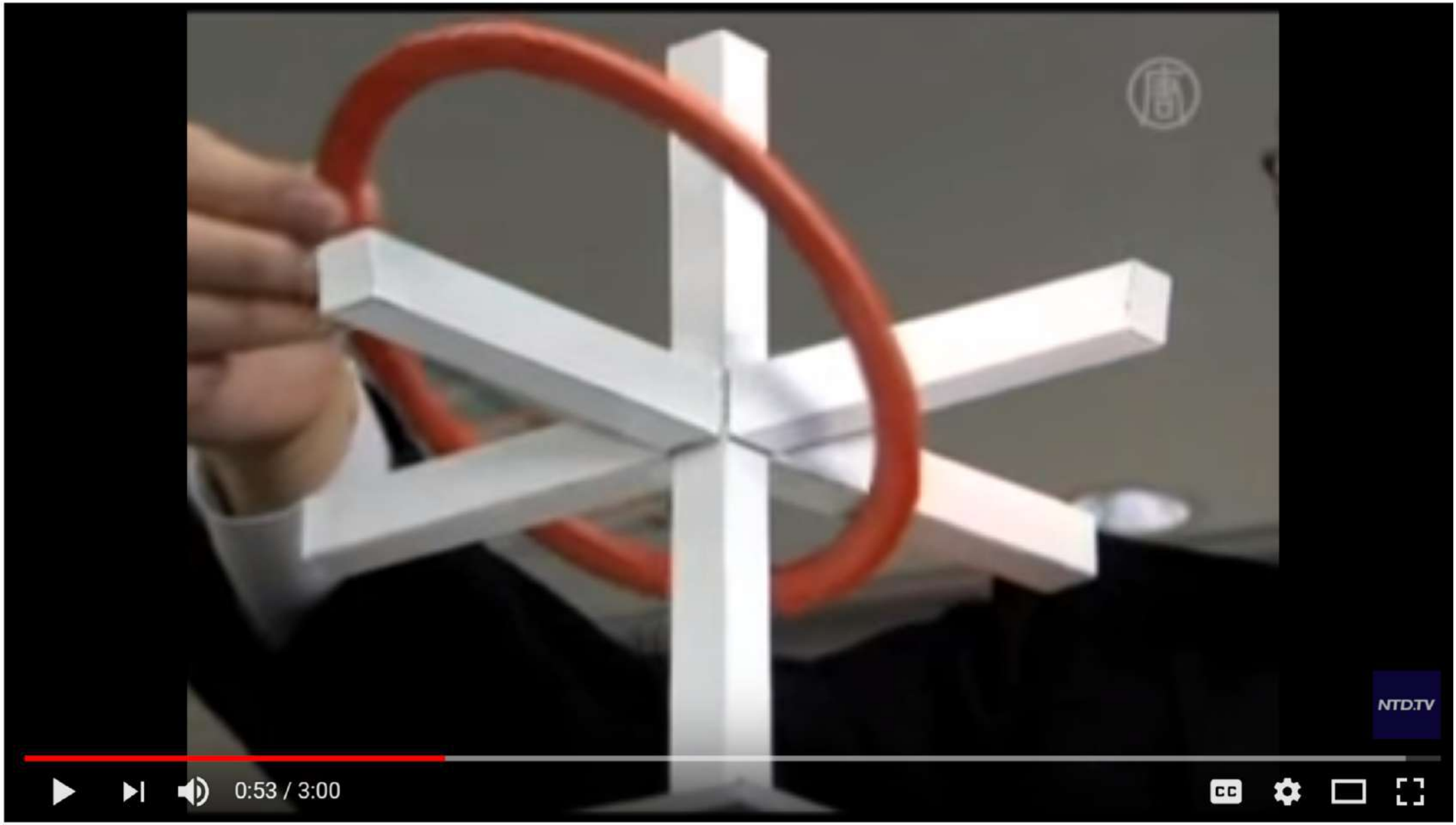

FIRST YEAR GROWTH
RAINY SEASON
DRY SEASON
SCAR FROM FOREST FIRE
SPRING/EARLY SUMMER GROWTH
LATE SUMMER/FALL GROWTH

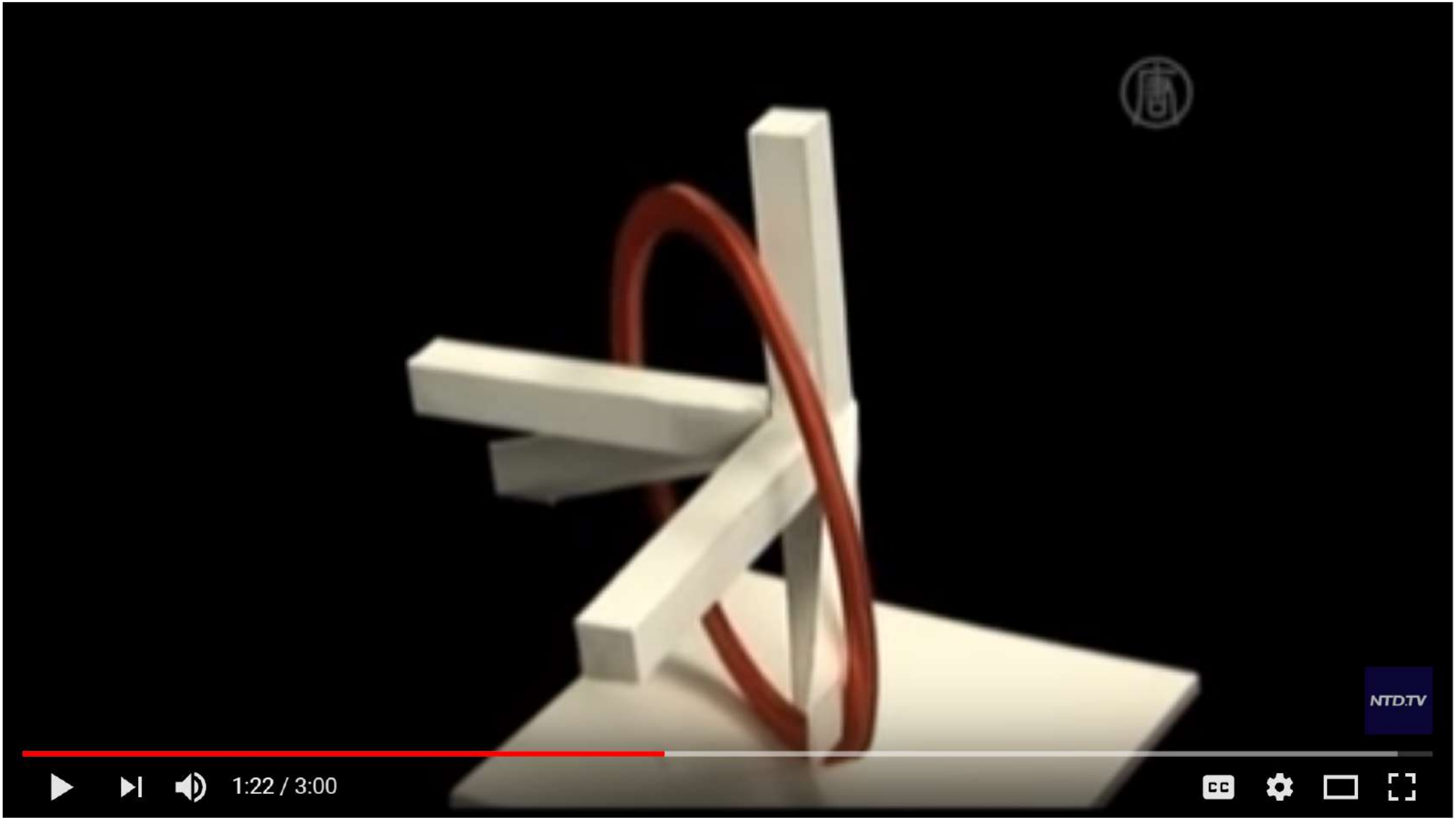

Maximum Vibration
No Vibration
Maximum Vibration
ANCIENT
ARCHITECTS
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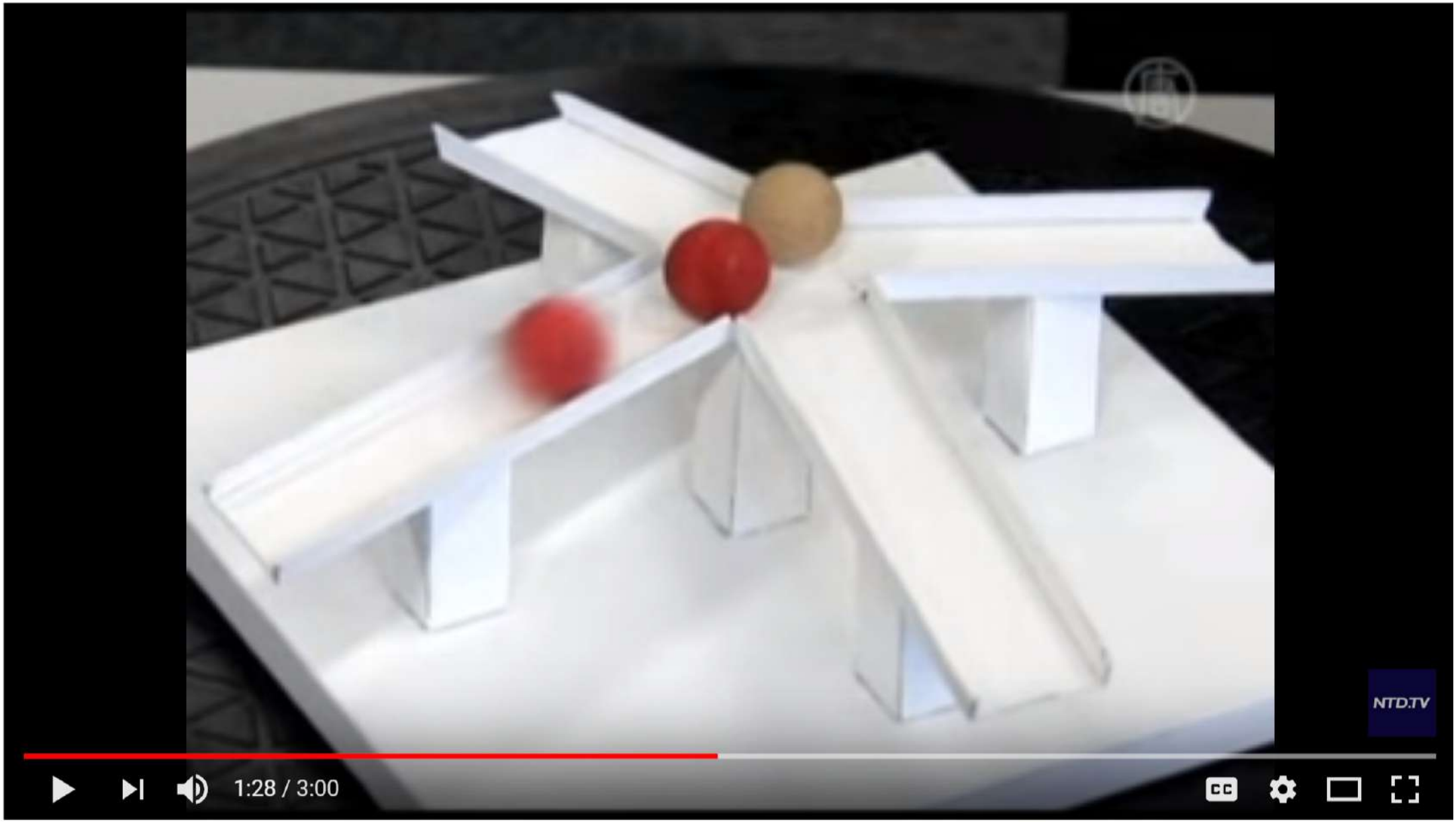


Japanese Math Professor Excellent Optical Illusionist

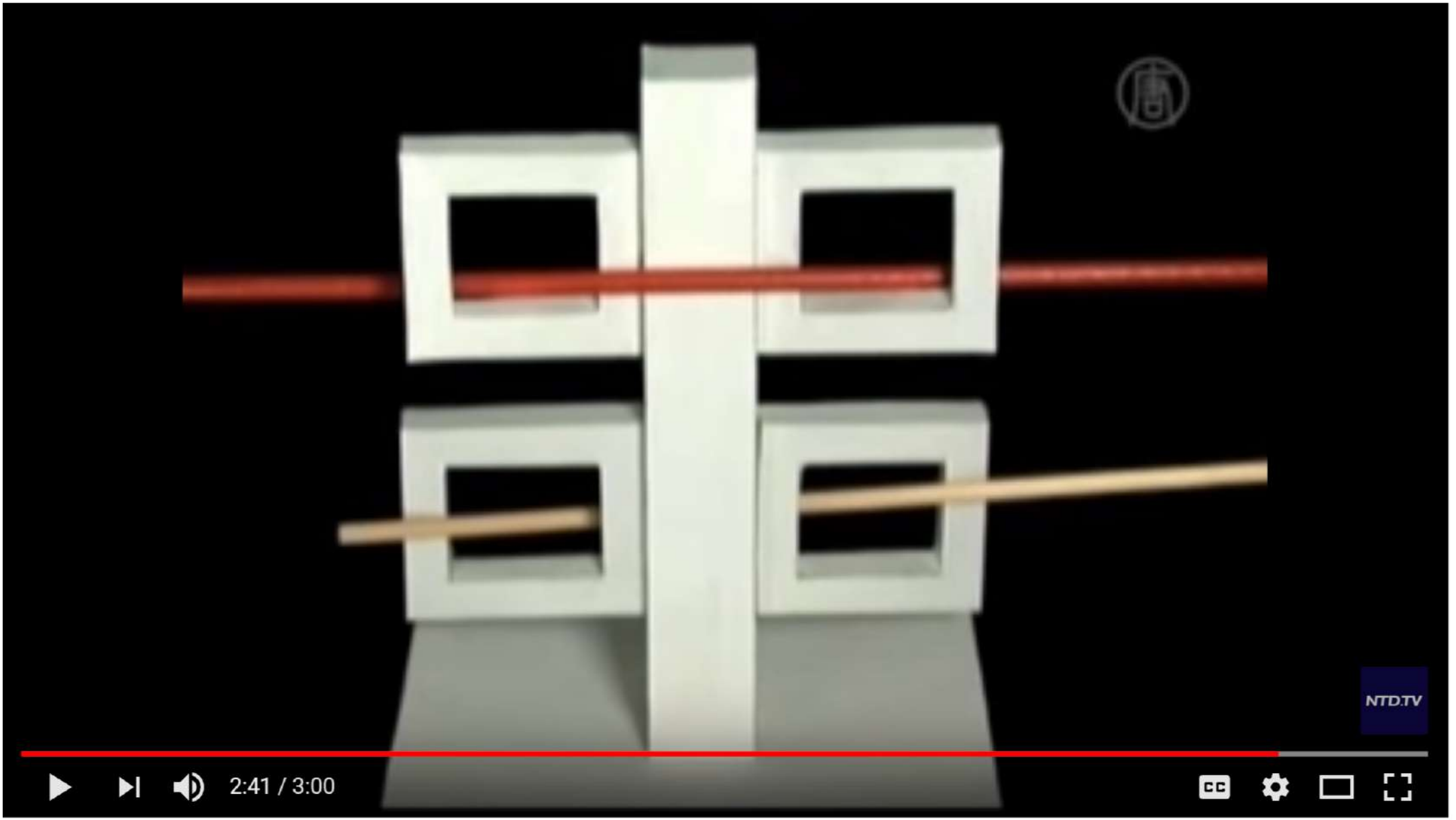

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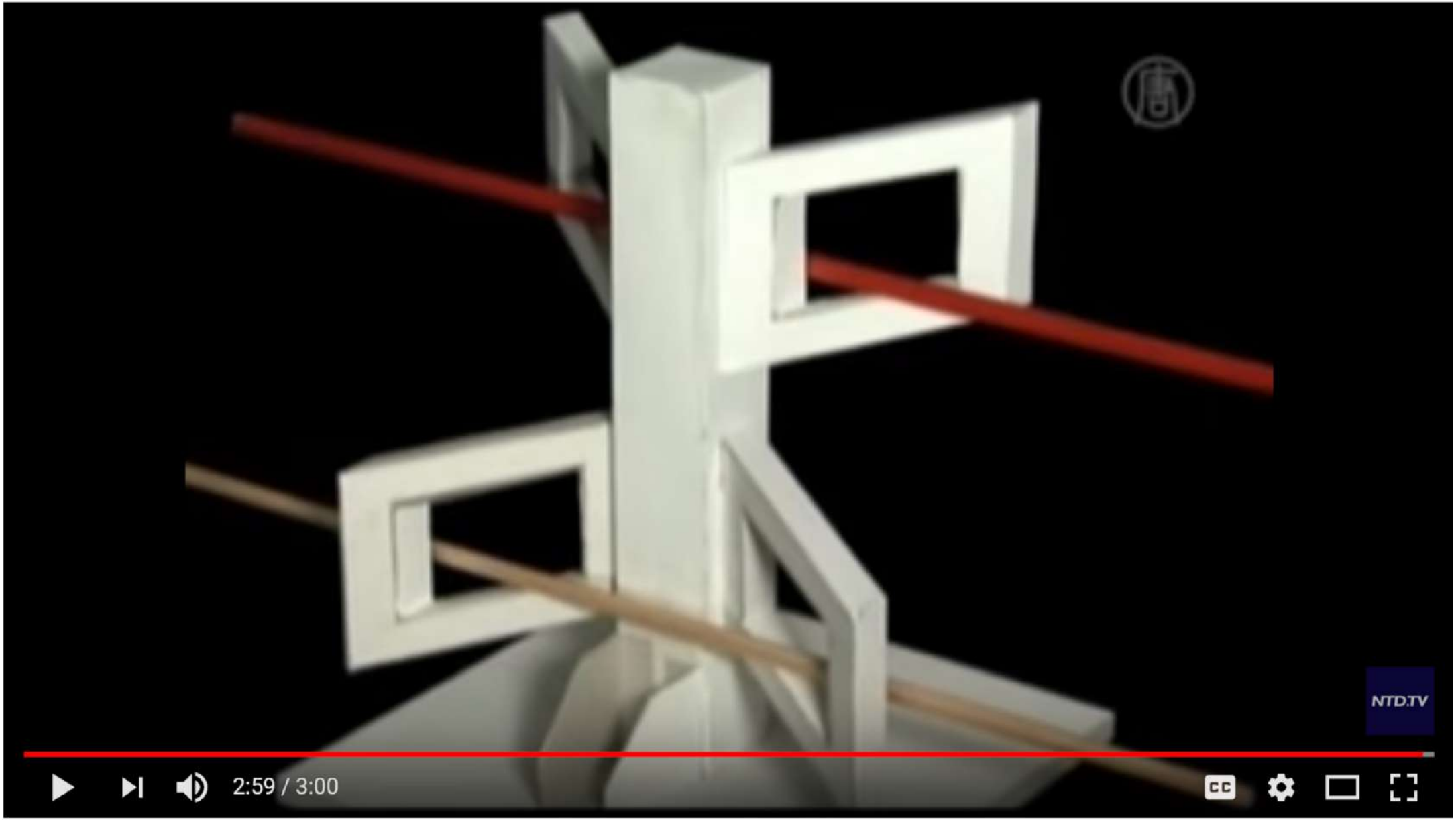

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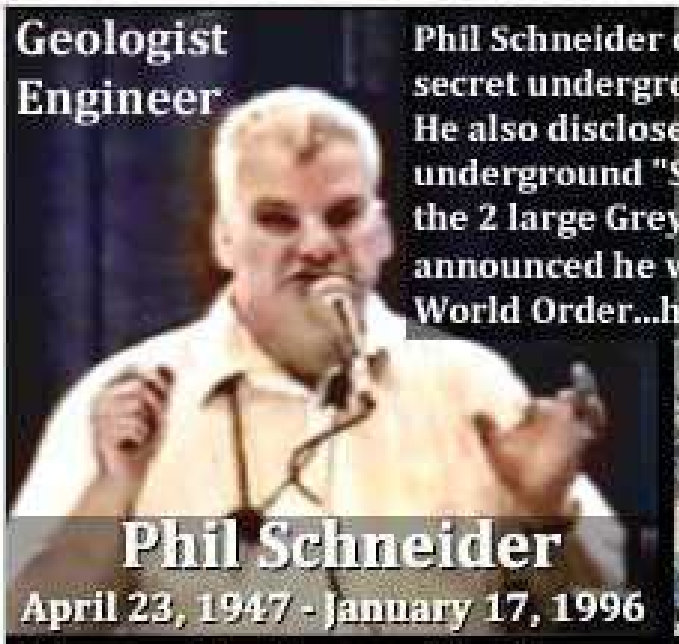

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UNDERGROUND CITIES



Geologist
Engineer

Phil Schneider
April 23, 1947 - January 17, 1996

Phil Schneider came forward in May 1995 to divulge secret underground bases/cities he helped engineer. He also disclosed the existence of Aliens within these underground "Subtropolis" as he describes them and the 2 large Grey Aliens he killed. Shortly after Phil announced he would reveal deeper plans for the New World Order...he was mysterious killed.



These Air Force Underground Boring Machines are nuclear-powered and can tunnel through solid rock at a speed of 10mph and tunnel 7 miles in one day.



Phil Schneider acknowledges over 50 underground bases that are several stories deep and go on for miles. These underground cities are designed to sustain millions of people for several years.

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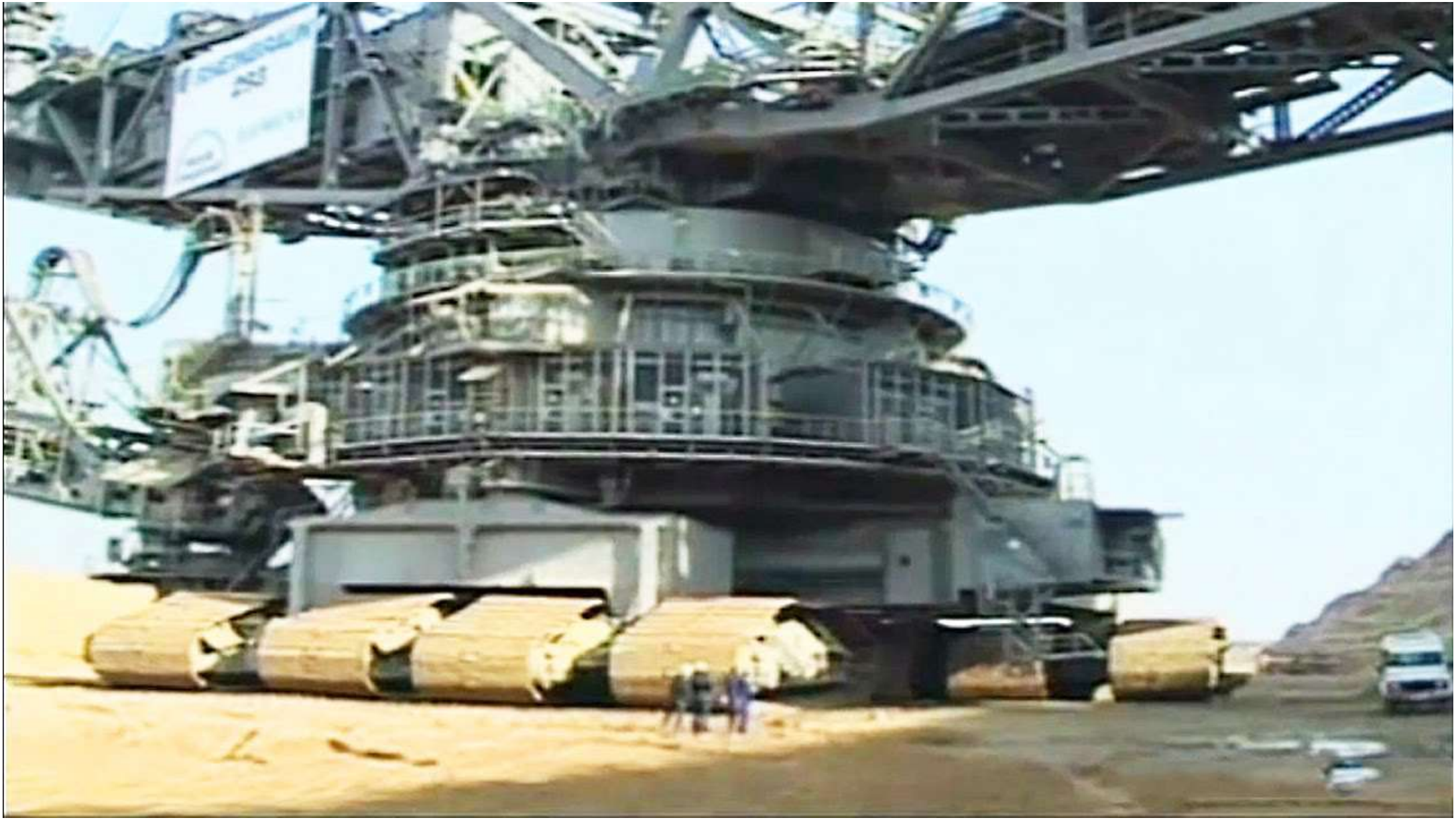





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BAGGER 293






THIS IS THE BAGGER 228 BUCKET-WHEEL EXCAVATOR IN GERMANY
IT CAN EXCAVATE 240,000 TONS OF COAL PER DAY.
IT IS THE LARGEST LAND VEHICLE IN THE WORLD.
YES, VEHICLE.
THIS THING MOVES....

QUIZ SLATED ON USURPING

Attorneys' Grab Under Fire

Grand Jury's Attention to Be Called to Practices at Hall of Justice

Lawyers Appropriate Office Space in Building to Transact Business

Investigation of the appropriation of free office space in the Hall of Justice by attorneys is listed as one of the first matters to be brought before the 1934 county grand jury, Dep. Dist.-Atty. Hammon, in charge of grand jury matters, indicated.

Complaint against the practice has been received and the matter listed as one of the inquiries to be brought to the attention of the grand jury.

SPACE PRE-EMPTED

It is charged that certain attorneys who have no offices have made a practice of appropriating space in county offices, particularly on the second floor of the Hall of Justice, using county telephones to transact their business.

These attorneys also, according to witnesses, have attempted to impress their clients by telling them that they have a great deal of influence among county officials, pointing out the fact that they are accorded the courtesy of office space in the Hall of Justice.

FULL INQUIRY

According to Superior Judge Bourquin, in charge of the 1934 grand jury, a full inquiry into the matter will be made and the practice stopped.

Although it is not considered probable that criminal action will be taken against any of the attorneys, it was indicated that a report probably will be submitted to the California Bar Association.

FRIEDMAN TRIAL TO BE RESUMED

Judge Scheduled Later to Rule on Mae West Case Confession

Entering the closing phase of the prosecution's case, the trial of Edward Friedman, charged with robbing Mae West, motion-picture actress, of $14,000 in cash and jewels, is to be resumed today in Superior Judge Sewell's court.

According to John Oliver, Deputy District Attorney prosecuting the case, he probably will finish today the introduction of testimony intended to contradict charges made by Friedman under voire dire examination that police obtained a confession from Friedman concerning the robbery after using force upon him.

After Judge Sewell hears all of the voire dire testimony he will be asked to rule on the admissibility of the confession asserted to have been made to police by Friedman.

The prosecution already has introduced testimony by officers who arrested Friedman denying that they abused him.

Friedman is defended by William J. Clark.

FIRE SWEEP PUTS VICTIM IN HOSPITAL

Woman Burned in Effort to Save Fowls in Burning Ranch Buildings

Fire originating from a small stove in a hen-house on a poultry ranch at 20015 Strathern street, Canoga Park, yesterday swept through barn units on three adjoining ranches, destroying more than a score of chickens and turkeys and burning a woman as she attempted to rescue the trapped fowls.

Mrs. Bert A. Nadler received second-degree burns of the face, arms and legs as the fire, fanned by a slight breeze, spread to the Nadler barns at 20017 Strathern street. She was given first aid by firemen and then removed in a police ambulance to the Van Nuys Emergency Hospital.

At 20007 the fire destroyed a barn containing valuable machinery and poultry units belonging to Frank B. Kelch. Fire officials estimated that the combined loss to the three ranches will run into hundreds of dollars.

G.O.P. PLANS LINCOLN DAY OBSERVANCE

County Republicans to Hold North Hollywood Banquet February 12

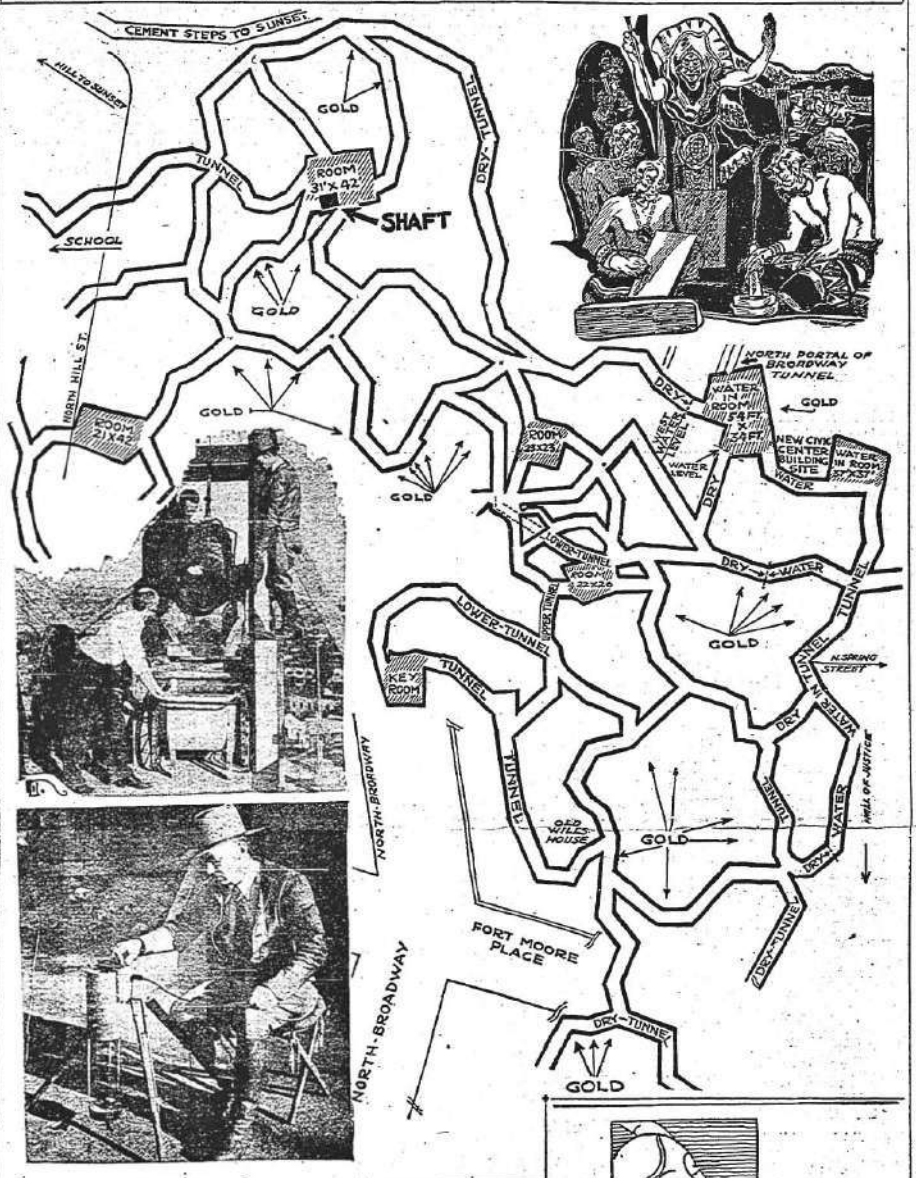
Los Angeles county Republicans will observe the natal anniversary of Abraham Lincoln with a banquet to be held at North Hollywood on February 12 under the auspices of the Associated Republican Clubs of the San Fernando Valley.

The Los Angeles Republican County General Committee will cooperate in arrangements for the affair, which will be the fourth annual Lincoln Day dinner to be held by the members of the G.O.P. of the Forty-second Assembly District, which includes the San Fernando Valley communities, according to Ismill W. Bull, county chairman.

The banquet will be held at the North Hollywood Woman's Club, Burbank Boulevard and Vineland avenue. Details of the program will be announced later.

DID STRANGE PEOPLE LIVE UNDER SITE OF LOS ANGELES 5000 YEARS AGO?

An amazing labyrinth of underground passages and caverns hundreds of feet below the surface of Fort Moore Hill is revealed in maps—all rights to which have been reserved—prepared by G. Warren Shufelt, local mining engineer, who explains his topographical endeavors as being based on results obtained from a radio X-ray perfected by him. In this elaborate system of tunnels and rooms, according to a legend furnished Shufelt by an Indian authority, a tribe of human beings called the Lizard People, lived, 5000 years ago. The network of tunnels formed what Indians call the lost Lizard City, according to Shufelt and the legend. Gold tablets on which are written the origin of the human race and other priceless documents are to be found in the tunnels, according to the legend. Shufelt declares his radio X-ray has located the gold. The engineer has dug a shaft 250 feet deep on North Hill street, overlooking North Broadway, Sunset and Spring streets, and intends to dig to 1000 feet in an effort to strike the lost city. Upper right-hand corner inset is Timms Shaft Artist Ewing's conception of the Lizard People at work. Lower left, upper inset shows Shufelt and crew at top of shaft, bailing water out of their deep excavation. Lower left inset shows Shufelt operating his radio X-ray device.



TRACES OF CATACOMB CITY OF LIZARD PEOPLE SOUGHT

(Continued from First Page)

the path being "several hundred miles wide." The city underground was dug as a means of escaping furnace fires.

The lost city, dug with powerful chemicals by the Lizard People instead of pick and shovel, was drained into the ocean, where its tunnels began, according to the legend. The tide passing daily in and out of the lower tunnel portals and forcing air into the upper tunnels, provided ventilation and "cleansed and sanitized the lower tunnels," the legend states.

Large rooms in the domes of the hills above the city of labyrinths housed 1000 families "in the manner of tall buildings" and imperishable food supplies of the herb variety were stored in the catacombs to provide sustenance for the lizard folk for great lengths of time as the next fire swept over the earth.

CITY LAID OUT LIKE LIZARD

The Lizard People, the legend has it, regarded the lizard as the symbol of long life. Their city is laid out like a lizard, according to the legend, its tail to the southwest, far below Fifth and Hope streets, its head to the northeast, at Lookout and Marda streets. The city's key room is situated directly under South Broadway, near Second street, according to Shufelt and the legend.

This key room is the directory to all parts of the city and to all records, tablets, the legend states. All records were kept on gold tablets, four feet long and fourteen inches wide. On these tablets of gold, gold having been the symbol of life to the legendary Lizard People, will be found the recorded history of the Mayans and on one particular tablet, the southwest corner of which will be missing, is to be found the "record of the origin of the human race."

TABLETS PHOTOGRAPHED

Shufelt stated he has taken "X-ray pictures" of thirty-seven such tablets, three of which have their southwest corners cut off.

"My radio X-ray pictures of tunnels and rooms, which are subsurface voids, and of gold pictures with perfect corners, sides and ends, are scientific proof of their existence," Shufelt said. "However, the legendary story must remain speculative until unearthed by excavation."

The Lizard People, according to Macklin, were of much higher type intellectually than modern human beings. The intellectual accomplishments of their 9-year-old children were the equal of those of present day college graduates, he said. So greatly advanced scientifically were these people that, in addition to perfecting a chemical solution by which they bored underground without removing earth and rock, they also developed a cement far stronger and better than any in use in modern times with which they lined their tunnels and rooms.

HILLS ENCLOSE CITY

Macklin said legendary advice to American Indians was to seek the lost city in an area within a chain of hills forming "the frog of a horse's hoof." The contour of hills surrounding this region forms such a design, substantiating Shufelt's findings, he said.

Shufelt's radio device consists chiefly of a cylindrical glass case inside which a pilument attached to a copper wire held by the engineer sways continually, pointing, he asserts, toward minerals or tunnels below the surface of the ground, and then revolves when over the mineral or swings in prolongation of the tunnel when above the excavation.

He has used the instrument extensively in mining fields, he said.

SIGNALS OPPOSED

Installation of traffic signals at the intersection of Third street and Larchmont avenue is not warranted, according to a report from Deputy Police Chief Steckel, forwarded to the City Council by the Police Commission.



A well-balanced DIET Will Keep You Fit

Battle Creek Health Foods are prepared to add the essential roughage to your diet that so many modern diets lack. Fruit Crackers, Fig Bran Cookies, Bran Biscuits, Psylla Wafers, Laxa Biscuits ... are but a few of many foods.

Battle Creek Health Foods BULLOCK'S—Street Floor

BULLOCK'S Broadway ◆ Hill ◆ Seventh



"Skin —Smooth as Silk"

6 Albert Durande FACIALS... $8

For just the week of January 29th ... this remarkable opportunity! Assure yourself a smooth, vibrant skin! Learn to emphasize your own best points ... as you watch creative artists apply the subtle touches of a make-up. In a word, take advantage of this special price and register for 6 invigorating, refreshing facials! Telephone TR. 1911 for an appointment.

Every Superbe Permanent Wave, exclusively Bullock's. $1.5

Galerie de Chasme BULLOCK'S North Floor

"QUALITY REIGNS SUPREME"

BULLOCK'S

BROADWAY ◆ HILL ◆ SEVENTH

"QUALITY REIGNS SUPREME"

BULLOCK'S

BROADWAY ◆ HILL ◆ SEVENTH

Modernize Your Diamonds With New Settings!



Left—Bullock's had this stunning setting created by hand from 10 per cent iridium platinum ... for your own diamond (¾ to 1 karat size)... 12 small diamonds enhance its beauty $59.50



As a setting with space for 2 or 3 of your own center diamonds, this platinum mounting with 8 small diamonds costs but $82.50. As sketched with 3 center diamonds at $150

In Bullock's estimation these are two of the most unusual ring values of a decade. Each a credit to fine jewelry craftsmanship. Precious settings for precious stones ... that add beauty to your jewels and greatly enhance their value.

Fine Jewelry BULLOCK'S Street Floor, Hill

Famous FINETEX Numbers

No. 145



Evening-sheer Two-thread Chiffons

$1.25 pair



Finetex

Triple Heel HOSIERY

Even Bullock's Finetex No. 145 boasts triple heel reenforcements! A Bullock precaution that lends happy assurance to continuously dancing feet. Seems hairline thin, deceptively sheer appearance, and Bullock's exclusive Desert shades contribute to the increasing popularity of Finetex No. 145. $1.25 pair ... 3 pairs $3.60

Women's Hosiery BULLOCK'S Street Floor

Kingdon WOOL Crepe SUITING

$2.45 yard

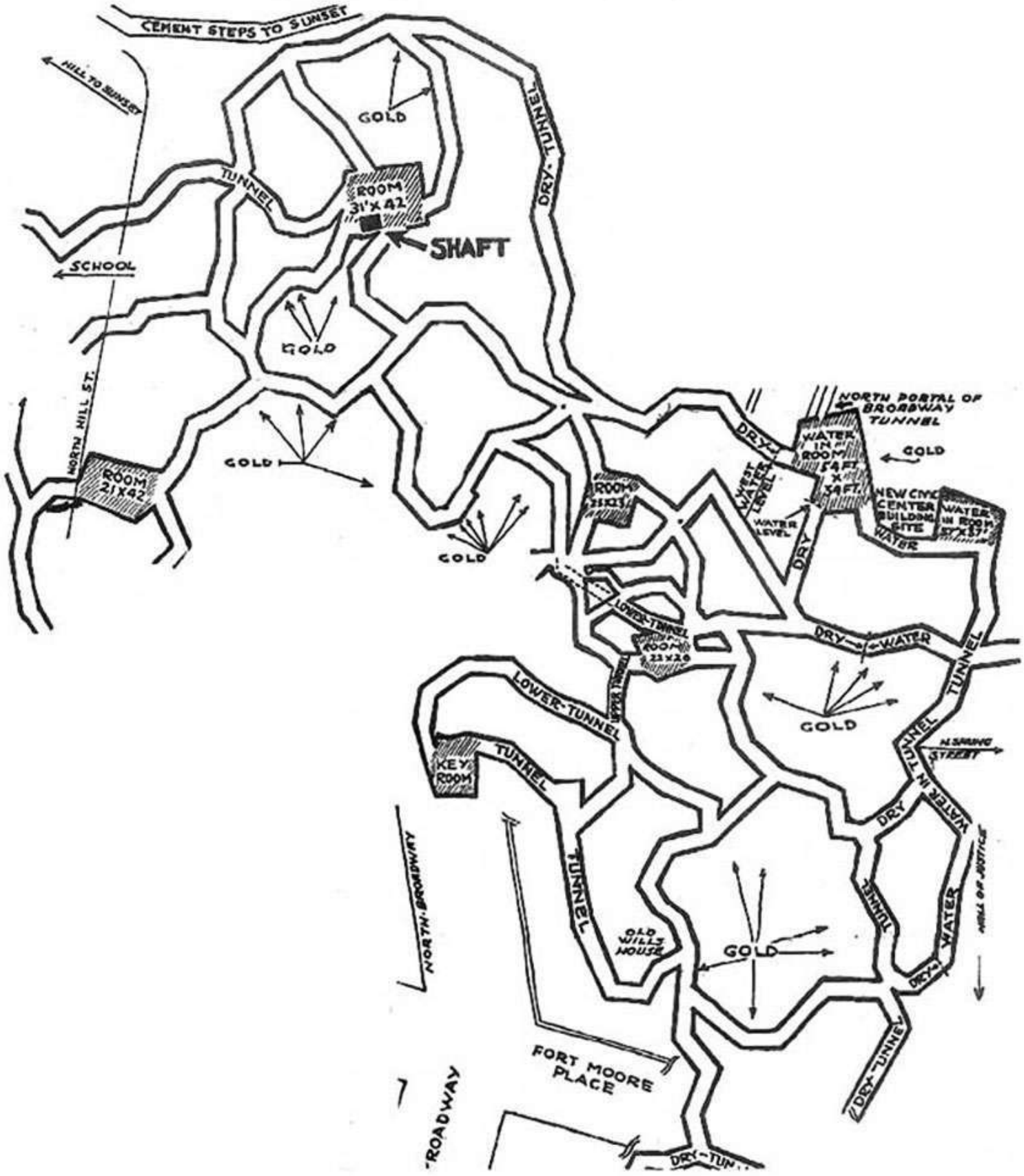
"Suits are the costume of Spring" ... you hear it on every hand ... and see it on many smart women! Bullock's brings Suiting ... a fascinating new crepey suiting with an almost imperceptible woven dice pattern.

Such smart new colors as Sun Yellow, Indian Turquoise, Putty Beige, Maar Green, Lupin Blue, Sun Red, Desert Sand, and Black ... 54 inches wide, outstanding Bullock values, yard $2.45

Woolens BULLOCK'S Second Floor

Los Angeles Underground "Lizard People" Tunnel Map according to engineer G. Warren Shufelt

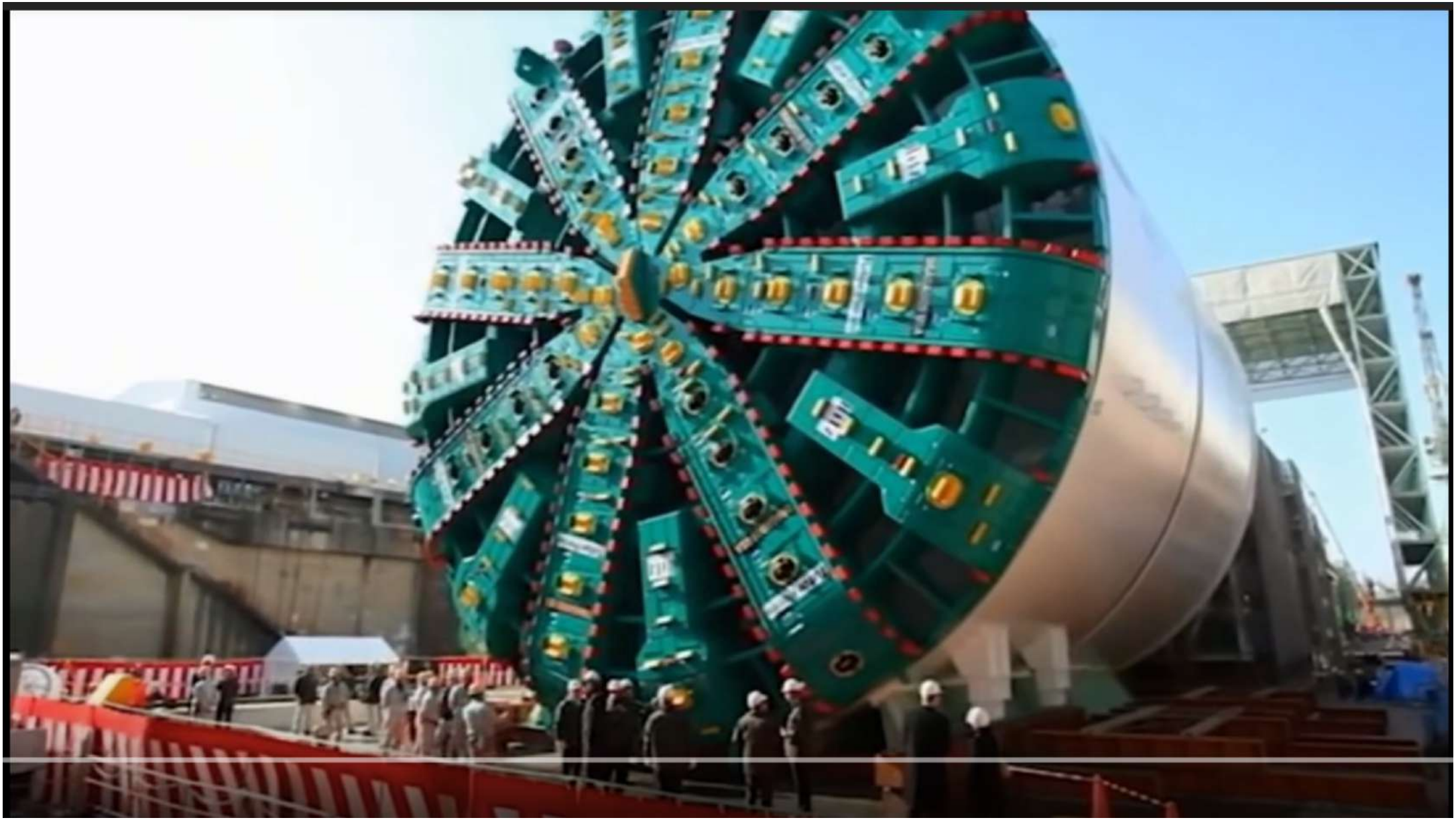
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TALKS WITH TEACHINGS FROM MY COSMIC FRIENDS





ASHTAR SHERAN



ORTHON

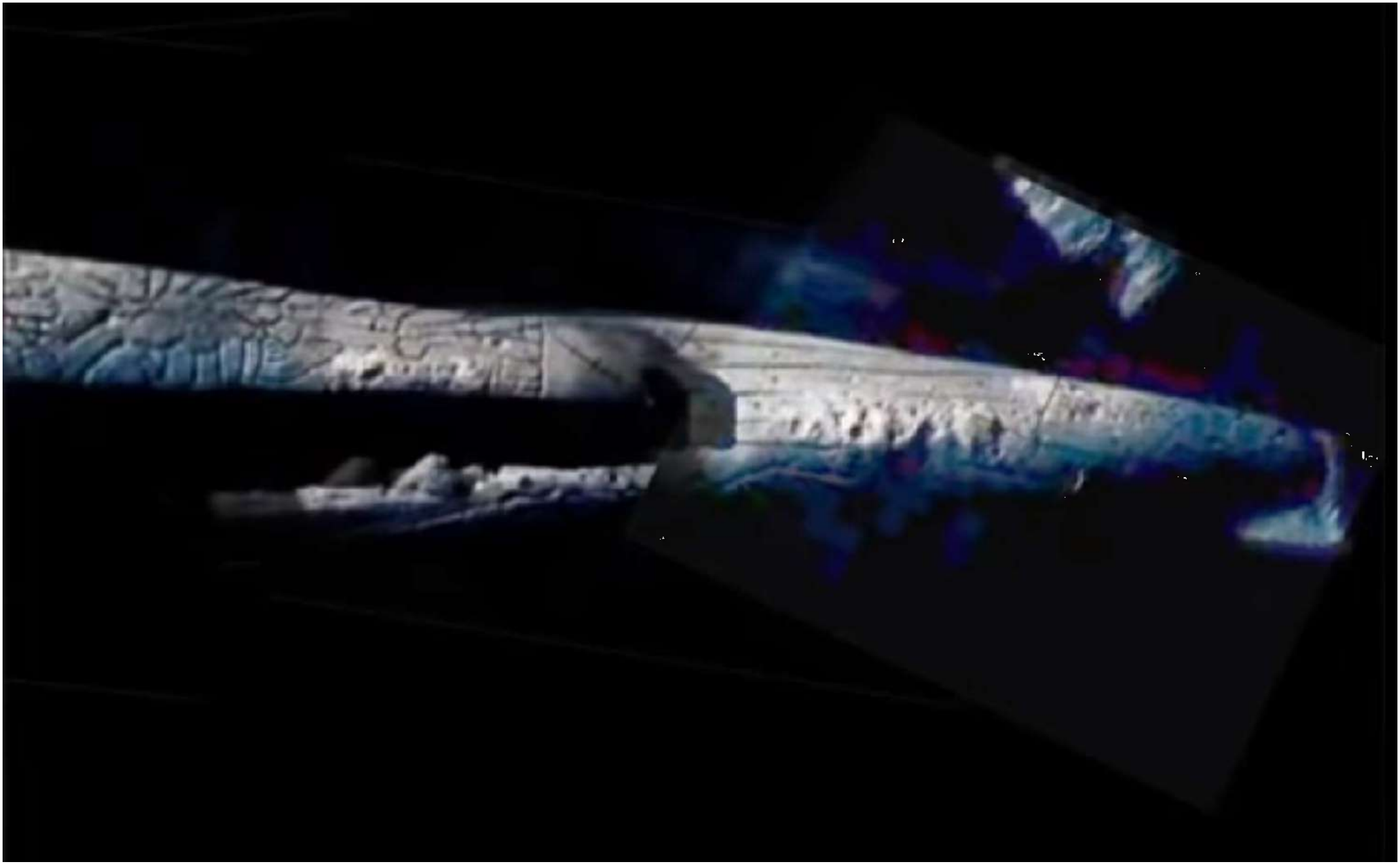
angels-heaven.org

Pic. 4395 P EN

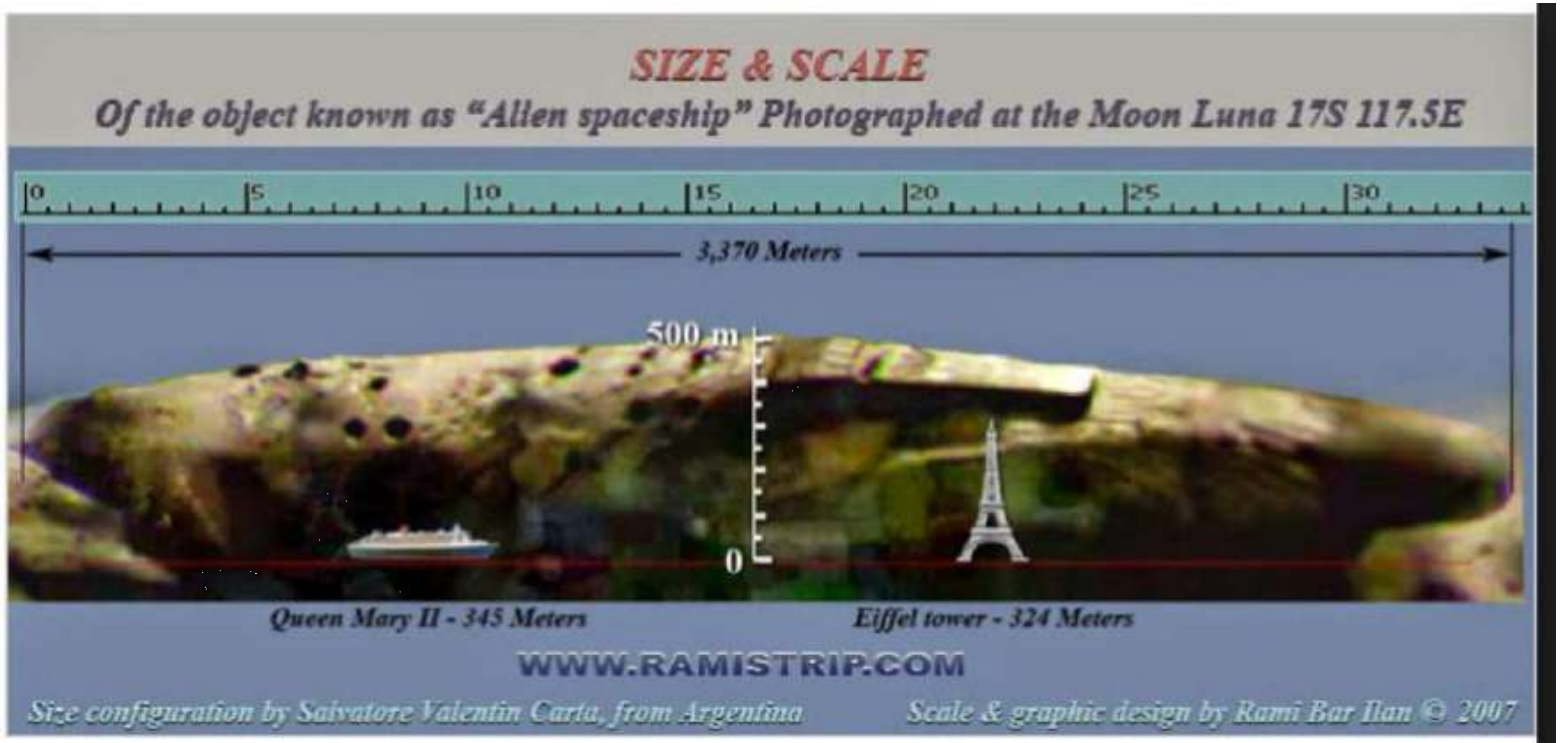

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Apollo 20 the unknown mission




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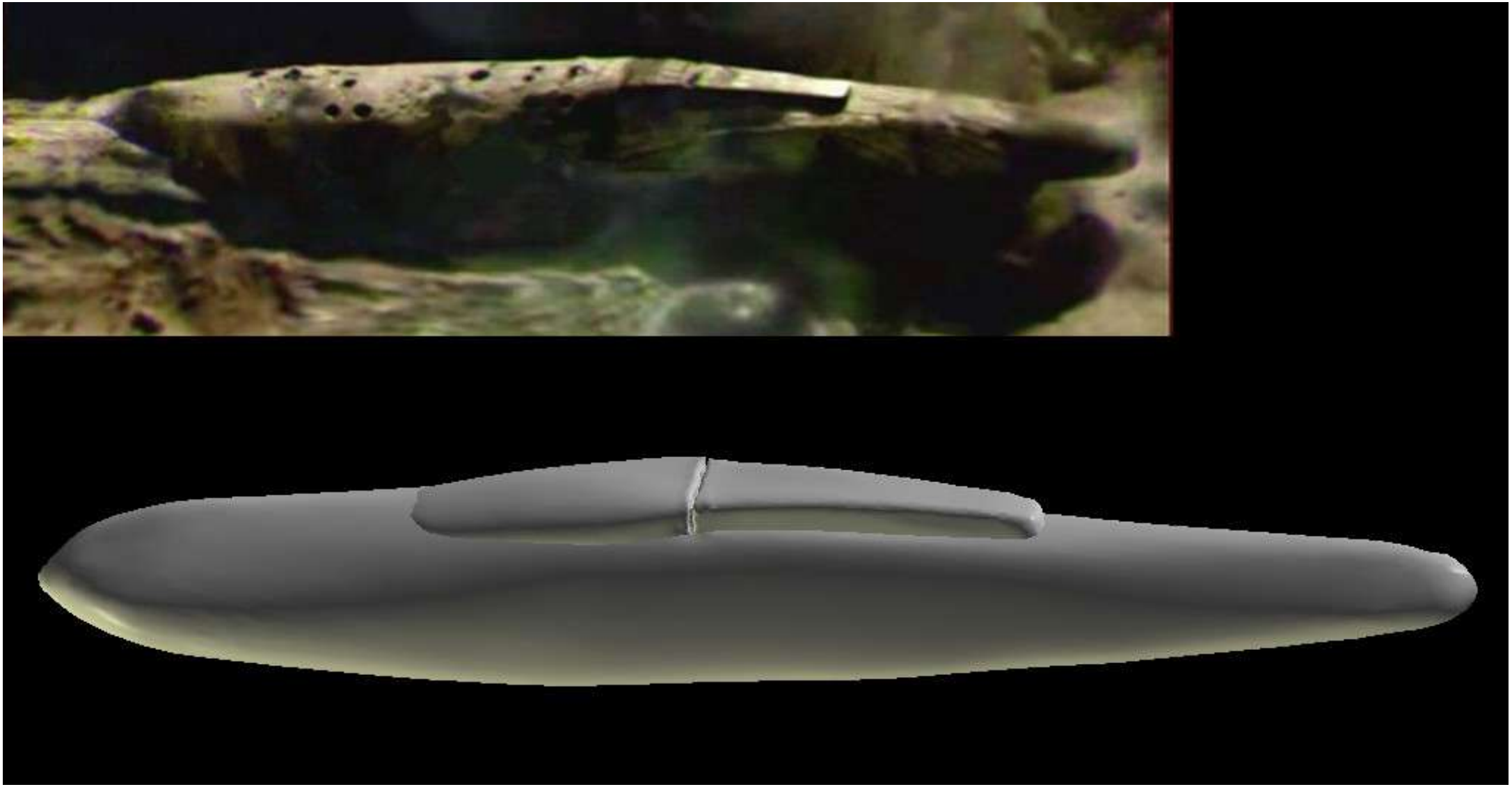

Excellent Aerodynamic Design!!!

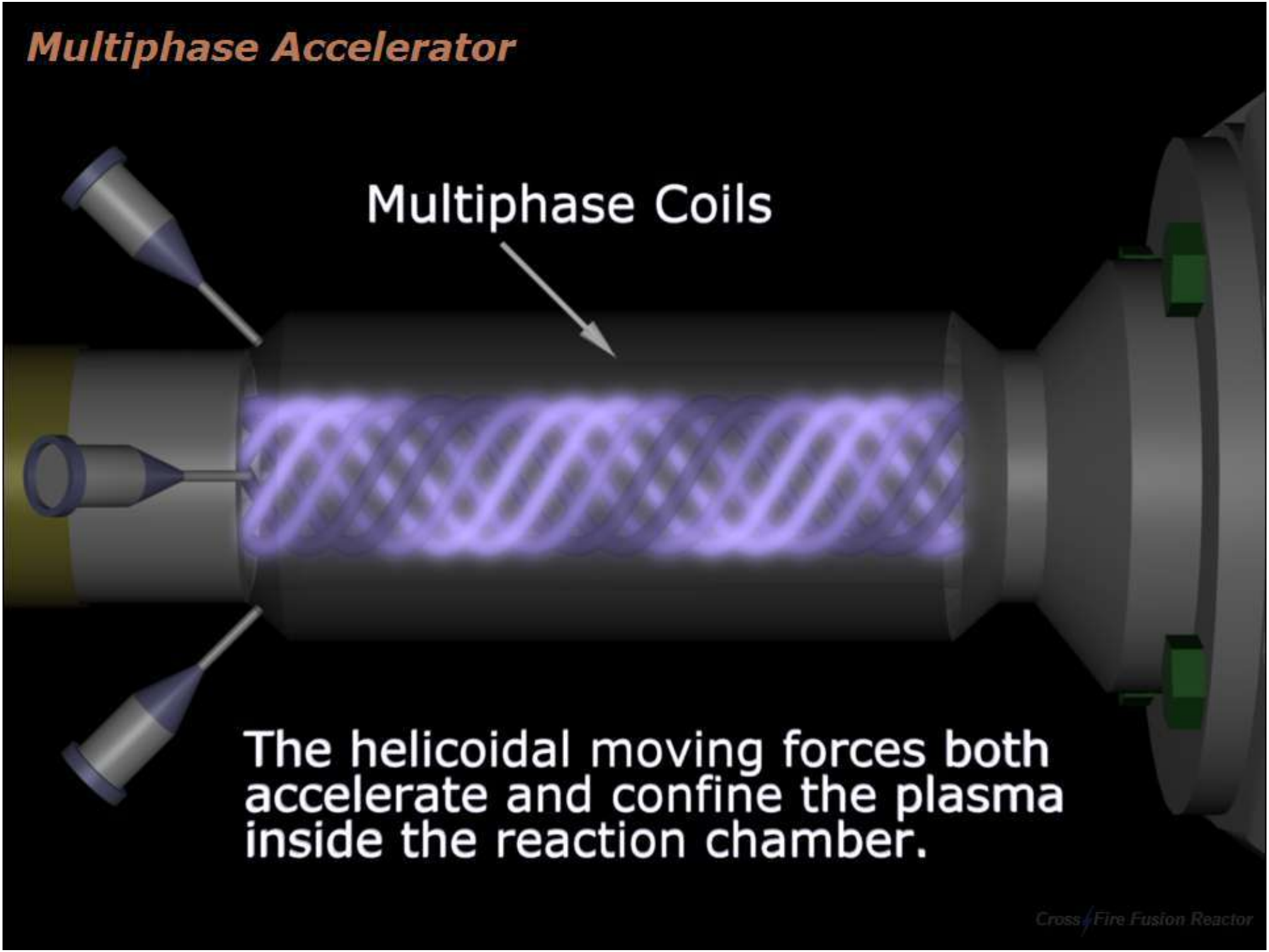

SIZE & SCALE
Of the object known as "Alien spaceship" Photographed at the Moon Luna 17S 117.5E
0
5
10
15
20
25
30
3,370 Meters
500 m
0
Queen Mary II - 345 Meters
Eiffel tower - 324 Meters
WWW.RAMISTRIP.COM
Size configuration by Salvatore Valentin Carta, from Argentina
Scale & graphic design by Rami Bar Ilan © 2007


ALIEN SPACESHIP ON THE MOON
HOW BIG IS IT?
Rami © 2007
WWW.RAMISTRIP.COM
General impression of size & scale - Object around urban structures of Manhattan & Toronto







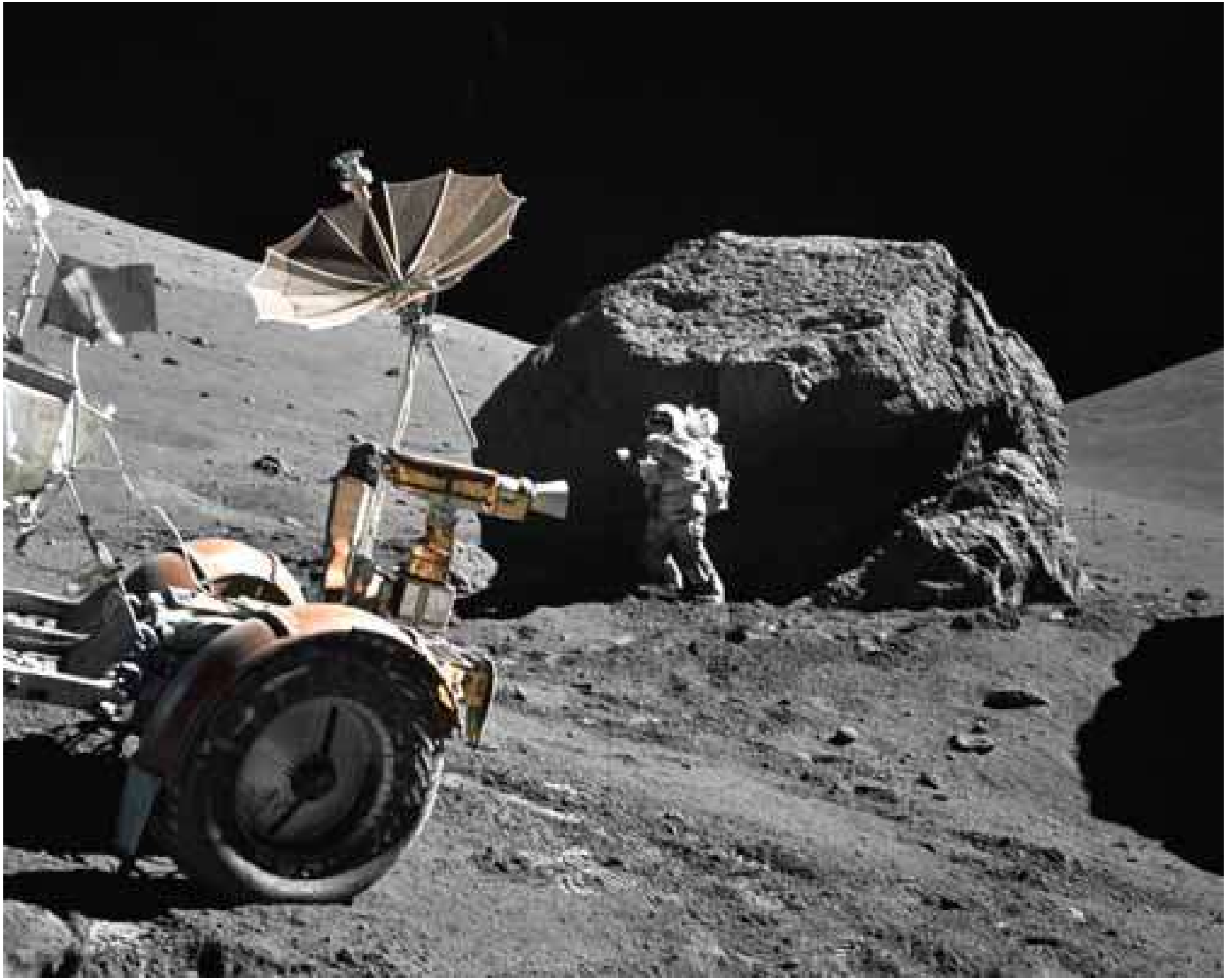

Multiphase Accelerator
Multiphase Coils
The helicoidal moving forces both accelerate and confine the plasma inside the reaction chamber.
Cross Fire Fusion Reactor


23

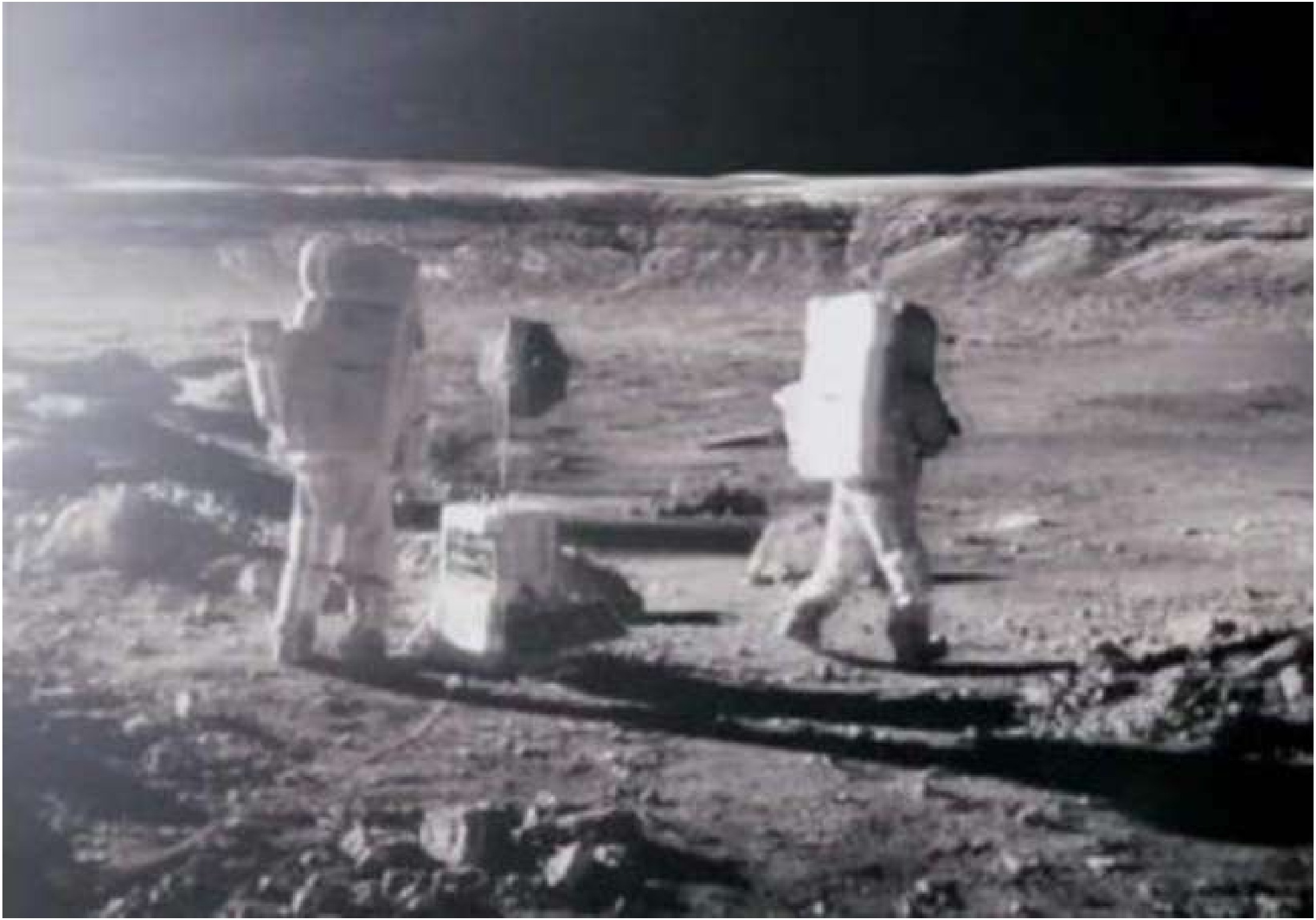


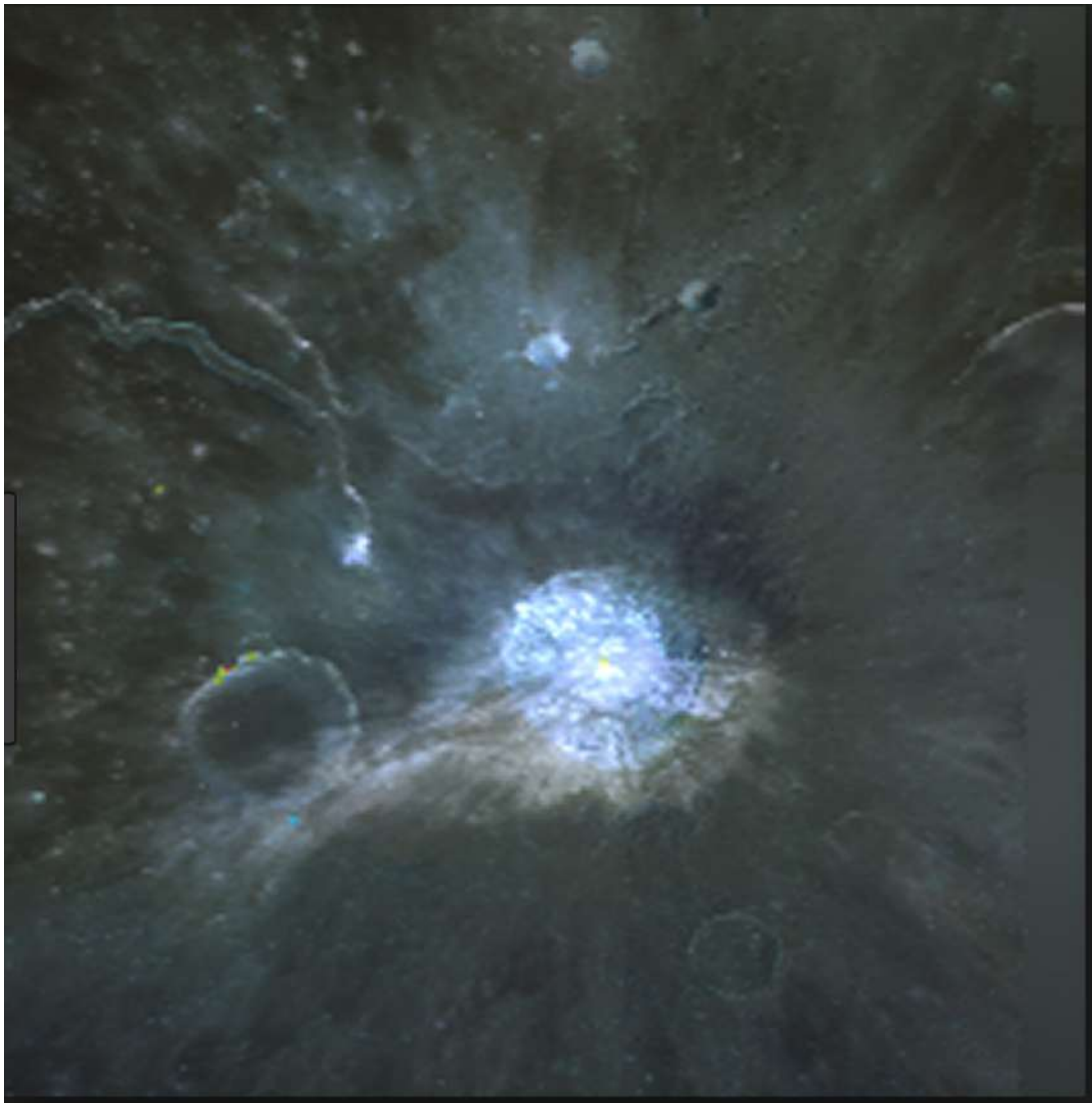












Aristarchus Crater - Blue Gem

The Living Moon

Credit: USGS/US Navy/Clementine Spacecraft

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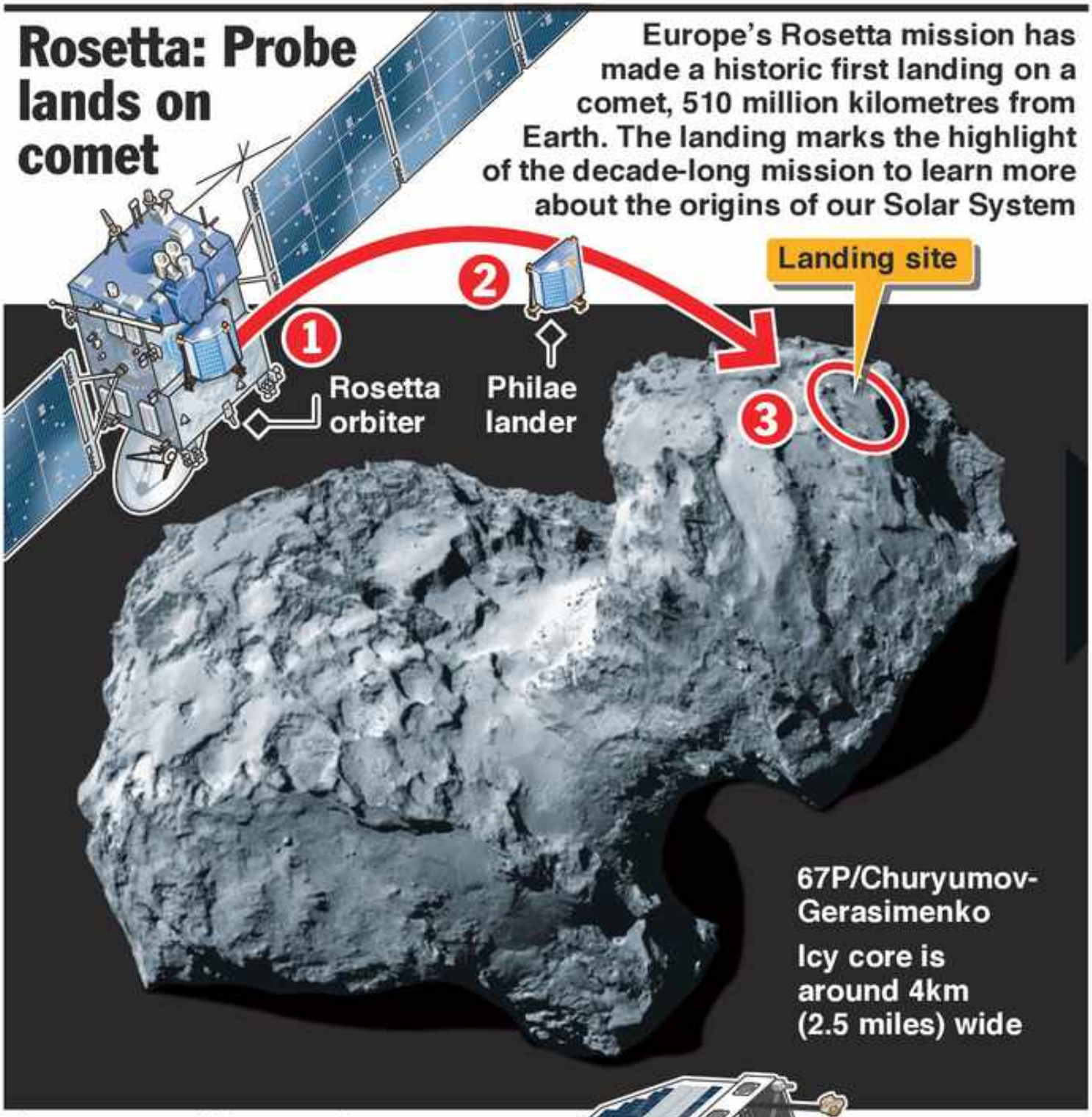




© BONI / BACKGRID

Rosetta: Probe lands on comet

Europe's Rosetta mission has made a historic first landing on a comet, 510 million kilometres from Earth. The landing marks the highlight of the decade-long mission to learn more about the origins of our Solar System

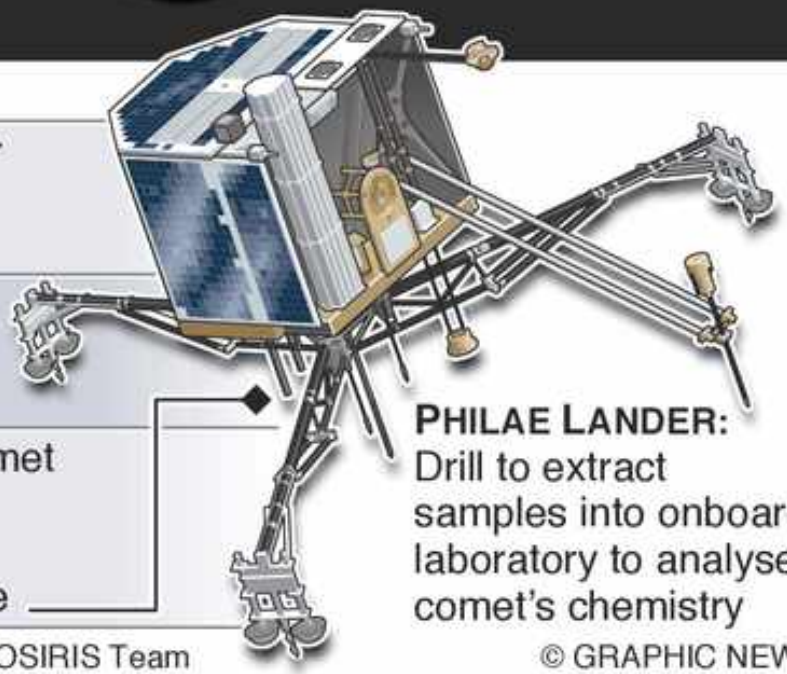


ANATOMY OF HISTORIC LANDING

1 08:35GMT: Fridge-sized lander launched from mother ship. 20km descent will take seven hours

2 11:00GMT: Rosetta receives signal from Philae, which unfurls legs and starts taking pictures

3 16:05GMT: Philae lands on comet but harpoons that secure probe to surface fail to attach, meaning craft could bounce back into space



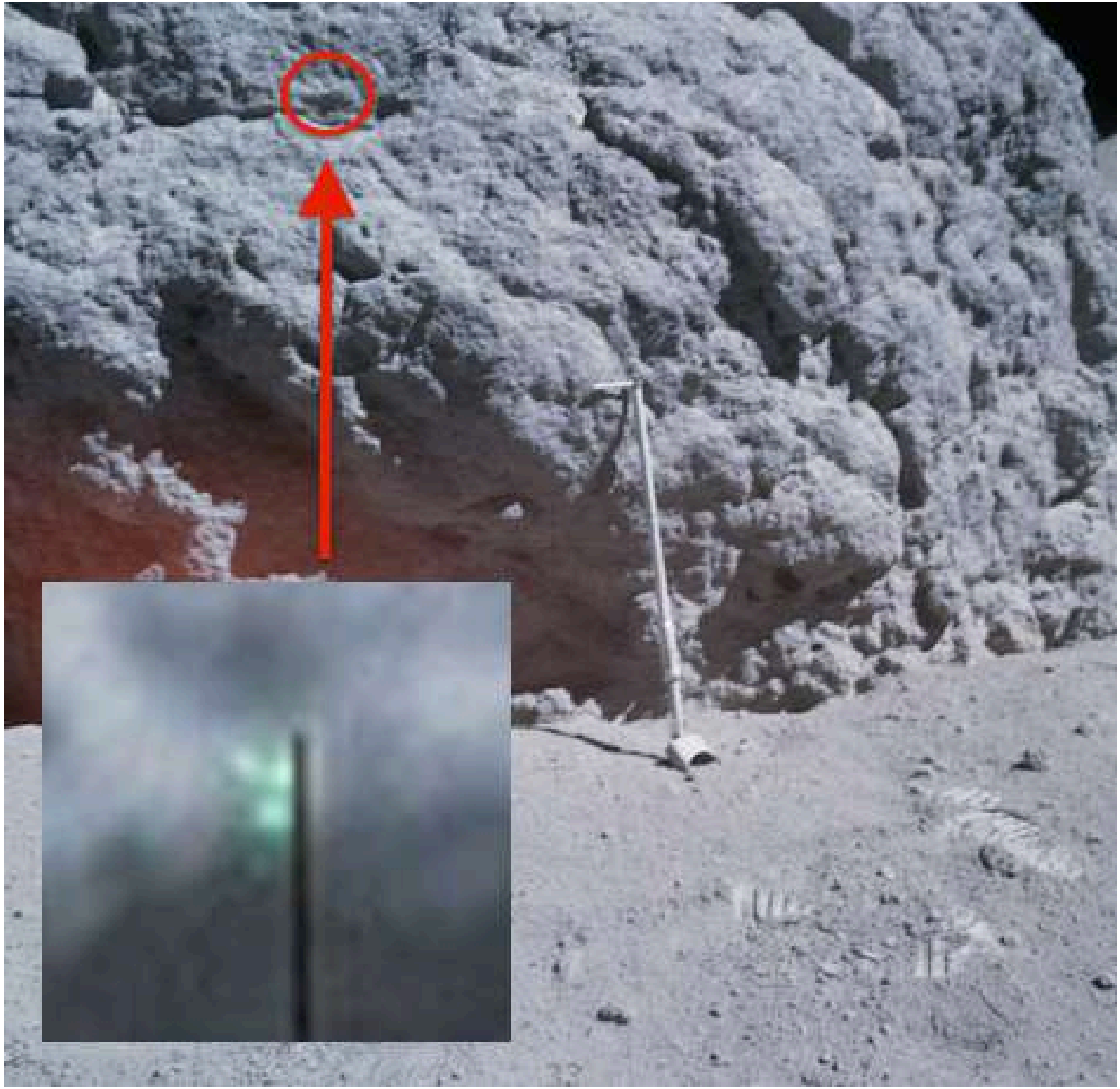
PHILAE LANDER: Drill to extract samples into onboard laboratory to analyse comet's chemistry

Source: ESA Picture: ESA/Rosetta/MPS for OSIRIS Team

© GRAPHIC NEWS







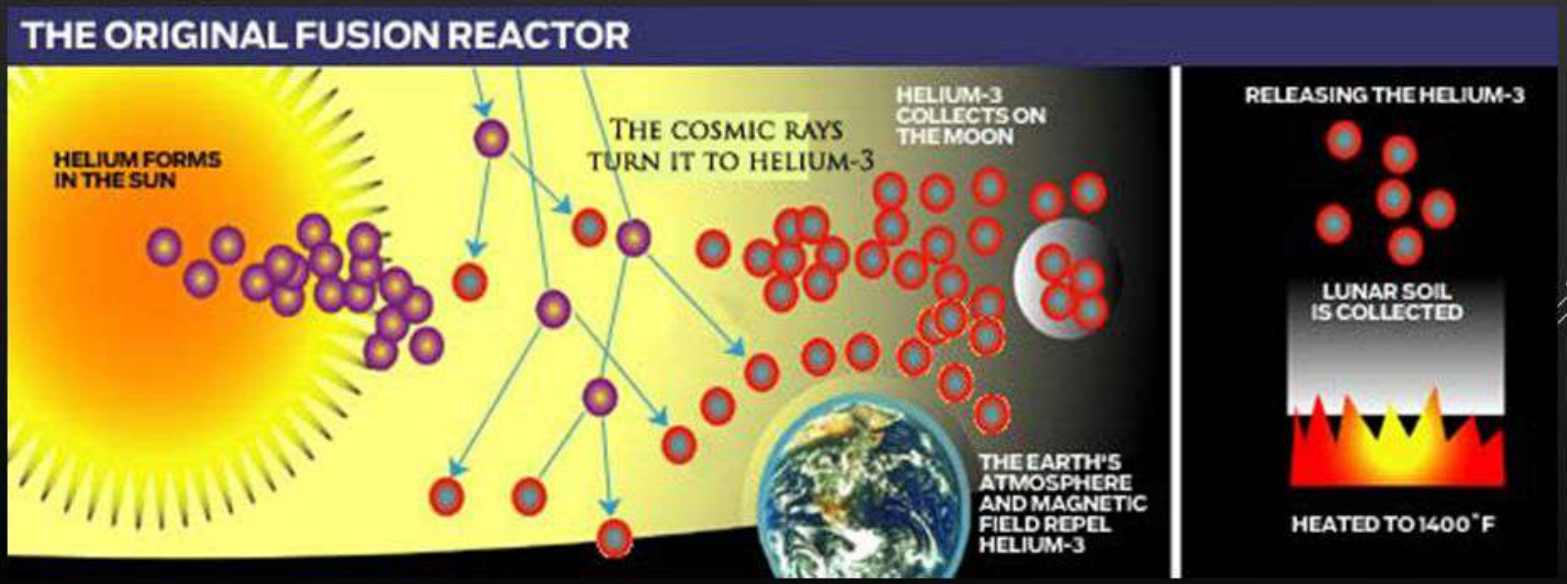
Moon Fuel or Moonshine for Reactors



The moon is 'so rich' in helium 3, that this could 'solve humanity's energy demand for 10,000 years at least.

HELIUM-3

- An ideal candidate fuel for nuclear fusion.
- Formed in the Sun and carried through space on solar winds, helium-3 is extremely rare on Earth.
- Helium 3 is a light, non-radioactive isotope of helium with two protons and one neutron.

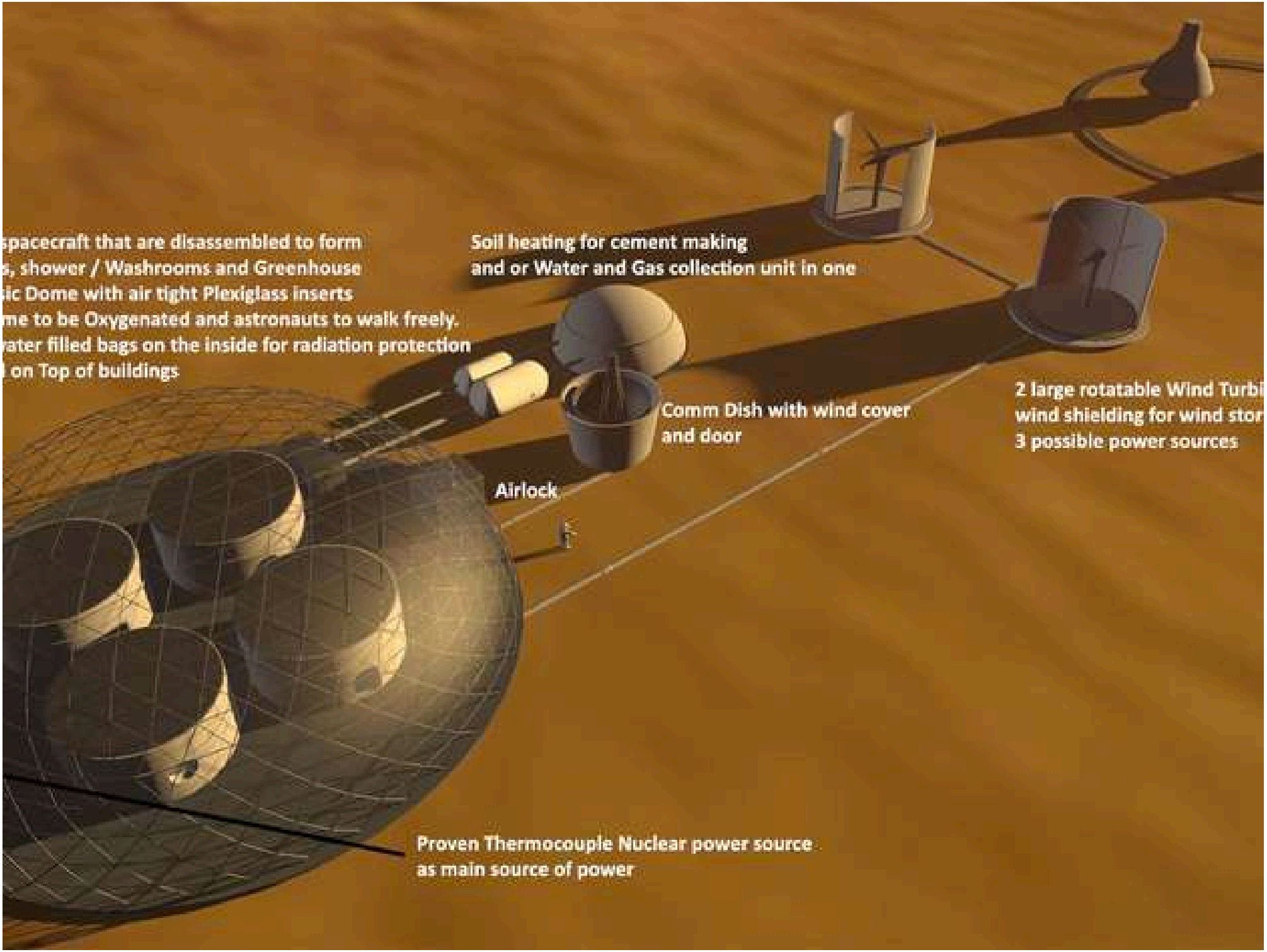






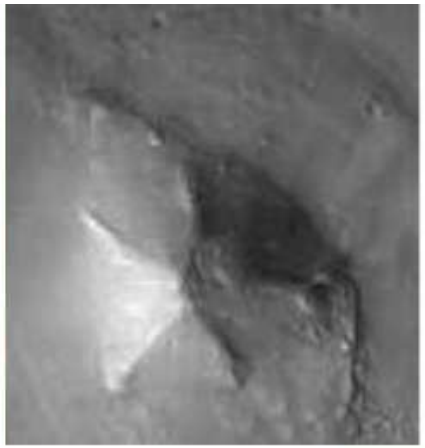



HOLD 1

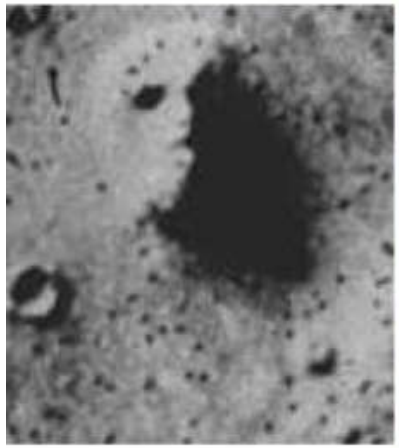

spacecraft that are disassembled to form
s, shower / Washrooms and Greenhouse
ic Dome with air tight Plexiglass inserts
me to be Oxygenated and astronauts to walk freely.
ater filled bags on the inside for radiation protection
on Top of buildings
Soil heating for cement making
and or Water and Gas collection unit in one
Comm Dish with wind cover
and door
2 large rotatable Wind Turbi
wind shielding for wind stor
3 possible power sources
Airlock
Proven Thermocouple Nuclear power source
as main source of power


Paranormal Cru










NASA Curiosity Rover photographs Pyramid on Mars



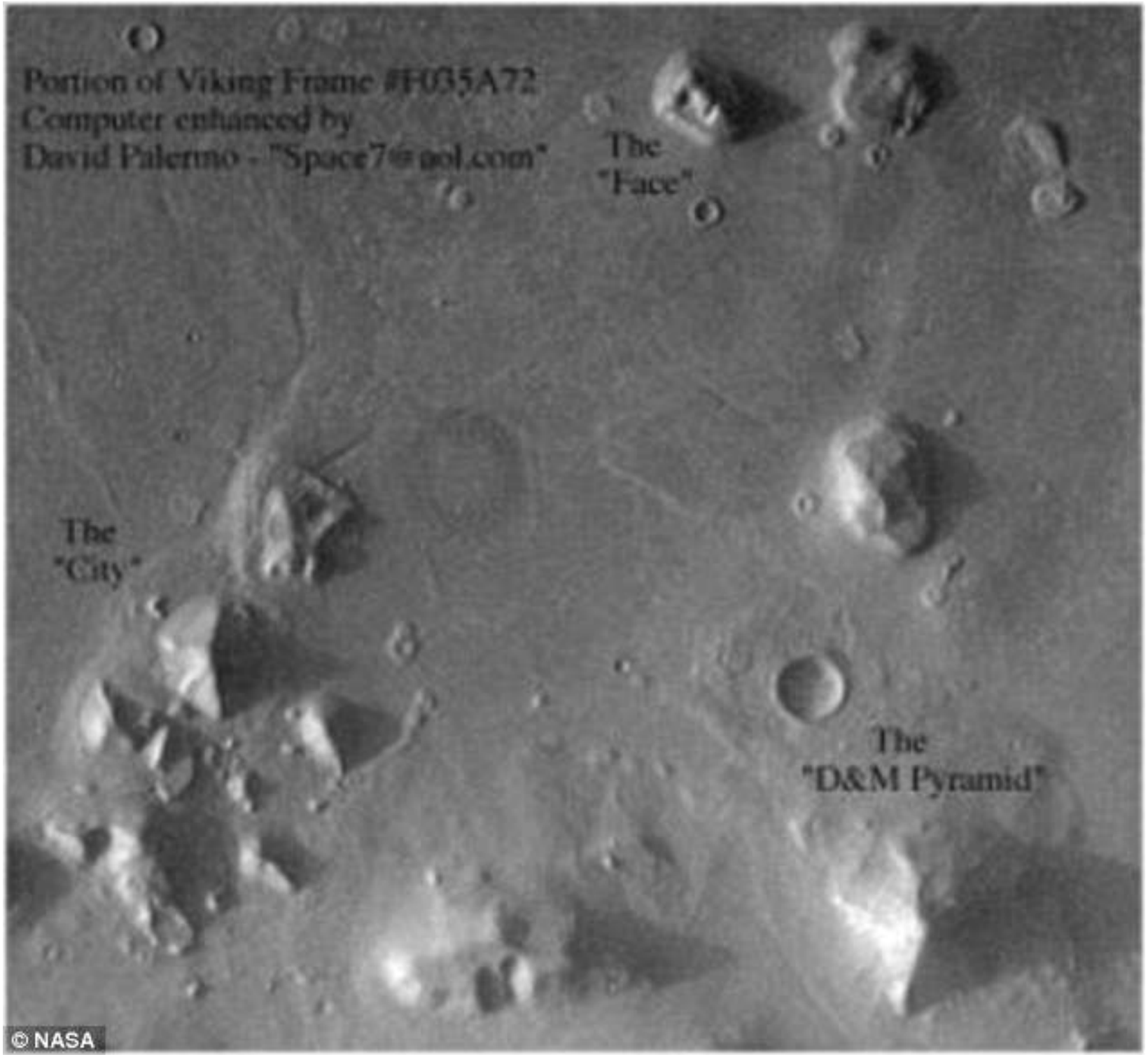


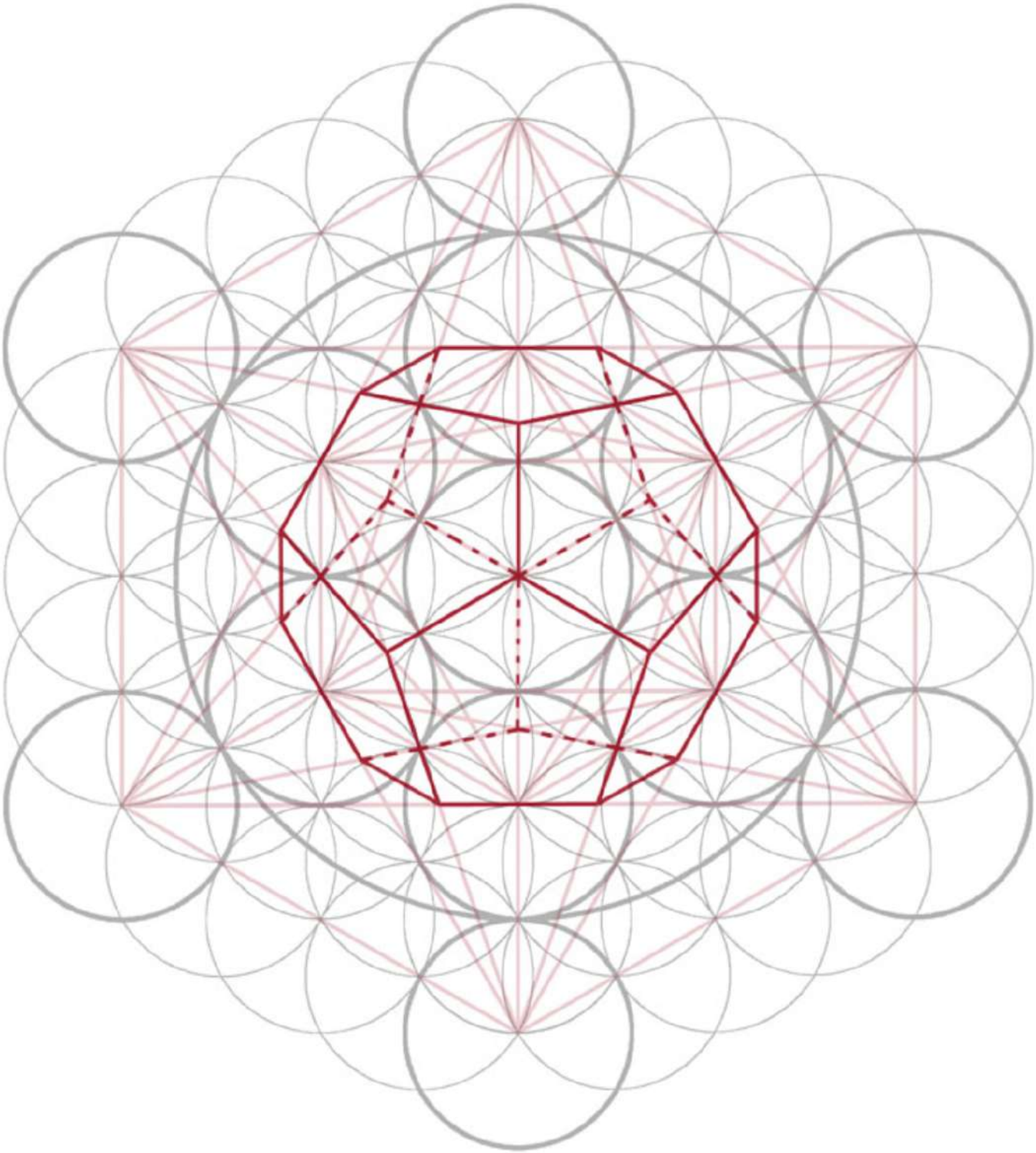

1976
1996
2001







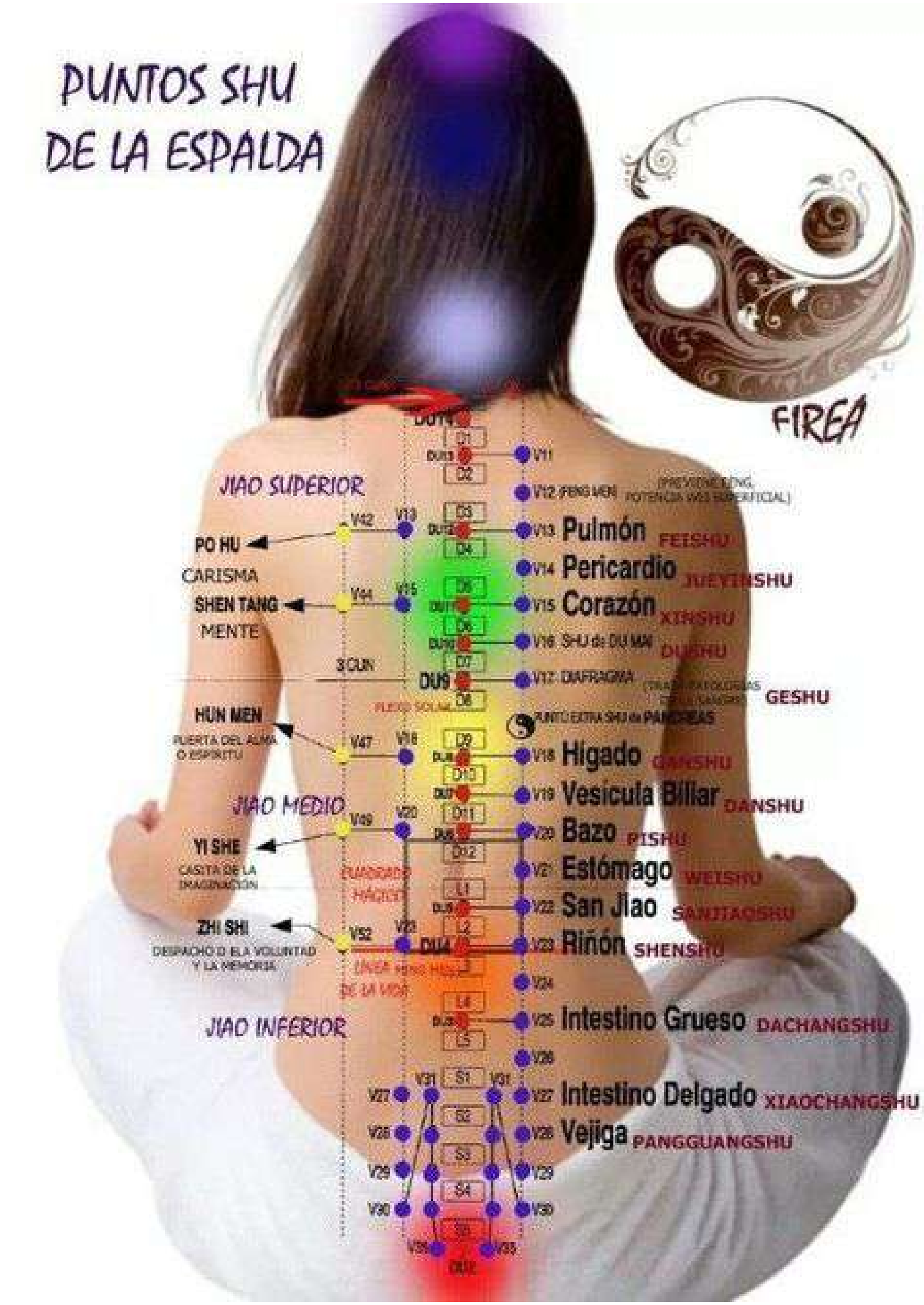

Portion of Viking Frame #f035A72
Computer enhanced by
David Palermo - "Space7@aol.com"
The
"Face"
The
"City"
The
"D&M Pyramid"
© NASA



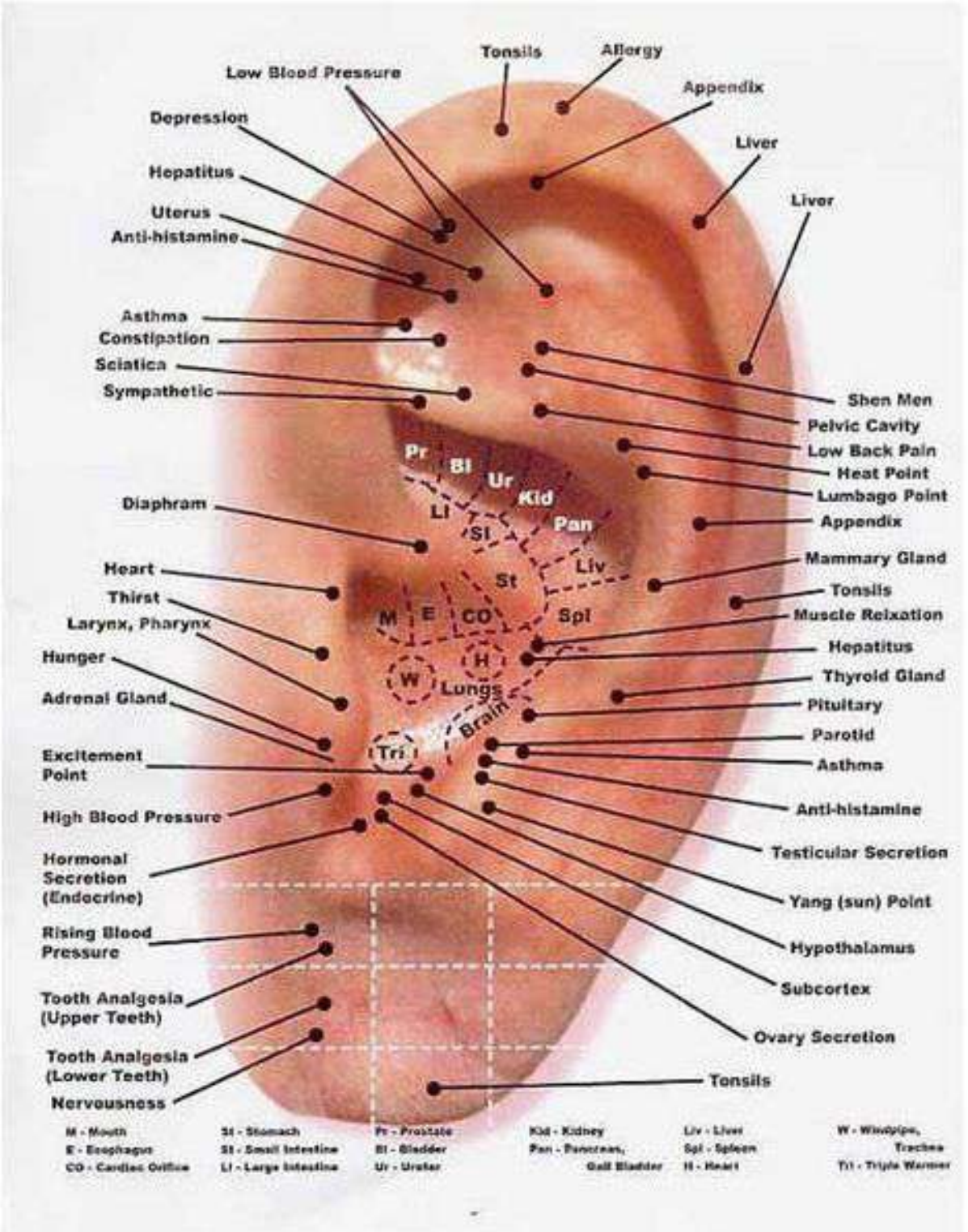


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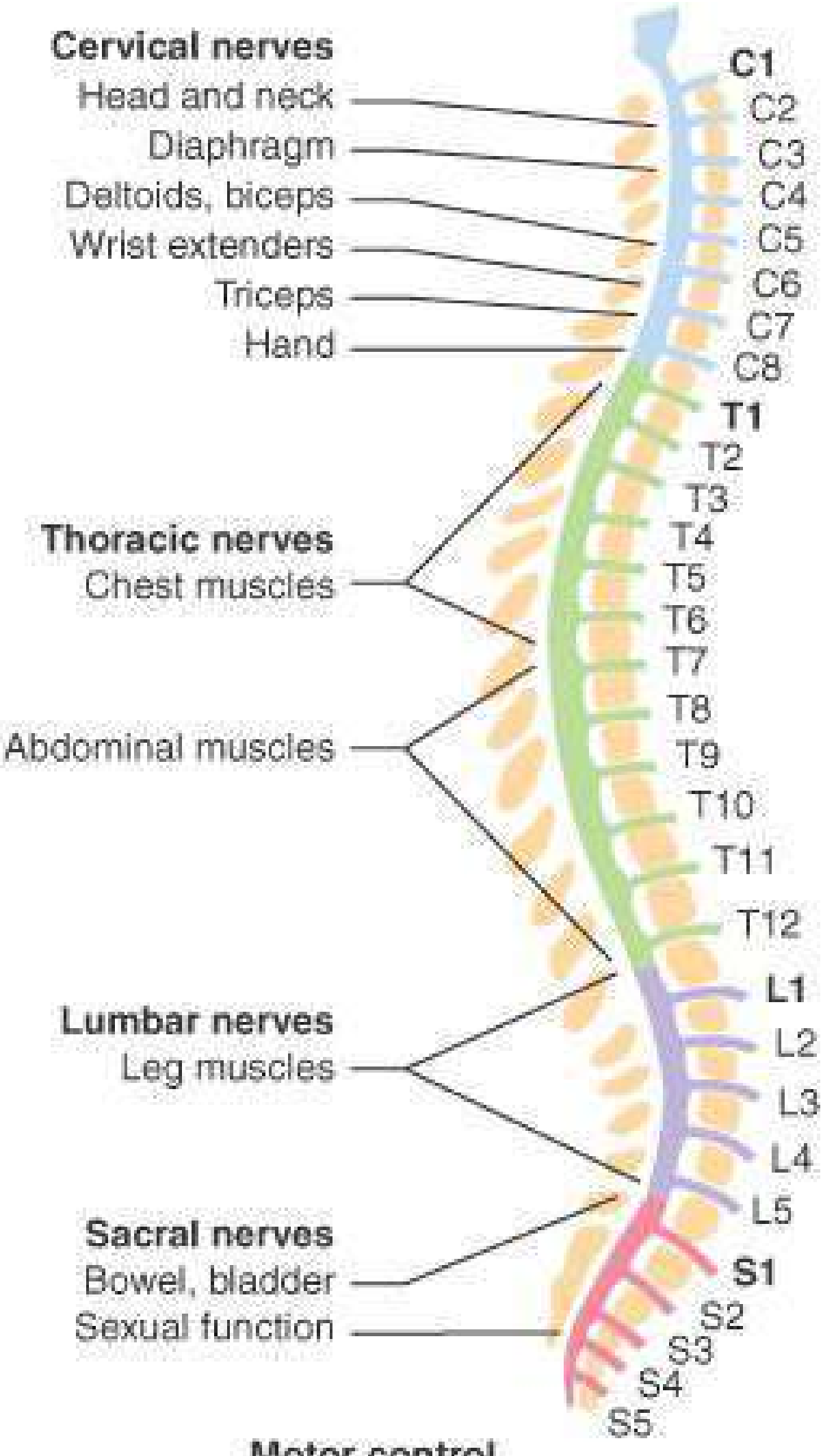
PUNTOS SHU DE LA ESPALDA



Physical Ear Chart



ebay $21.90


Cervical nerves
Head and neck
Diaphragm
Deltoids, biceps
Wrist extenders
Triceps
Hand
Thoracic nerves
Chest muscles
Abdominal muscles
Lumbar nerves
Leg muscles
Sacral nerves
Bowel, bladder
Sexual function
C1
C2
C3
C4
C5
C6
C7
C8
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
L1
L2
L3
L4
L5
S1
S2
S3
S4
S5
Motor control

dōTERRA®

Wellness Advocate

Foot Reflexology Chart & Oil Use Guide



1 Brain, Pineal, & Pituitary
Frankincense
Immortelle®
Balance®
Patchouli, Copaiba
Sandalwoods
InTune®, Console®
Myrrh, Vetiver

2 Parathyroid
Frankincense
Rosemary
Immortelle®
Vetiver, Basil
Clove, Forgive®

3 Thyroid
Clove, Myrrh
Frankincense
Rosemary, Basil
Peppermint
Immortelle®
Lemongrass
DDR Prime®

4 Thymus
Cassia, Thyme
Melaleuca
On Guard®
Rosemary
Lemongrass
Clary Sage

Clary Sage
Frankincense
Helichrysum
Immortelle®
Lavender
Eyes

15 Lung
Breathe®
Eucalyptus
Melissa, Siberian Fir
Cypress, Rosemary
Oregano, Thyme
Lime, Cardamom
Arborvitae

Sinus

Eyes

Sinus
Breathe®
Melissa, Lime
Eucalyptus
Peppermint
Lavender, Lemon
Rosemary
Douglas Fir

Helichrysum
Melaleuca
Frankincense
Lavender, Basil
Emotional Oils
Ears

Shoulder

Ears
AromaTouch®
Wintergreen
Birch
Lemongrass
Deep Blue®
PastTense®
Siberian Fir
Shoulder

Cilantro, Geranium
Frankincense
Zendocrine®
Rosemary, Fennel
Citrus Oils
DDR Prime®
Slim & Sassy®
Liver

Cardamom, Rose
Cypress, Blk Pepper
Lemongrass, Anchor®
Marjoram, Elevation®
Ylang Ylang, Jasmine
Cinnamon/Cassia
Geranium, Passion®
Heart

Gallbladder
Geranium, Lavender
Rosemary
Juniper Berry
Cardamom
Zendocrine®
Citrus Oils

Rosemary
Basil, Coriander
On Guard®
Fennel
Motivate®
Slim & Sassy®
5 Pancreas

Spleen
Citrus Oils
Marjoram
Melaleuca
Fennel
Cardamom

14 Adrenal
Rosemary, Basil
Ylang Ylang
Geranium, Clove
Zendocrine®
Citrus Oils

13 Bladder
Cassia/Cinnamon
On Guard®
Cypress, Bergamot
Lemongrass
Juniper Berry

DigestZen®
Fennel, Ginger
Peppermint
Cardamom
Zendocrine®
Slim & Sassy®
Coriander, Basil
6 Stomach
7 Small Intestine

DigestZen®
Fennel, Ginger
Blk Pepper
Cardamom
Peppermint
Slim & Sassy®
Spearmint
Citrus Oils
Ascending Colon
8 Descending Colon
12 Transverse Colon

Descending Colon 8

Rectum
Cypress
Balance®
Helichrysum
Melaleuca
Lavender

Sciatic Nerve 9
AromaTouch®
Deep Blue®
Birch/Wintergreen
PastTense®
Peppermint
Helichrysum
Copaiba

10 Kidney
Rosemary
Lemongrass
Cassia, Cilantro
Geranium
Juniper Berry
Zendocrine®
Citrus Oils

Right Foot

Left Foot

Muscles
AromaTouch®
Deep Blue®
Douglas Fir
Siberian Fir
Spearmint
Frankincense
PastTense®
Wintergreen
Marjoram
Blue Tansy

Nerves
Helichrysum
Lemongrass
Clove, Geranium
Peppermint
Roman Chamomile
Serenity®, Copaiba
DDR Prime®
Petitgrain, Vetiver
Frankincense

11 Spine
Melaleuca
AromaTouch®
Copaiba
Wintergreen
Siberian Fir
Douglas Fir
Melissa, Balance®
DDR Prime®

Outer Ankle— **Ovaries or Testes**

Ovaries
Myrrh, Basil
ClaryCalm®
Whisper®
Rosemary
Jasmine
Ylang Ylang
Geranium

Testes
Rosemary
Clary Sage
Geranium
Lavender
Sandalwoods

Inner Ankle— **Uterus or Prostate**

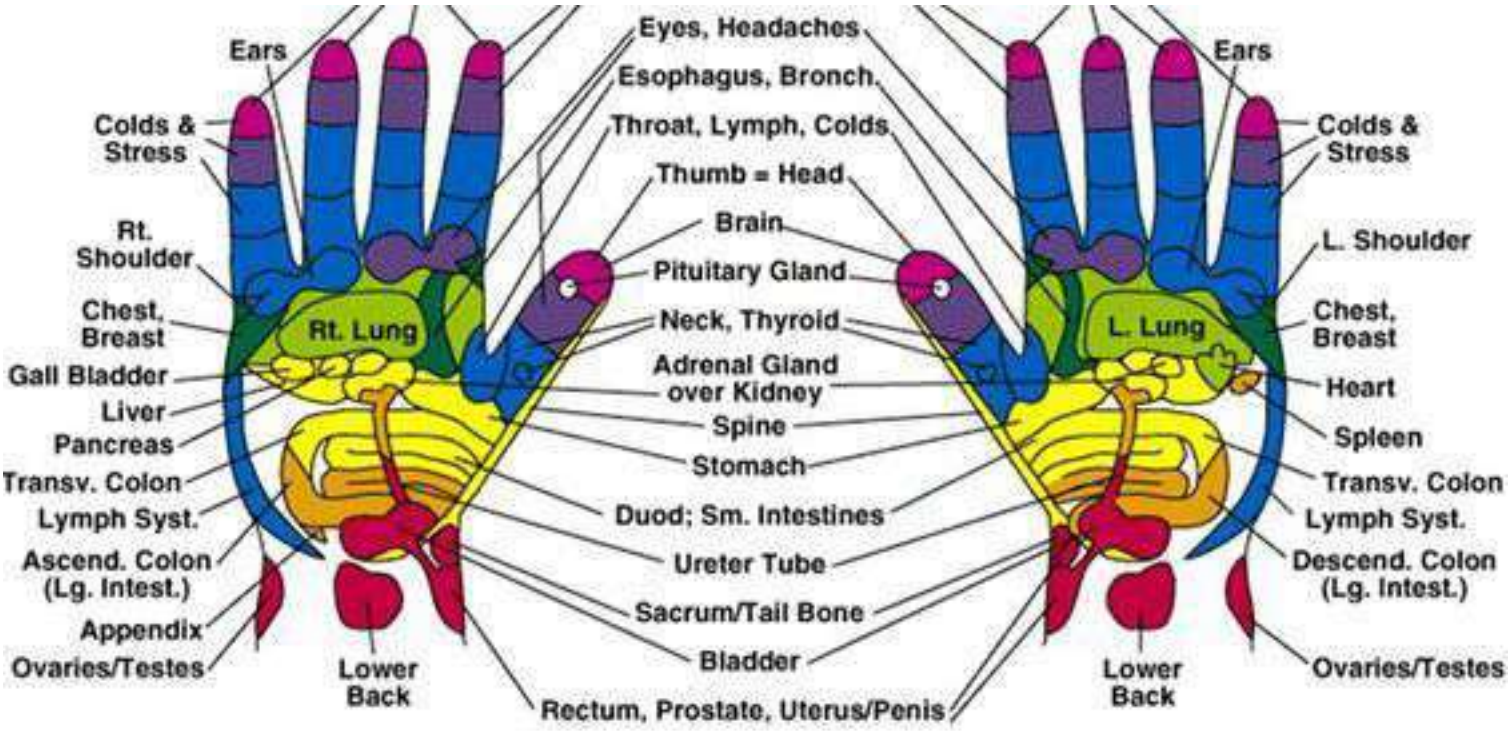
Uterus
Frankincense
Lemon, Forgive®
Jasmine, Neroli
Clary Sage
Geranium
ClaryCalm®
Whisper®

Prostate
Helichrysum
Frankincense
Immortelle®
Copaiba, Basil
Juniper Berry
Cypress, Myrrh
DDR Prime®

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VERTEBRAL LEVEL	NERVE ROOT*	INNERVATION	POSSIBLE SYMPTOMS
C1	C1	Intracranial Blood Vessels • Eyes • Lacrimal Gland • Parotid Gland • Scalp • Base of Skull • Neck Muscles • Diaphragm	Headaches • Migraine Headaches • Dizziness • Sinus Problems • Allergies • Head Colds • Fatigue • Vision Problems • Runny Nose • Sore Throat • Stiff Neck • Cough • Croup • Arm Pain • Hand and Finger Numbness or Tingling • Asthma • Heart Conditions • High Blood Pressure
C2	C2		
C3	C3		
C4	C4		
C5	C5	• Neck Muscles • Shoulders • Elbows • Arms • Wrists • Hands • Fingers • Esophagus • Heart • Lungs • Chest	
C6	C6		
C7	C7		
	C8		
T1	T1	Arms • Esophagus • Heart • Lungs • Chest • Larynx • Trachea	Wrist, Hand and Finger Numbness or Pain • Middle Back Pain • Congestion • Difficulty Breathing • Asthma • High Blood Pressure • Heart Conditions • Bronchitis • Pneumonia • Gallbladder Conditions • Jaundice • Liver Conditions • Stomach Problems • Ulcers • Gastritis • Kidney Problems
T2	T2		
T3	T3		
T4	T4		
T5	T5	Gallbladder • Liver • Diaphragm • Stomach • Pancreas • Spleen • Kidneys • Small Intestine • Appendix • Adrenals	
T6	T6		
T7	T7		
T8	T8		
T9	T9		
T10	T10		
T11	T11	Small Intestines • Colon • Uterus	
T12	T12	Uterus • Colon • Buttocks	
L1	L1	Large Intestines • Buttocks • Groin • Reproductive Organs • Colon • Thighs • Knees • Legs • Feet	Constipation • Colitis • Diarrhea • Gas Pain • Irritable Bowel • Bladder Problems • Menstrual Problems • Low Back Pain • Pain or Numbness in Legs
L2	L2		
L3	L3		
L4	L4		
L5	L5		
	SACRAL	Buttocks • Reproductive Organs • Bladder • Prostate Gland • Legs • Ankles • Feet • Toes	Constipation • Diarrhea • Bladder Problems • Menstrual Problems • Lower Back Pain • Pain or Numbness in Legs



RIGHT HAND LEFT HAND

11 THINGS TO KNOW IF YOU'RE LEARNING HOW TO DO REFLEXOLOGY!



Mushrooms with white or cream spores



Pleurotus They grow on wood or debris. The stem is either lateral or almost absent





Russula Very common in woods, often bright colours. The gills and flesh are brittle, the gills white or creamy



Mycena Very small species with thin stems and mainly conical caps. Some exude a liquid on breaking the stem

Lactarius Exude droplets of milky-white or coloured liquid when damaged

Collybia The gills are very numerous (crowded). The stem is fibrous

Oudemansiella This one has a deep root







Hygrocybe Waxy to the touch, often brightly coloured, growing in grass

Melanoleuca The caps are normally flat with a central umbo. The stem is fibrous









Cantharellus The Chanterelles have gill-like wrinkles rather than gills

Armillaria Grows on or near trees, very often in large clumps

Amanita They all have a bag (volva) or a bulb with a rim at the stem base. Most have a ring on the stem

Laccaria The main species are very common. The stem is fibrous

Clitocybe The gills run down the stem (decurrent) in most of the species





Lepiota & Macrolepiota Usually have rings on the stem and scales on the cap. Some are very large, some small

Tricholoma Brown, grey, white or yellow. Generally thick-fleshed with a stout appearance

Marasmius Mostly small and white with tough flesh. This one is the Fairy Ring Champignon

Freeze Fresh Herbs in Olive Oil

(to use when not in season)



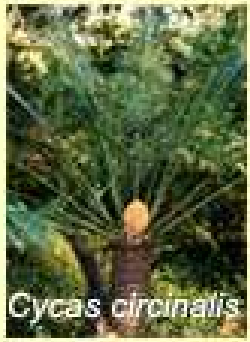





Aegle marmelos


Operculina turpethum


Schrebera swietenioides


Cycas circinalis


Oroxylum indicum


Terminalia arjuna


Piper longum


Embelia tsjeriam-cottam


Salacia oblonga


Smilax zeylanica


Acorus calamus


Gloriosa superba

Photo courtesy : Dr. Ravi Kumar , K. FRLHT



Aconitum heterophyllum



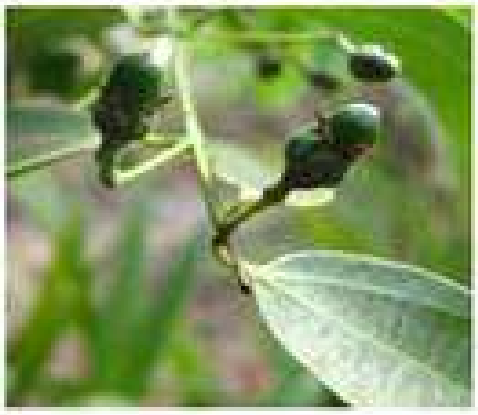
Acalypha indica



Cassia fistula



Crocus sativus



Cinnamomum zeylanicum



Bombax malabaricum



Anthocephalus indicus



Datura metel



Withania somnifera



Justicia gerandurossa



Murraya koenigii



Ricinus communis


TOXIC
INEDIBLE
EDIBLE
TASTY
CINNABAR WEBCAP
BAY POLYPORE
GERANIUM BRITTLEGILL
FRUITY BRITTLEGILL
OCHRE B'GILL
YELLOW SWAMP B'GILL
BLACKING B'GILL
CHANTERELLE
BEEF-STEAK
CHANTERELLE
FALSE SAFFRON M'CAP
AM.
DECEIVER
THE MILER
HEDGEHOG
BULBOUS FIBRECAP
BIRCH MILKCAP
UGLY MILKCAP
COMMON MILKCAP
TAWNY GRISETTE
CHICKEN OF THE WOODS
CEP
COMMON EARTHBALL
FAWN PLUTEUS
FLY AGARIC
SCARLETINA BOLETE
FALSE CHANTER-ELLE
BIRCH POLYPORE
BOVINE BOLETE
SLIPPEY JACK
HOOF BRACKET
SLIMY SPIKE
BROWN BIRCH BOLETE
LARCH BOLETE
BAY BOLETE
© Galloway Wild Foods.com

Mushrooms with white or cream spores



Pleurotus They grow on wood or debris. The stem is either lateral or almost absent





Russula Very common in woods, often bright colours. The gills and flesh are brittle, the gills white or creamy



Mycena Very small species with thin stems and mainly conical caps. Some exude a liquid on breaking the stem

Lactarius Exude droplets of milky-white or coloured liquid when damaged

Collybia The gills are very numerous (crowded). The stem is fibrous

Oudemansiella This one has a deep root







Hygrocybe Waxy to the touch, often brightly coloured, growing in grass

Melanoleuca The caps are normally flat with a central umbo. The stem is fibrous







Cantharellus The Chanterelles have gill-like wrinkles rather than gills

Armillaria Grows on or near trees, very often in large clumps

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WATER HYACINTH (Eichhornia Crassipes)



WATER CALTROP (Trapa Natans)



EEL GRASS (Vallisneria)



WATER CROWFOOT (Ranunculus Aquatilis)



QUILLWORT (Isoetes)



GIANT WATER LILY (Victoria Amazonia)




NAHA Image Database



Aubrieta deltoidea
rock cress



Primula denticulata
drumstick primrose



Scabiosa spp.
pincushion flower



Gaillardia spp.
blanket flower



Malus spp.
crabapple



Thymus pseudolanuginosus
wooly thyme



Acanthus mollis
bear's breeches



Lavandula spp.
lavender



Crocosmia spp.
montbretia



Ligularia spp.
leopard plant



Perovskia atriplicifolia
Russian sage



Stokesia laevis
Stokes aster



Sedum spurium 'Fuldaglut'
dragon's blood stonecrop



Calamagrostis spp.
reed grass*



Sedum sp.
autumn stonecrop

Choice dozen

Potentially useful chemicals are produced by plants to protect themselves from predators and pathogens. A look at some plants and the chemicals they produce



BLACK POPLAR

Kaempferol 3, 5-dimethyl ether



GRACEFUL HIMALAYAN IRIS

Irisolone



KARIYAT (NILAVEMBU)

Skullcapflavone



REDSTEM WORMWOOD

Kumatakenin



GUINEA HENWEED

Leridol



KUMAON IRIS

Iriskumaonin



ONOSMA

Onosmone



ARHAR (RED GRAM)

Cajanol



GERMAN IRIS

Iriskashmirianin



PEACH

Persicogenin



GUNJ

Abrectorin



SHISHAM

7-O-Methyltectorigenin

IMAGES: FLOWERS OF INDIA



Abrus precatorius



Albizzia lebbek



Allium sativum



Aloe vera



Alstonia scholaris



Anacardium occidentale



Annona squamosa



Aristolochia indica



Asparagus racemosa



Azadirachta indica



Bacopa monnieri



Baliospermum montanum



Bauhinia racemosa



Berberis aristata



Bergenia ligulata



Boswellia serrata



Calotropis gigantea



Cedrus deodara



Centella asiatica



Curcuma longa



Cymbopogon citratus



Datura metal



Euphoria hirta



Heliotropium indicum



Holarrhena antidysenterica



Hygrophila spinosa



Inula cappa



Jasminum auriculatum



Leea macrophylla



Luffa cylindrica



Mallotus philippensis



Manilkara hexandra



Melia azadirachta



Moringa oleifera



Nerium indicum



Nigella sativa



Ocimum sanctum



Paederia foetida



Phyllanthus fraternus



Picrorrhiza kurroa

Piper betle

Pisum sativum

Plumbago zeylanica

Plumbago rosea

Saraca indica

Rubia cordifolia

Saussurea lappa

Podophyllum emodi

Semecarpus anacardium

Tylophora asthmatica

Vernonia Spp.

Vinca rosea

Withania somnifera

MEDICINAL PLANTS

YOU CAN GROW AT HOME



DANDELION

What most people see as a pesky weed is actually rich in folate,magnesium, fiber, calcium, iron and vitamins A, C and E. It also may lower blood pressure, treat acne, foster weight loss and reduce the risk of urinary tract infections.



MALLOWS

Mallow, once commonly used to make marshmallows, has anti-inflammatory properties, and can soothe a sore throat and aid cell renewal when healing bites, minor wounds and burns.



MILK THISTLE

Taken interanlly, this plant can aid liver function and help manage blood sugar and cholesterol levels.



SAGE

Internally, sage can aid indigestion, flatulence, and help boost your mood. Externally, sage can soothe insect bites and skin infections.



USNEA

Usnea grows on trees and is a combination of fungus and algae. Usnea can be used to aid weight loss, relieve pain, heal wounds, and reduce throat congestion.



PRIMROSE

Primrose roots can be eaten as a vegetable or made into tea and is useful in treating eczema, breast pain, premenstrual syndrome, and rheumatoid arthritis.



PEPPERMINT

This sterile plant blended from watermint and spearmint can help treat the symptoms of irritable bowel syndrome, including gas, bloating, pain, and diarrhea.



ECHINACEA

A member of the daisy family, echinacea has been used as a treatment for colds and flu. But it also could help provide some relief from acid indigestion, ADHD and chronic fatigue syndrome.



LEMON BALM

This lemon-scented plant can be crushed and rubbed on the skin as a natural mosquito repellent or to heal bites. Lemon balm tea can help combat a cold or soothe an upset stomach.



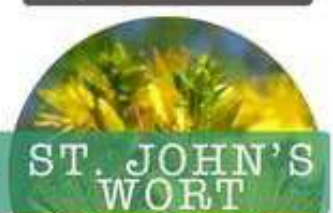
SELF-HEAL

This member of the mint family is rich in antioxidants and minerals and is used to treat wounds and control gingivitis because of its antiviral properties.



CHICKWEED

This nutritioius weed has anti-inflammatory properties and is used to reduce minor aches, pains, and menstural cramps.



ST. JOHN'S WORT

This herb is a natural antideprssant used to improve mood, reduce anxiety, and improve sleep.

HealthCentral

10 HEALING WEEDS THAT MAY GROW IN YOUR BACKYARD

POSITIVEMED



PURSLANE has a high content of omega-3 fatty acids

DANDELIONS are rich in potassium which is often lost through excess urination.





CHICKWEED is rich in nutrients that nourish the lymph and glandular systems.

ROSEMARY reduces risk of Alzheimer's disease due to its carnosic acid.





MILKWEED can treat and remove warts

RED CLOVER has useful compounds to treat bronchitis & respiratory disorders.





NETTLES are useful in arthritis, gout, asthma, hay fever, and Alzheimer's disease.

LAVENDER has anti-inflammatory and antiseptic properties





BURDOCK may reduce the risk of stroke and heart attack

SOW THISTLE is useful for treating inflammation and digestive upsets



for more info visit PositiveMed.com

Seward
COMMUNITY CO-OP

Enoki



Delicate in flavor and appearance, this crisp textured mushroom is usually added to soups, pasta dishes, or vegetable side dishes towards the end of cooking time. They are also quite tasty raw in salads or on sandwiches. The flavor is sometimes described as slightly fruity.

Chanterelle



Orange or yellow, meaty and funnel-shaped, the chanterelle has a fruity smell, reminiscent of apricots and a mildly peppery taste. Most flavor compounds are fat soluble, so preparations using cream, butter, or oil make the best use of these mushrooms. They are not typically eaten raw.

Button



The classic white mushroom is very versatile. Though their flavor is subtle when raw, it deepens nicely as they are cooked, especially sautéed. They can be used to good effect in preparations where a mushroom flavor is desired, but is not the focus of the dish.

Brown Beech



This clustered mushroom has nutty, buttery flavor, and a firm, crunchy texture. Can be eaten raw, but most western palettes best enjoy beech mushrooms baked, steamed, or sautéed in olive oil.



Shitake

The most commonly available asian mushroom, it has a robust flavor that adds depth to stir-fry, soups, and any other dish needing an umami flavor note. The stem tends to be unpleasantly fibrous, so the cap is usually separated before cooking.

Cremini

These look just like a button mushroom, except for their brown skin. They have a somewhat deeper flavor that white buttons. They can be used in any preparation that calls for button mushrooms and make especially handsome stuffed mushrooms.



Maitake

Firm textured with a robust, earthy flavor, Maitake is sometimes referred to as "Hen of the Woods." They make a good meat substitute and can be used in any recipe that calls for mushrooms. Health benefits are legion-these mushrooms help booster the immune system, fight cancer and are especially rich in potassium, vitamin B2, D , and niacin.





Oyster

These delicate, softly colored mushrooms are prized for their aromatic qualities and sweet, meaty flesh. They should be cooked, and can be used in their entirety, though the stems should be cooked slightly longer. The caps cook quickly and can be used in stir-fries, soups, sauces, risottos, or pan-fried and enjoyed on their own.



Portabella

These are really just cremini mushrooms let to grow larger. Their size and shape makes them excellent candidates for the grill, but they are also good sliced and sauteed.

SPROUTS FARMERS MARKET

HOMEMADE DRESSINGS

DRESSING	BASE	ACID	SWEET	HERBS
ORANGE GINGER 	2 Tbsp. Soy Sauce  2 Tbsp. Olive Oil	1/2 Roma Tomato  1/2 tsp. Rice Vinegar 	1 Orange (juiced)  1 Tbsp. Honey 	1 Tbsp. Ginger (peeled)  1 Garlic Clove 
BLUEBERRY CILANTRO 	 2 Tbsp. Olive Oil	1 1/2 Tbsp. White Wine Vinegar 	1/2 cup Blueberries  1/2 tsp. Honey 	1/8 Cup Fresh Cilantro 
SWEET BASIL 	 3/4 Cup Olive Oil	2 tsp. Dijon Mustard  1/2 tsp. Rice Vinegar	2 Tbsp. Honey 	2 Cups Basil  1 Garlic Clove 
LEMON HONEY 	 1/2 Cup Sunflower Oil	1 Tbsp. Dijon Mustard  2 Lemons (juice & zest) 	 1 Tbsp. Honey	1/2 Onion  2 Garlic Clove 
STRAWBERRY BASIL 	2 Tbsp. Olive Oil 	 1 Tbsp. Balsamic Vinegar	1 Cup Strawberries  1 tsp. Honey 	1/8 Cup Basil 



Wild Edible Mushrooms *by SovereignMan* **Zazzle**


F
Amanita phalloides
F
Amanita citrina
F
Amanita verna
F
Volvaria speciosa
F
Volvaria gloiocephala
F
Volvaria volvacea
P
Amanita muscaria
E
Russula virescens
P
Amanita jonquillea
E
Amanita ovoidea
E
Amanita vaginata
E
Psalliota campestris
E
Psalliota silvatica
P
Amanita pantherina
E
Amanita rubescens
E
Amanita Cæsarea
E
Boletus æreus
P
Boletus Satanas
E
Lepiota procera
E
Lepiota clypeolaria
E
Clavaria formosa
P
Brown Lepiota
P
Boletus felleus
E
Boletus edulis
P
Lactarius rufus
E
Truffle
P
Clavaria aurea
P
Lactarius Theiogalus
E
Lactarius deliciosus
P
Lactarius torminosus
P
Russula Queletii
E
Cantharellus cibarius
P
Cantharellus auranticus
E
Russula cyanoxantha
P
Russula furcata
P
Russula emetica
P
Yellow Russula

THE MOST COMMON POISONOUS MUSHROOMS



Livid entoloma



Fly agaric



Destroying angel



Cortinar



Death cap



Sulfur tuft



Ivory funnel



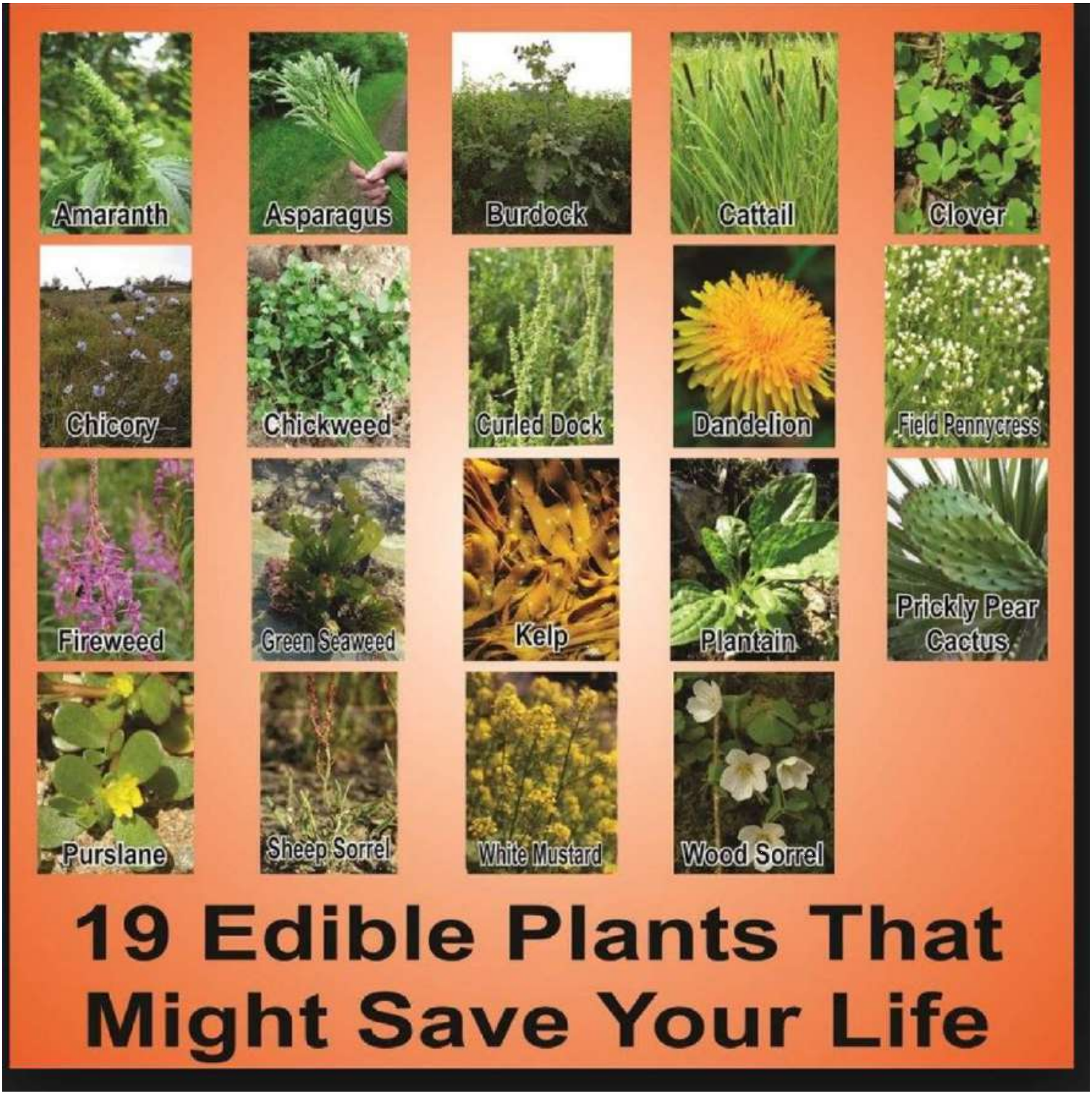
Deadly fibrecap



Yellow-staining

123RF.com


CEP
SUILLUS
PORSINI
PUFFBALL
CORAL MILKY CAP
CHAMPIGNONS
CHANTERELLE
RUSSULA
SHIITAKE
HONEY FUNGUS
LACTARIUS
PINK OYSTER
MOREL
AMANITA CAESAREA
TRUFFLE
LACTARIUS INDIGO


Amaranth
Asparagus
Burdock
Cattail
Clover
Chicory
Chickweed
Curled Dock
Dandelion
Field Pennycress
Fireweed
Green Seaweed
Kelp
Plantain
Prickly Pear Cactus
Purslane
Sheep Sorrel
White Mustard
Wood Sorrel
19 Edible Plants That Might Save Your Life

12 Best Wild Edible Plants of Australia



Amaranth
Leaves in soups and casseroles
seeds in breads and cakes



Chickweed
Young leaves used in
salads or as garnish



Dandelion
Leaves in salad
Roots as coffee substitute



Fat hen
Leaves in stir-fry
Seeds as flour for bread



Wild fennel
Young fronds as herb
Seeds as tea



Mallow
Young leaves in frittata
Seed pods as finger food



Nettle
A nutritious plant
Young shoots in soups and tea



Rambling dock
Leaves as potherb
and baked with fish



Scurvy weed
Young shoots in casseroles
and risottos



Sowthistle
Young leaves in salads or
saute' in oil with lemon



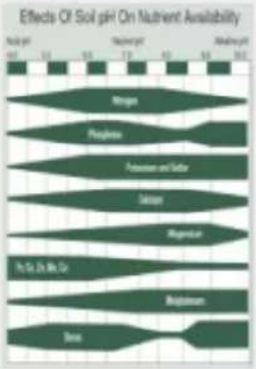
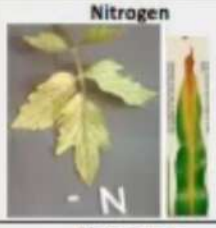
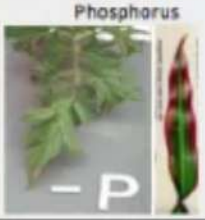
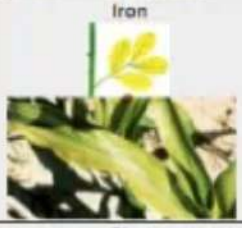
Warrigal greens
Leaves and stems in curries
and as a potherb



Wood sorrel
Leaves in salads
Flowers as garnish

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www.weedyconnection.com

COMPACTED SOIL	OVER GRAZED LAND	WET OR FLOODED SOIL	LOW FERTILITY SOIL	DEFICIENCY
Low Oxygen soils: Platy layers in soil, high bulk density (poor infiltration, increased runoff)	**Lack of cover:** effects similar to compacted land – High weed population	**Low Oxygen soils:** Pore spaces become saturated or not present negatively affecting soil structure, decomposition, and chemical and biological processes	**Unbalanced Fertility:** pH below 5.1 (frequent) or above 7.3 (high pH is uncommon in TN). Often Phosphorous is limiting factor. Potassium is typically limiting on hay land	**Severe deficiency of a nutrient or pH is low and infrequently too high in TN** 
Prostrate knotweed: *Polygonum arenastrum or aviculare* 	**Horsenettle:** *Solanum carolinense* 	**Sedges:** *Carex spp.* **Sedges have edges, triangular stem** 	**Rabbit tobacco:** *Pseudognaphalium obtusifolium* 	
Rushes: *Juncus spp.* 	**Bitter sneezeweed:** *Helenium amarum* 	**Rushes:** *Juncus* spp. Segmented hollow stem 	**Red sorrel:** *Rumex acetosella* 	**Nitrogen** 
Goosegrass: *Eleusine indica* 	**Spiny amaranth:** *Amaranthus spinosus* 	**Spikerush:** *Eleocharis spp.* 	**Poor Joe:** *Diodia virginiana* 	**Phosphorus** 
Bitter sneezeweed: *Helenium amarum* 	**Bermudagrass:** *Cynodon dactylon* 	**Flatsedge:** *Cyperus spp.* 	**Broomsedge:** *Andropogon virginicus* 	**Potassium** 
Dog fennel: *Eupatorium capillifolium* 	**Annual bluegrass:** *Poa annua* 	**Bulrush:** *Scirpus spp.* 	**Sweet vernalgrass:** *Anthoxanthum odoratum* 	**Calcium** 
Buttercup: *Ranunculus* 	**Kentucky bluegrass:** *Poa pratensis* 	**Virginia buttonweed:** *Diodaia Virginiana* 	**Oxeye Daisy:** *Leucanthemum vulgare* 	**Magnesium** 
Curly dock: *Rumex crispus* 	**Crabgrass:** *Digitaria ischaemum* 	**Smartweed:** *Persicaria spp.* 	**Panicums:** *Panicum spp.* 	**Iron** 
Chicory: *Cichorium spp.* 	**Ironweed:** *Vernonia gigantea* 	**Reed canarygrass:** *Phalaris arundinacea* 	**Yarrow:** *Achilleo millefolium* 	**Zinc** 

SUPPORT NATIVE BEES

Clay Soil



Nodding Onion
Allium cernuum



Rattlesnake Master
Eryngium yuccifolium



Purple Prairie Clover
Dalea purpurea



Stiff Goldenrod
Solidago rigida



Wild White Indigo
Baptisia lactea



Prairie Spiderwort
Tradescantia occidentalis



False Sunflower
Heliopsis helianthoides



Purple Coneflower
Echinacea purpurea



New England Aster
Symphyotrichum novae-angliae



Golden Alexanders
Zizia aurea



Canada Milk Vetch
Astragalus canadensis



Prairie Blazingstar
Liatris pycnostachya

© Heather Holm

PollinatorsNativePlants.com

PollinatorsNativePlants

PLANT NATIVE PLANTS


Alpine strawberry
Amaranth
Amaranth seedling
Annual nettle
Bitter Cress
Borage flowers
Catsear
Chickweed
Chicory flower and bee
Cleavers
Creeping Mallow
Dandelion
Dandelion flower
Dandelion seed head
Dock
Dove's Foot Geranium
Fathen
Galinsoga
Heartsease Pansy
Herb Robert Flower & Seedhead



Arugula
(brassicacae spp.)



Borage
(borago officinalis)



Broccoli
(brassicacae spp.)



Calendula
(calendula officinalis)



Chamomile
(matricaria recutita)



Chives
(allium schoenoprasum)



Comfrey
(symphytum officinale)



Dill
(anethum graveolens)



Elderberry
(sambucus caerulea)



Gladiolas
(gladiolas spp.)



Hens + Chicks
(echeveria elegans)



Black Hollyhock
(alcea rosea)



White Hollyhock
(alcea rosea)



Lavender
(lavandula officinalis)



Pink Mallow
(malvaceae alcea)



Purple Mallow
(malvaceae alcea)


Cowslip


Lesser Celandine


Foxglove


Field Bindweed


Common Knapweed


Cow Parsley


English Bluebell


Selfheal


Meadowsweet


Purple Loosestrife


Ladies Smock


Yarrow


Dandelion


Ground Ivy


Red Dead Nettle


Daisy


Meadow Buttercup


Yellow Rattle


Red Campion


Ragged Robin


Allium Moly


Garlic Mustard


Musk Mallow


Greater Knapweed


Maiden Pink


Wild Thyme


Betony


Marsh Woundwort


Teasel


Small Scabious



Alpine strawberry



Amaranth



Amaranth seedling



Annual nettle



Bitter Cress



Borage flowers



Catsear



Chickweed



Chicory flower and bee



Cleavers



Creeping Mallow



Dandelion



Dandelion flower



Dandelion seed head



Dock



Dove's Foot Geranium



Fathen



Galinsoga



Heartsease Pansy



Herb Robert Flower & Seedhead


Alfalfa


Blue Vervain


Borage


Broadleaf Plantain


Peppergrass


Pigweed


Pineapple Weed


Purslane


Bull Thistle


Burdock


Catnip


Cattail


Queen Annes Lace


Red Clover


Rue


Self Heal


Celendine


Chamomile


Chickweed


Chicory


Shepherds Purse


Silverweed


Spiderwort


Spotted Dead Nettle


Coltsfoot


Creeping Charlie


Dandelion


Echinacea


St Johns Wort


Stinging Nettle


Sunflower


Supplejack Vine



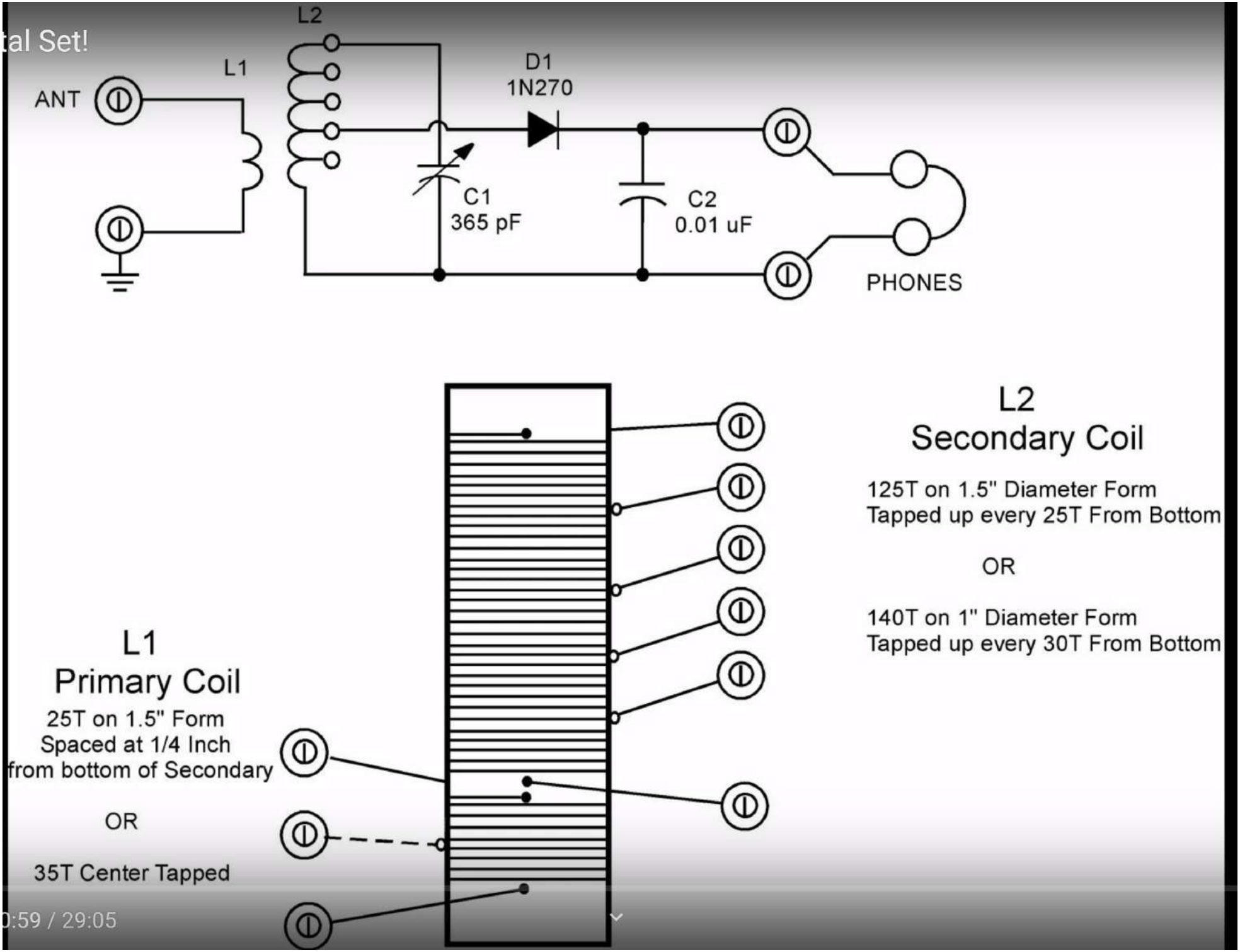
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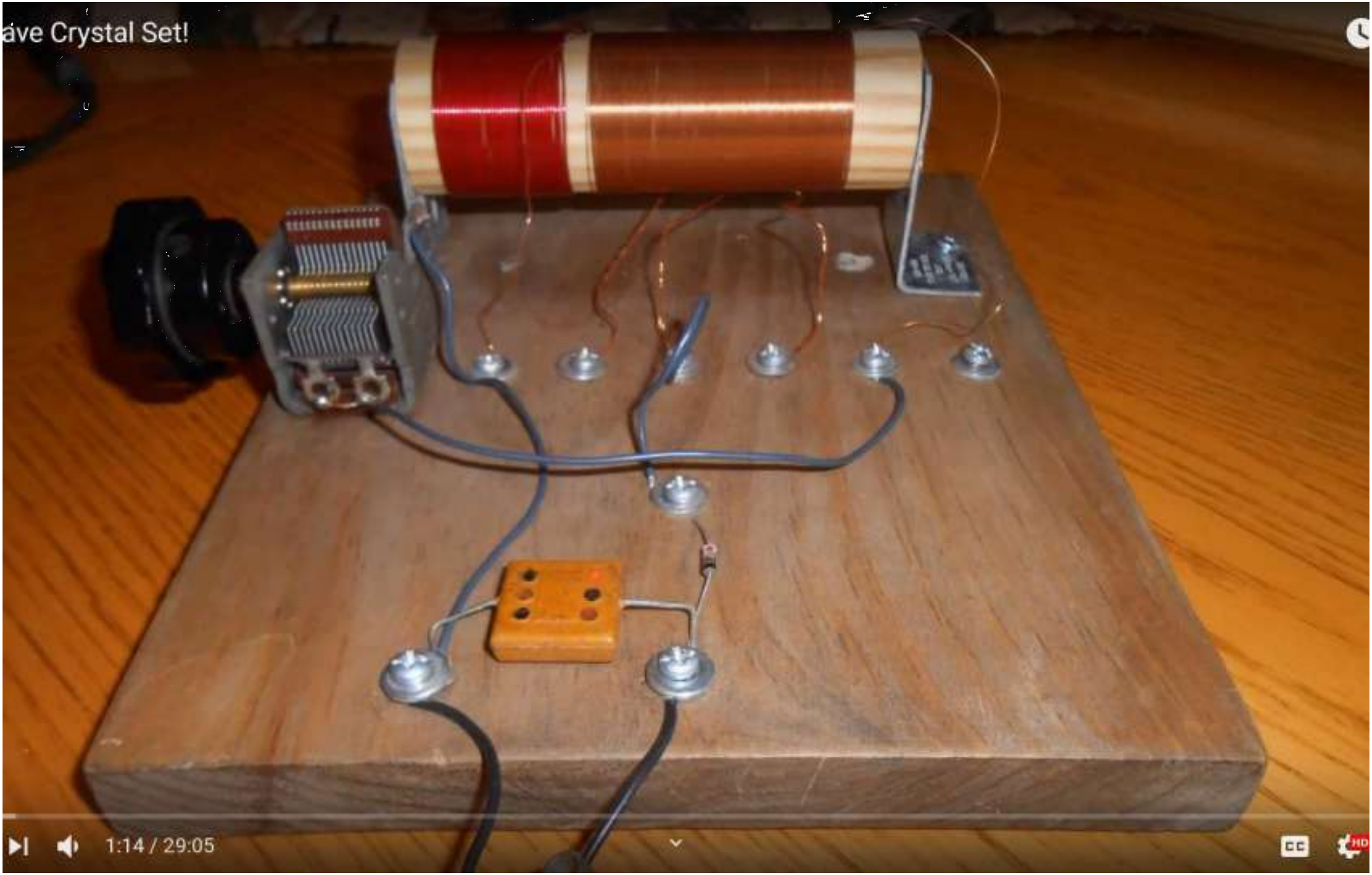

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LOOSE COUPLER
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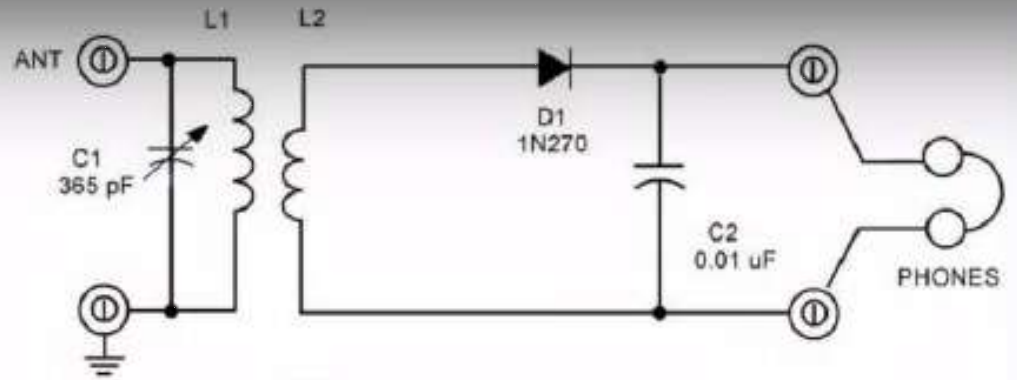


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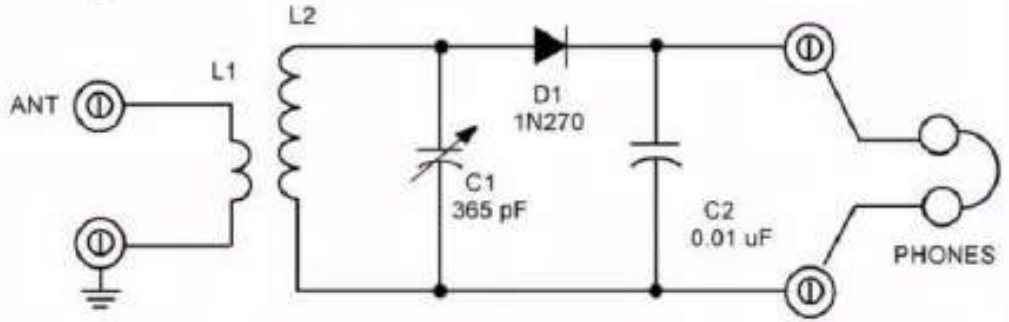

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1:14 / 29:05

rystal Set!

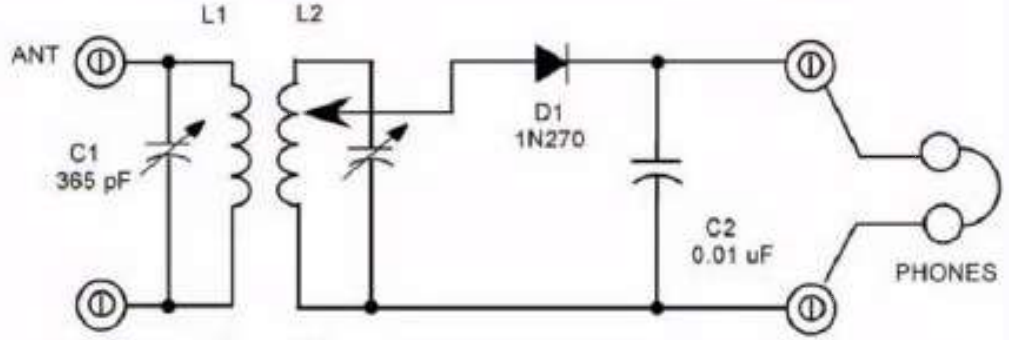
TUNED PRIMARY
(Short Antenna)



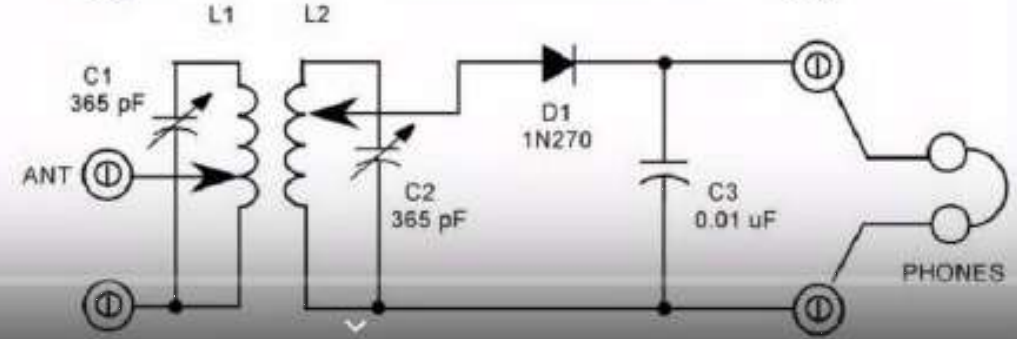
TUNED SECONDARY
(Resonant Antenna)



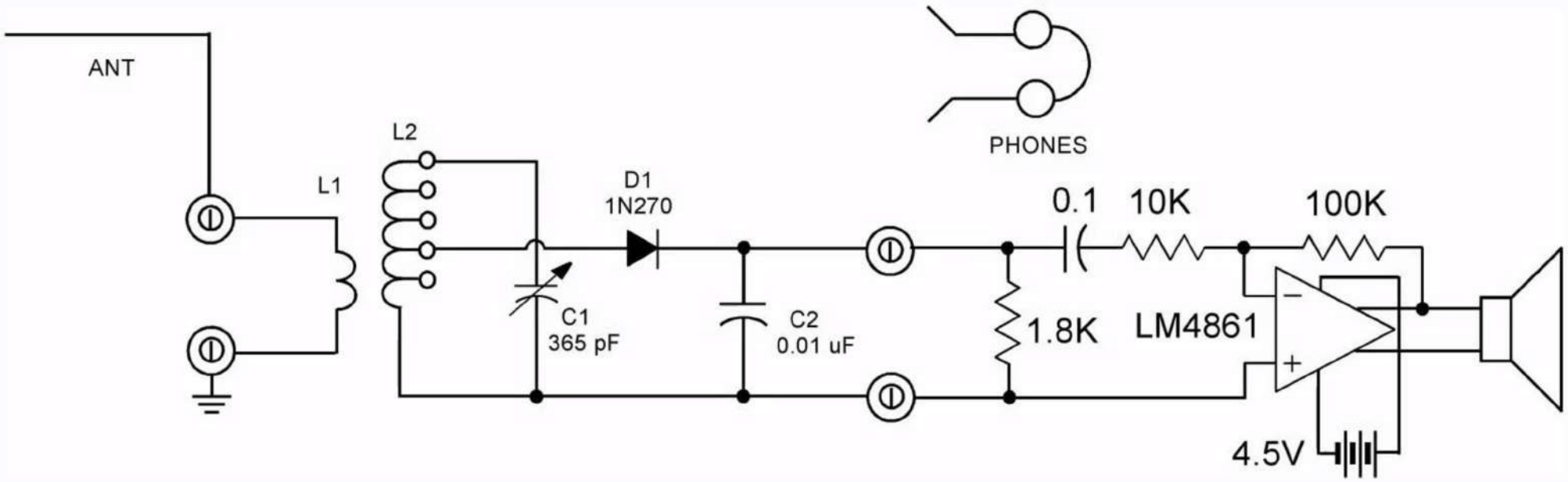
DOUBLE TUNED
(Short Antenna)



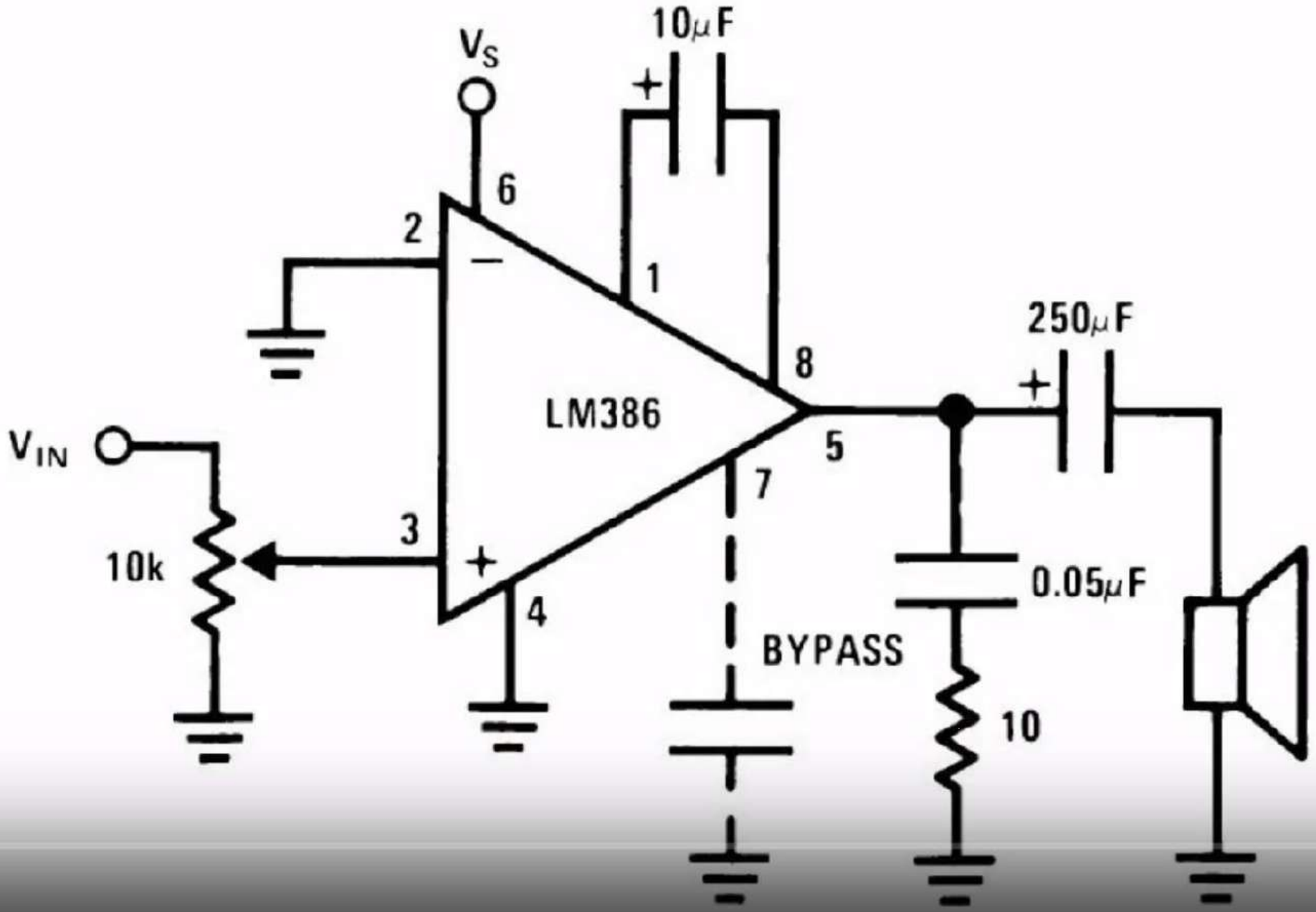
DOUBLE TUNED
(Long Antenna)

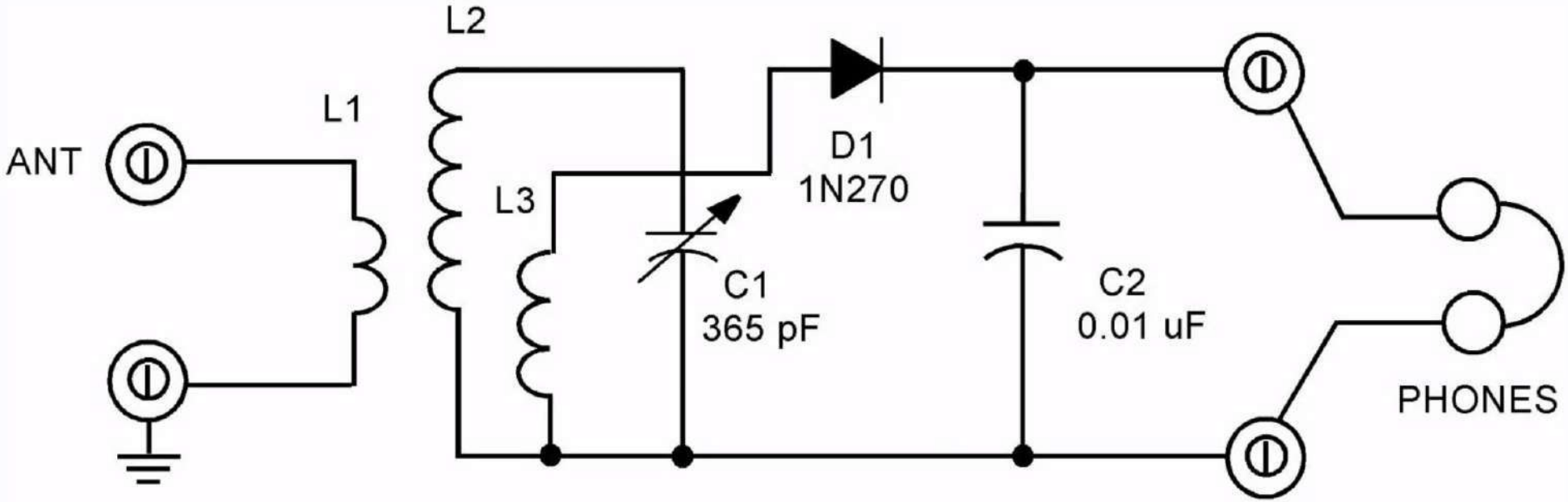


1:24 / 29:05

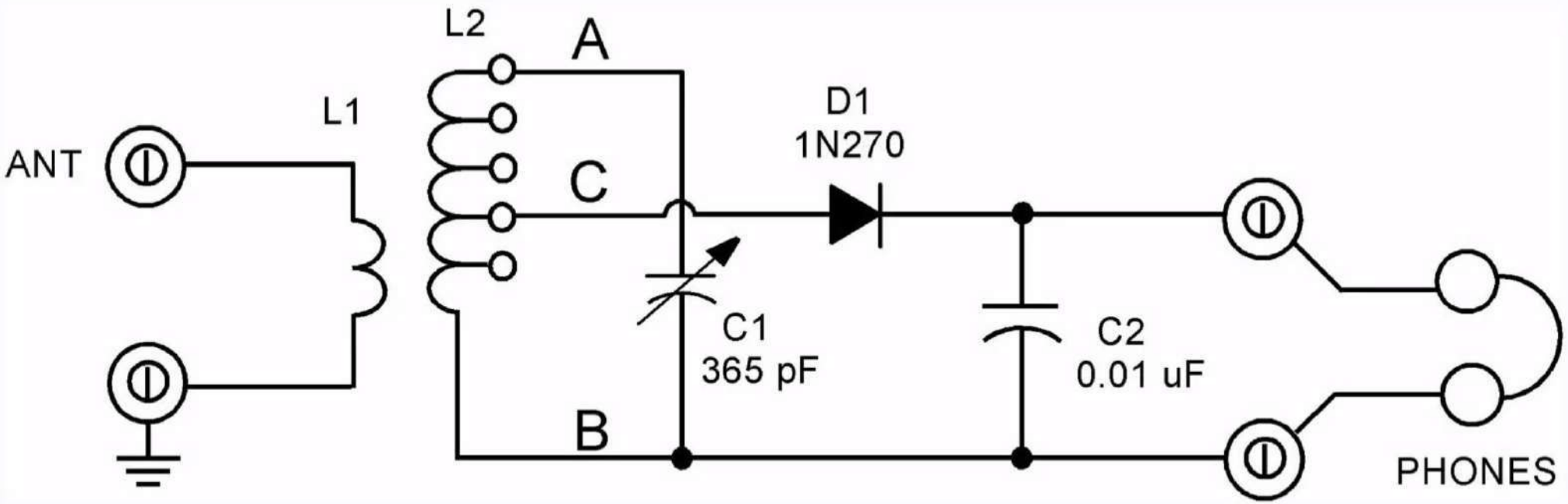

ANT
L1
L2
D1
1N270
C1
365 pF
C2
0.01 uF
PHONES
0.1
10K
100K
1.8K
LM4861
4.5V

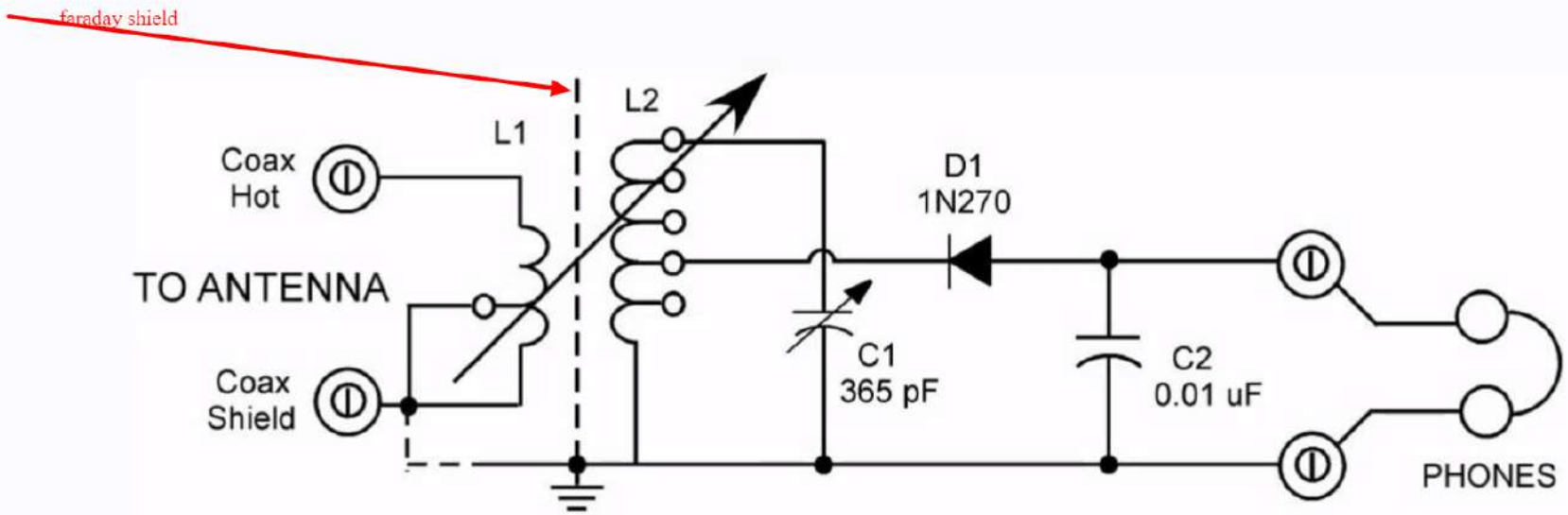
Amplifier with Gain = 200

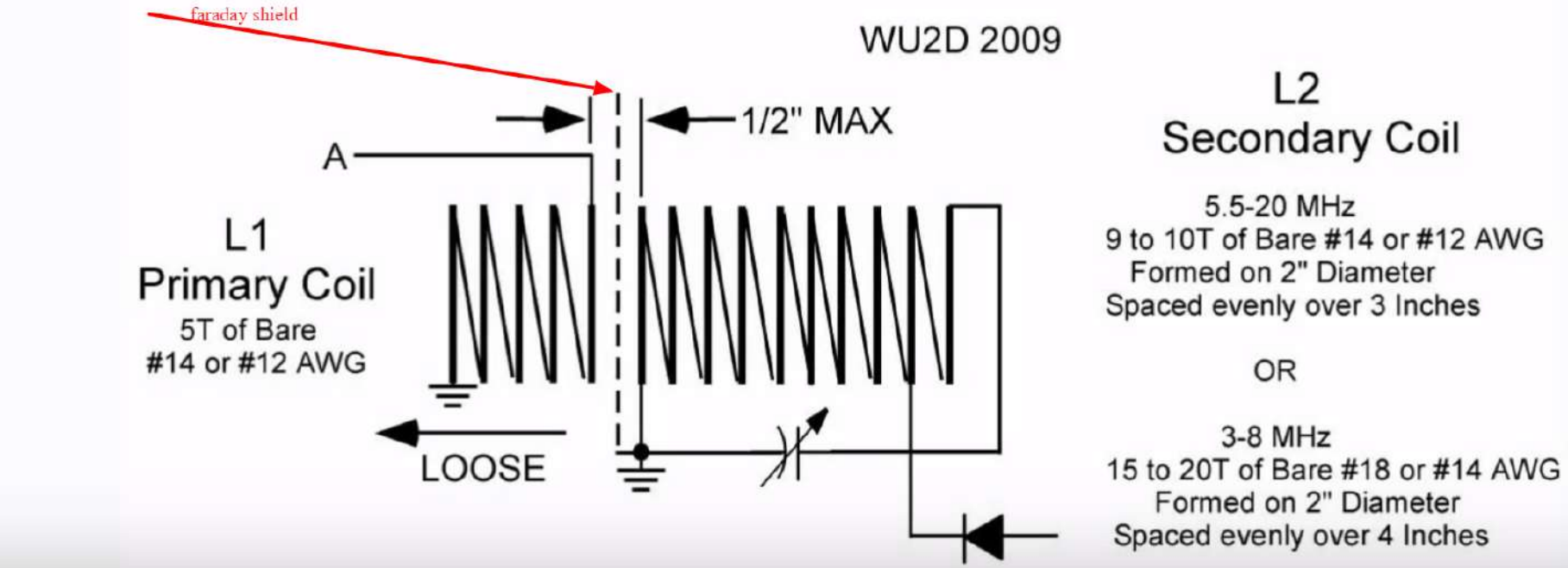


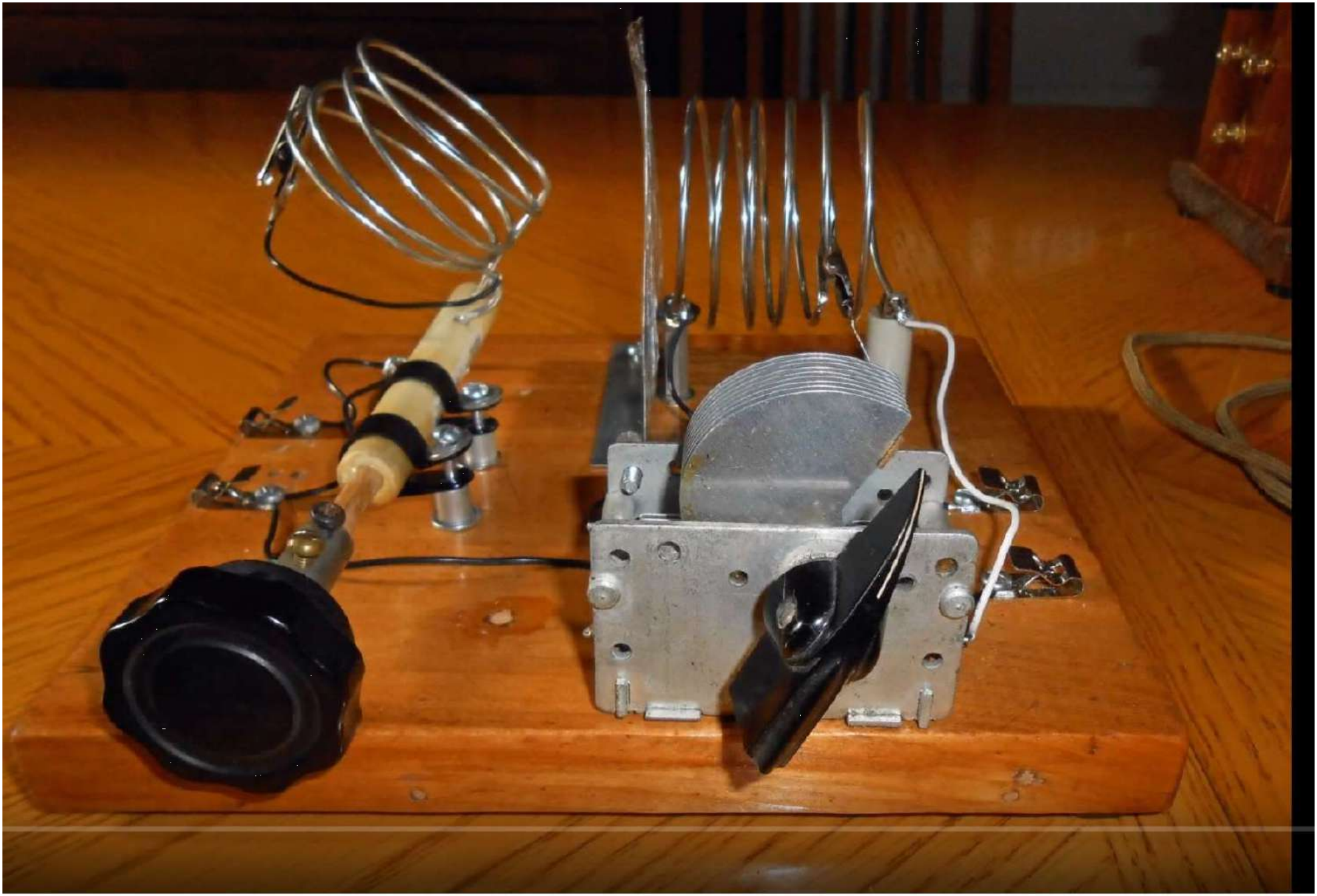


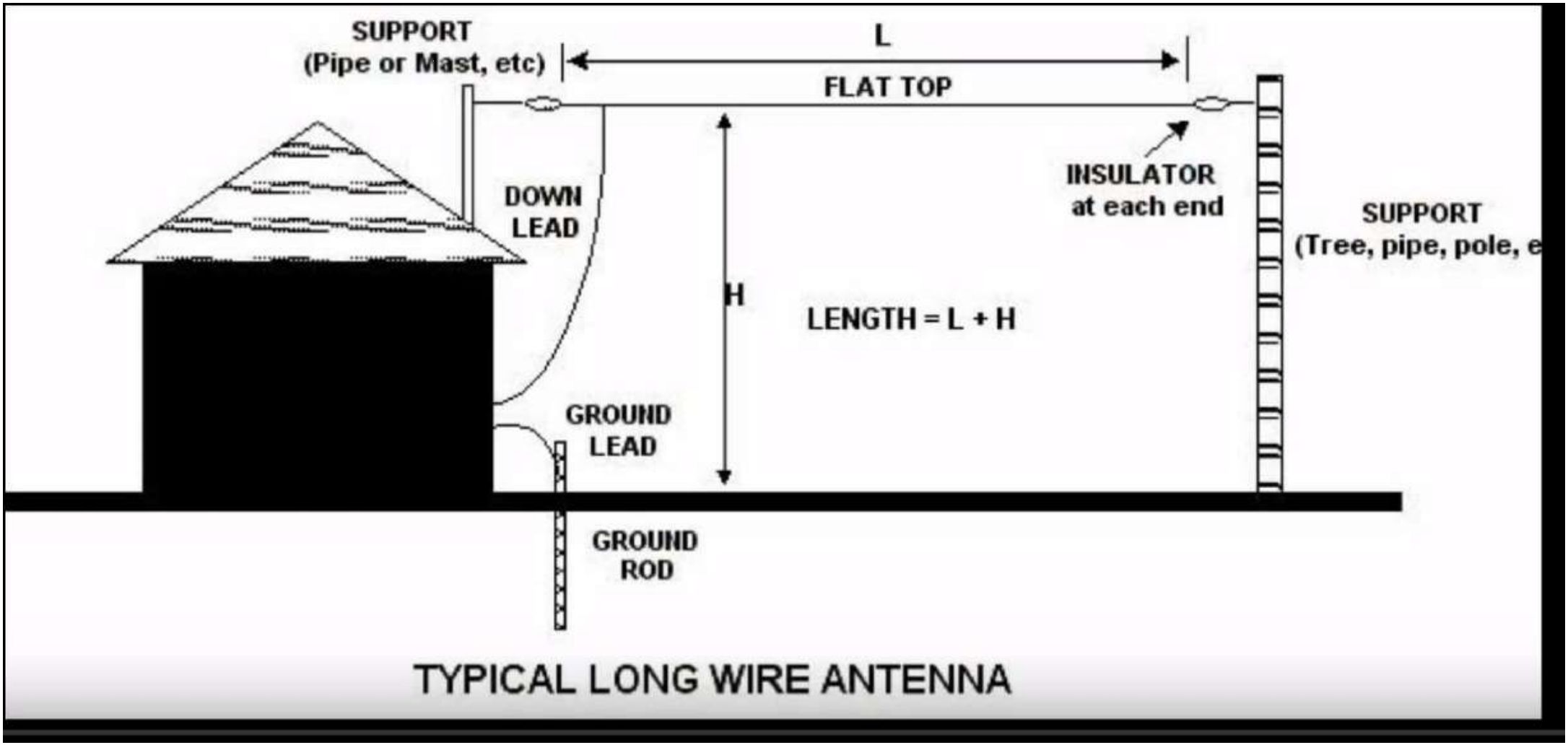
INDUCTIVELY MATCHING DIODE WITH SEPARATE WINDING


L2
A
L1
ANT
C
D1
1N270
C1
365 pF
C2
0.01 uF
B
PHONES

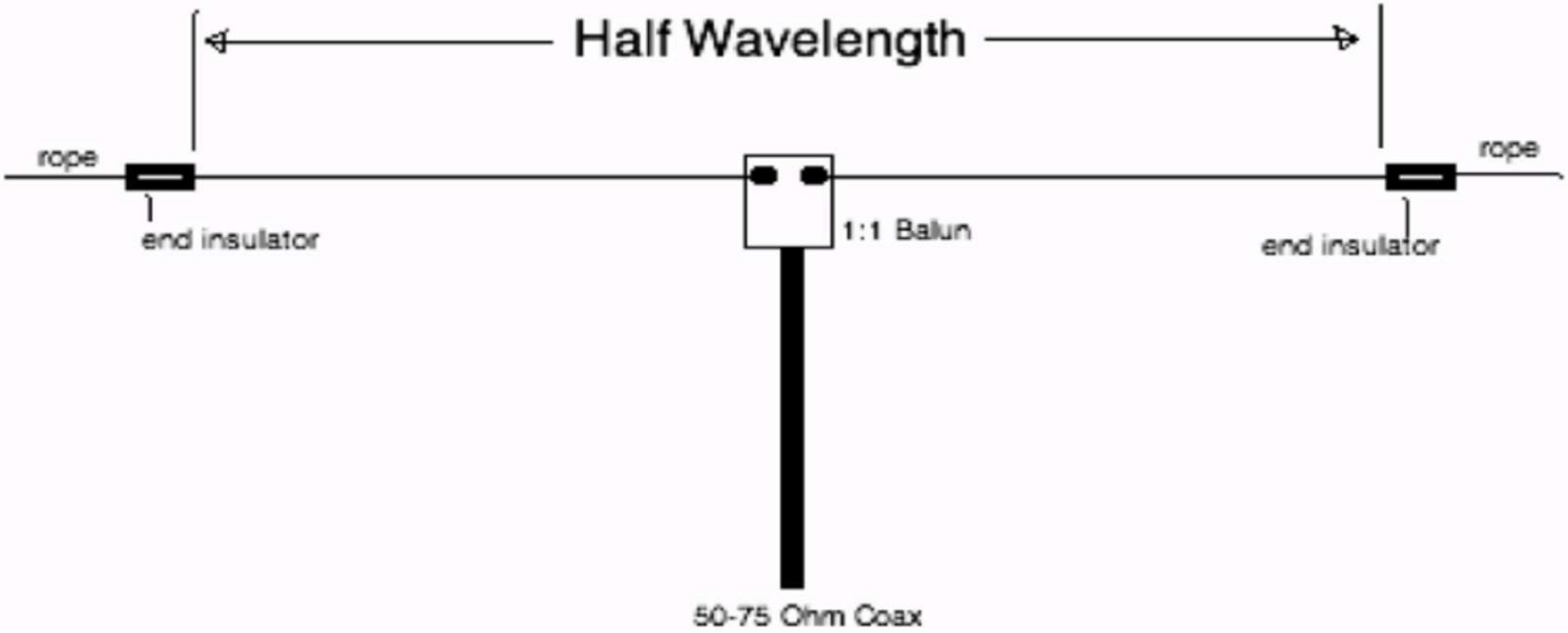

faraday shield
L1
L2
Coax
Hot
TO ANTENNA
Coax
Shield
D1
1N270
C1
365 pF
C2
0.01 uF
PHONES


faraday shield
WU2D 2009
1/2" MAX
A
L1
Primary Coil
5T of Bare
#14 or #12 AWG
LOOSE
L2
Secondary Coil
5.5-20 MHz
9 to 10T of Bare #14 or #12 AWG
Formed on 2" Diameter
Spaced evenly over 3 Inches
OR
3-8 MHz
15 to 20T of Bare #18 or #14 AWG
Formed on 2" Diameter
Spaced evenly over 4 Inches

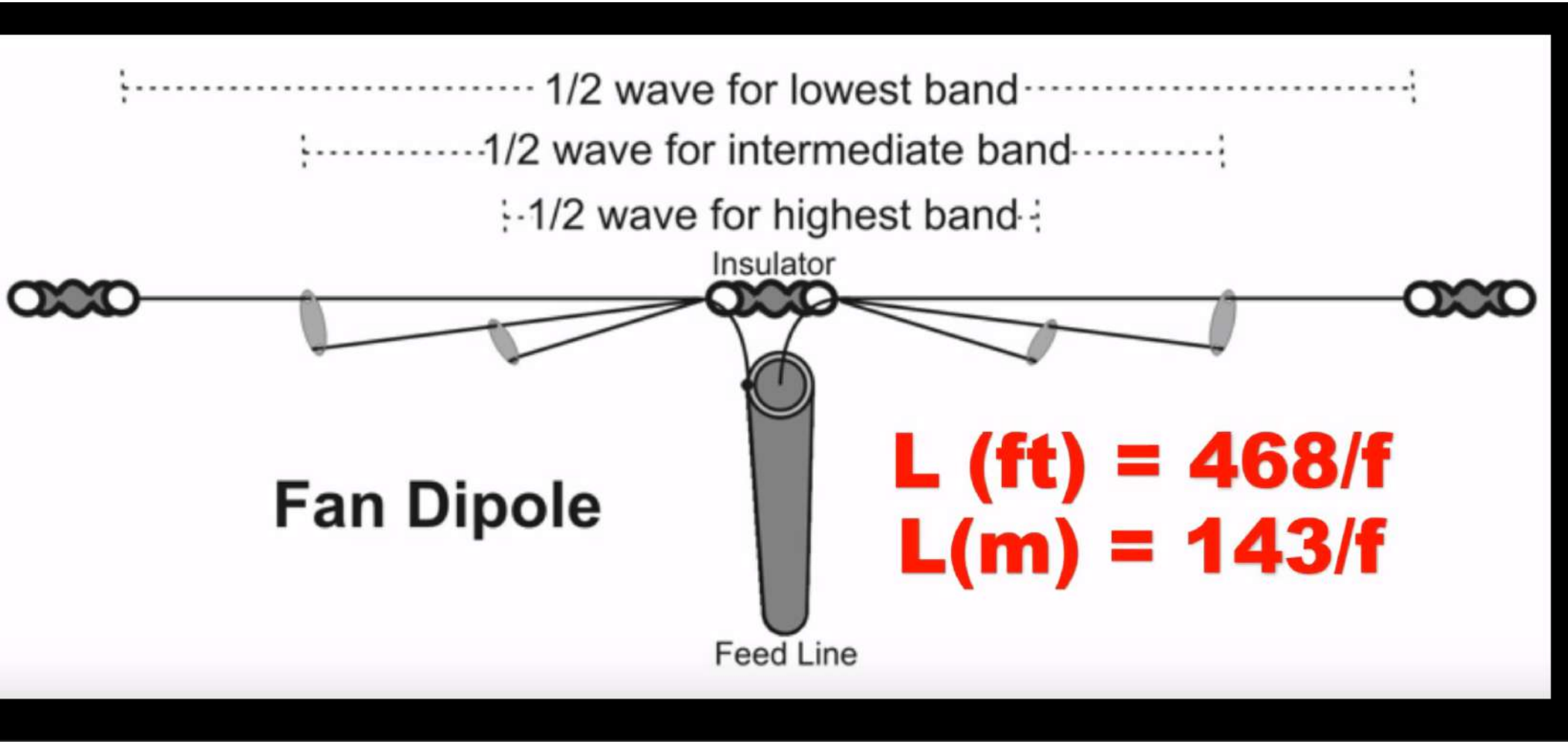


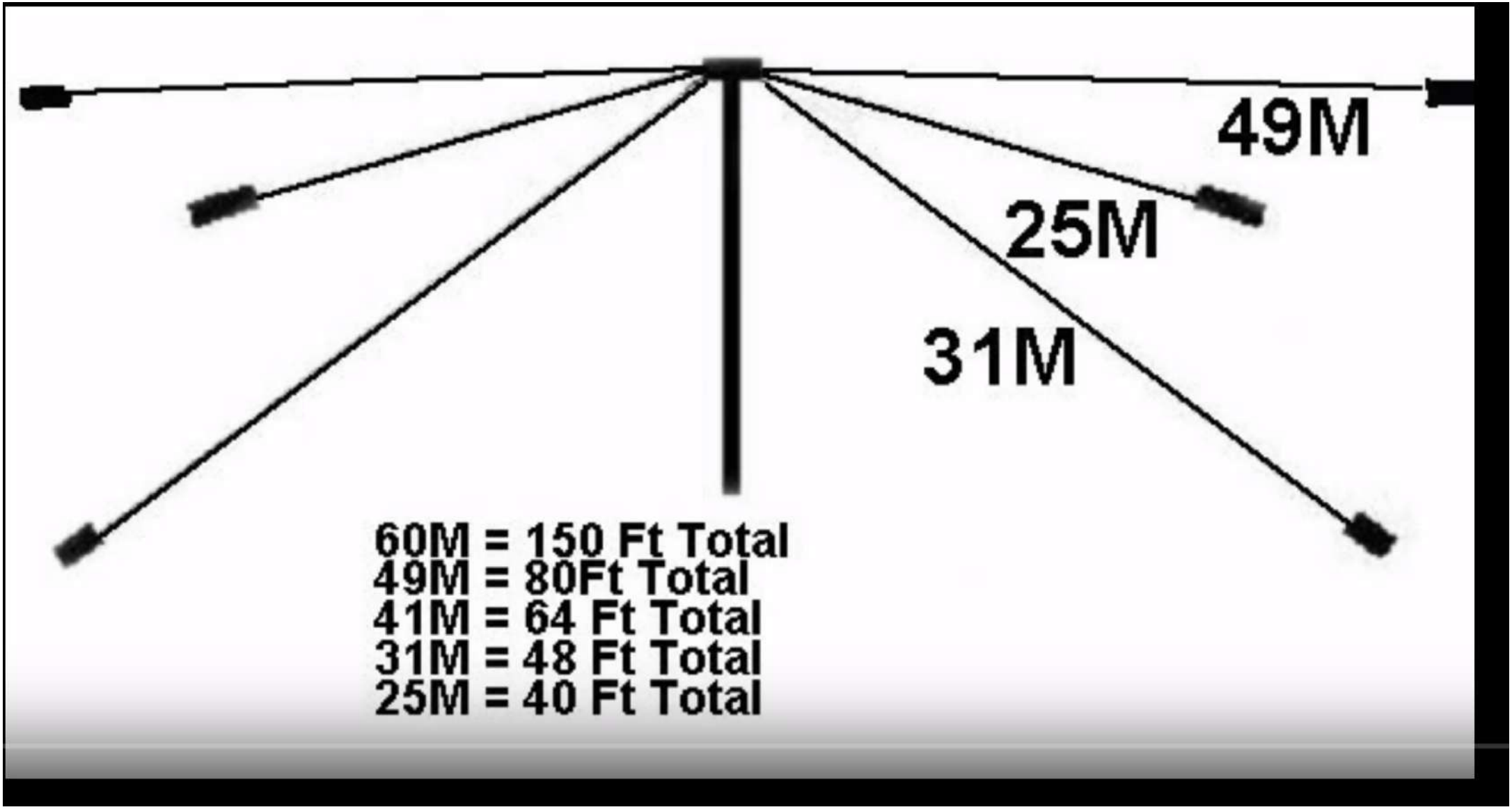


TYPICAL LONG WIRE ANTENNA



TUNED HORIZONTAL DIPOLE ANTENNA

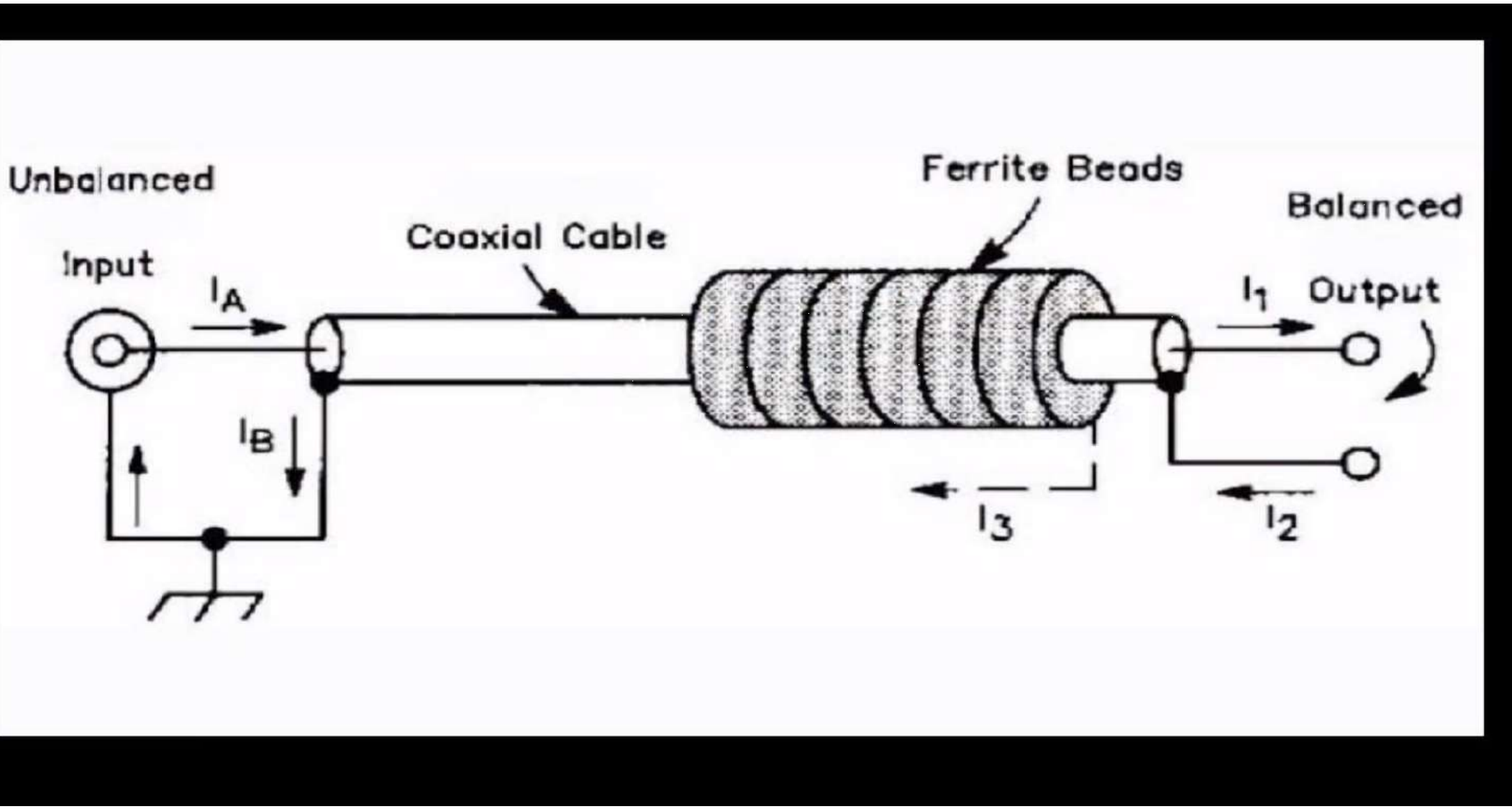

1/2 wave for lowest band
1/2 wave for intermediate band
1/2 wave for highest band
Insulator
Feed Line
Fan Dipole
L (ft) = 468/f
L(m) = 143/f


49M
25M
31M
60M = 150 Ft Total
49M = 80Ft Total
41M = 64 Ft Total
31M = 48 Ft Total
25M = 40 Ft Total




RG-6, RG59 75 Ohm
w 1:1 Balun
or 300 Ohm Twinlead w
4:1 Balun is Ideal

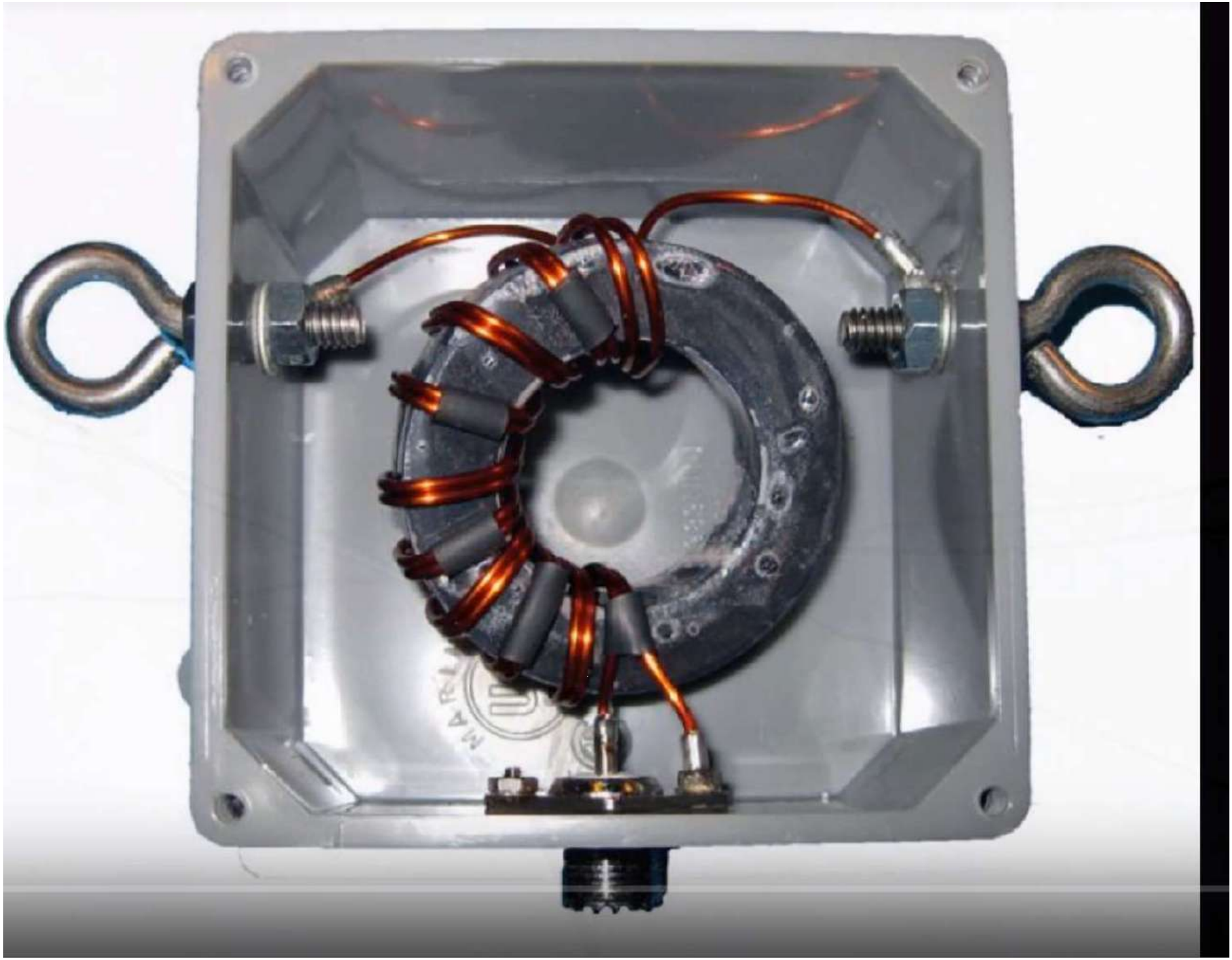

RG-58, RG-223, RG-400
LMR 200, 240
50 Ohm w 1:1 Balun


Unbalanced
Input
I_A
Coaxial Cable
Ferrite Beads
Balanced
I_1 Output
I_B
I_3
I_2



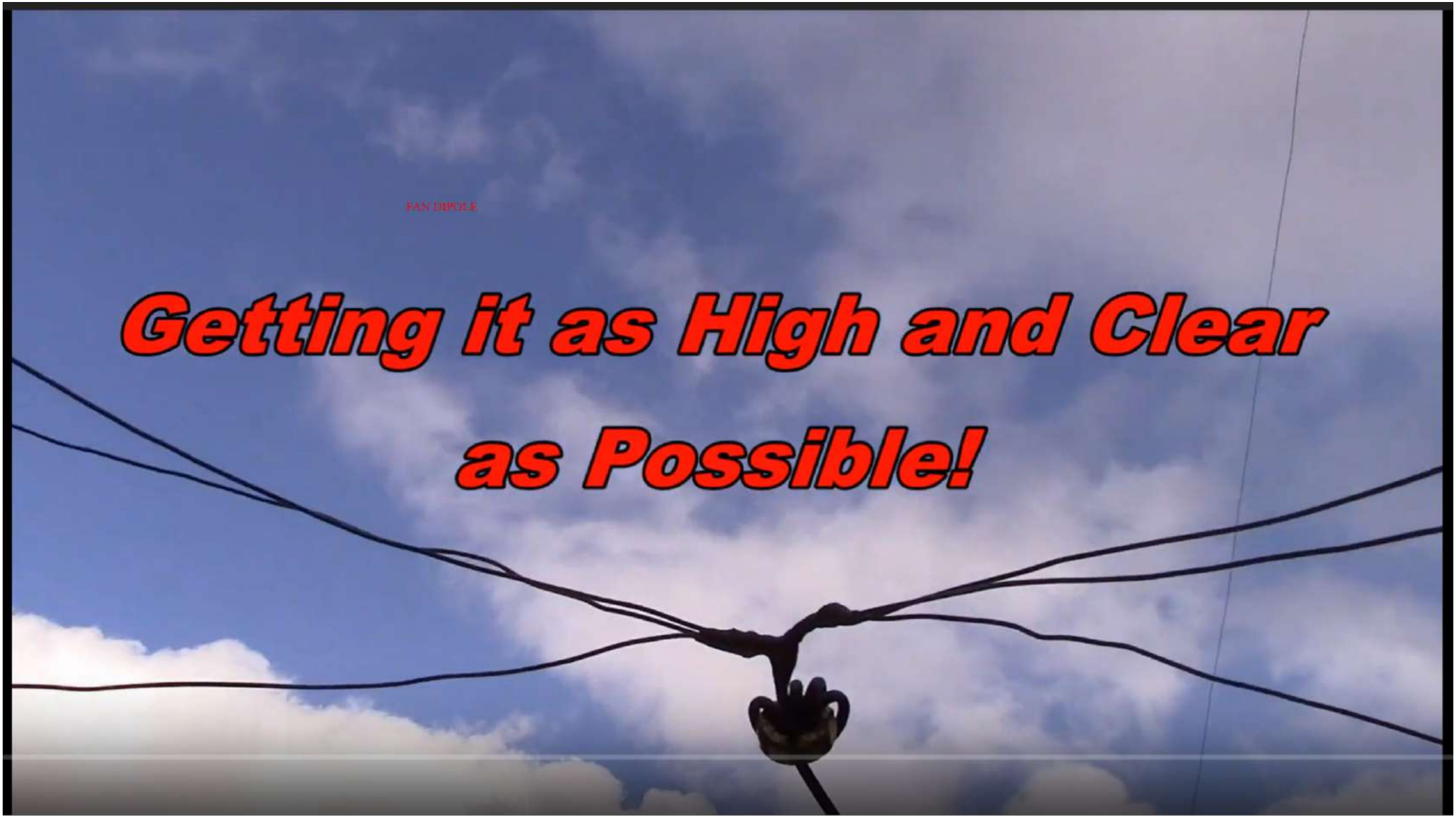

Choke Current
Baluns

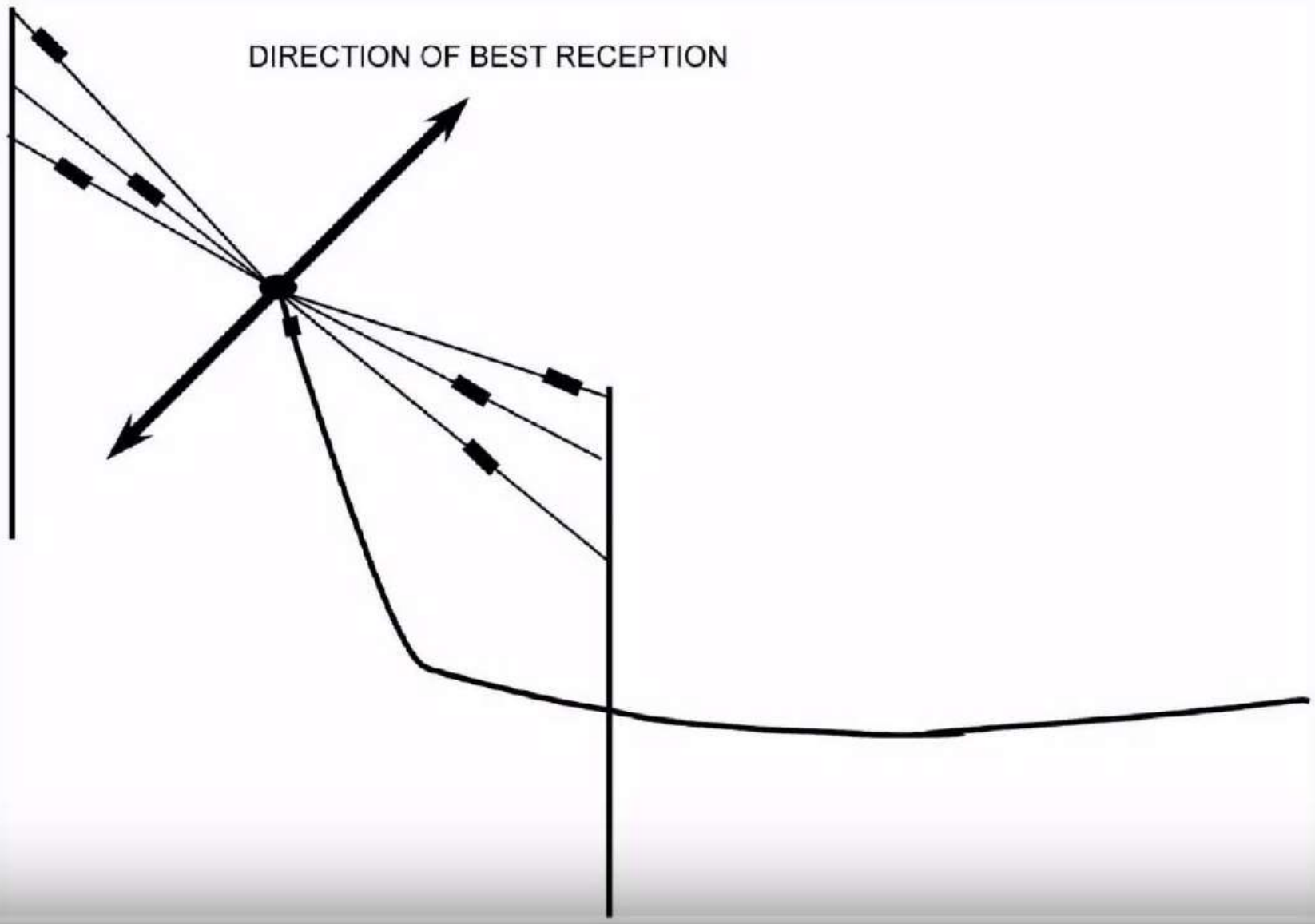

FT-240-61
Type 31 or 43 Material
49 M and up

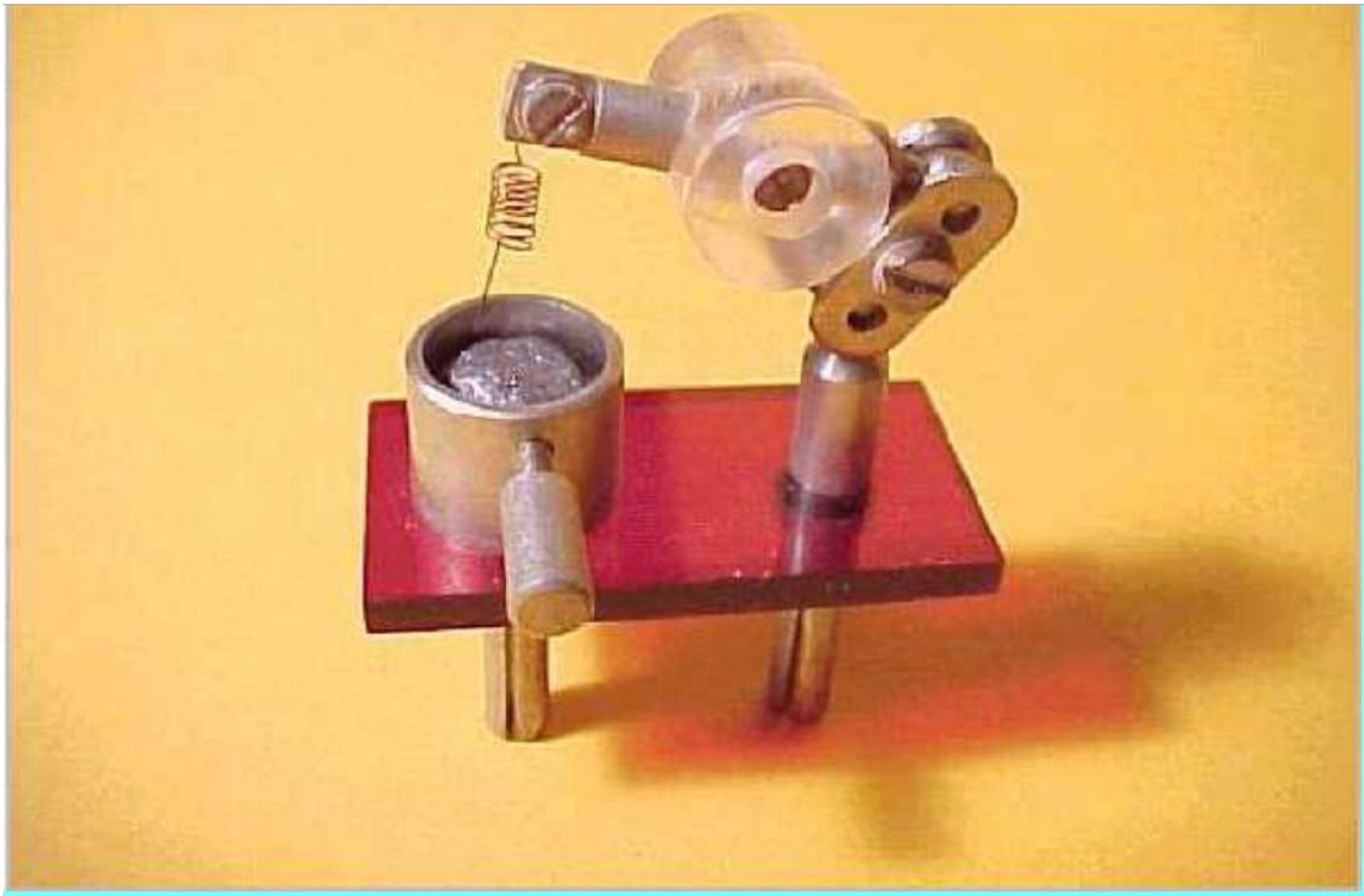


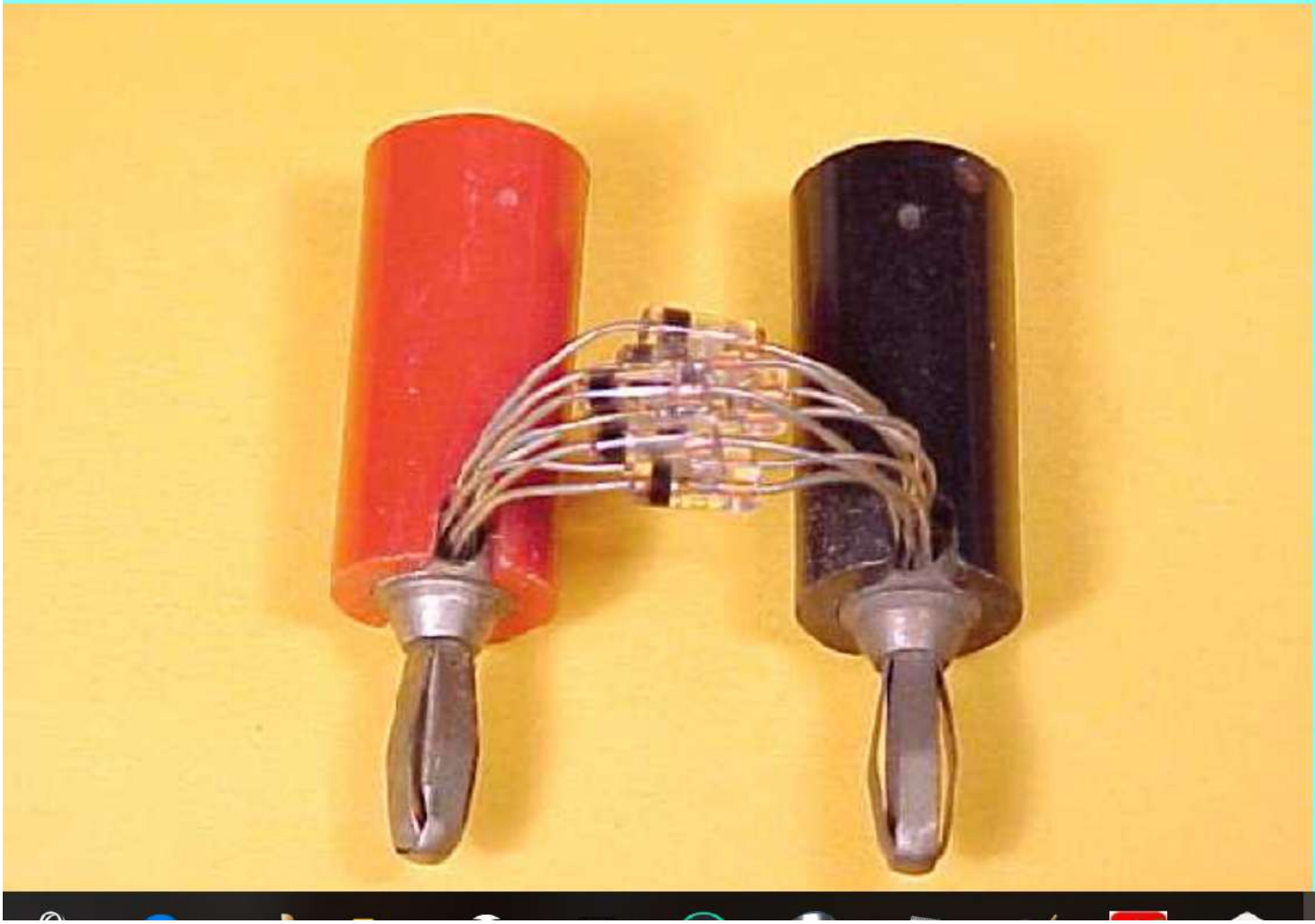


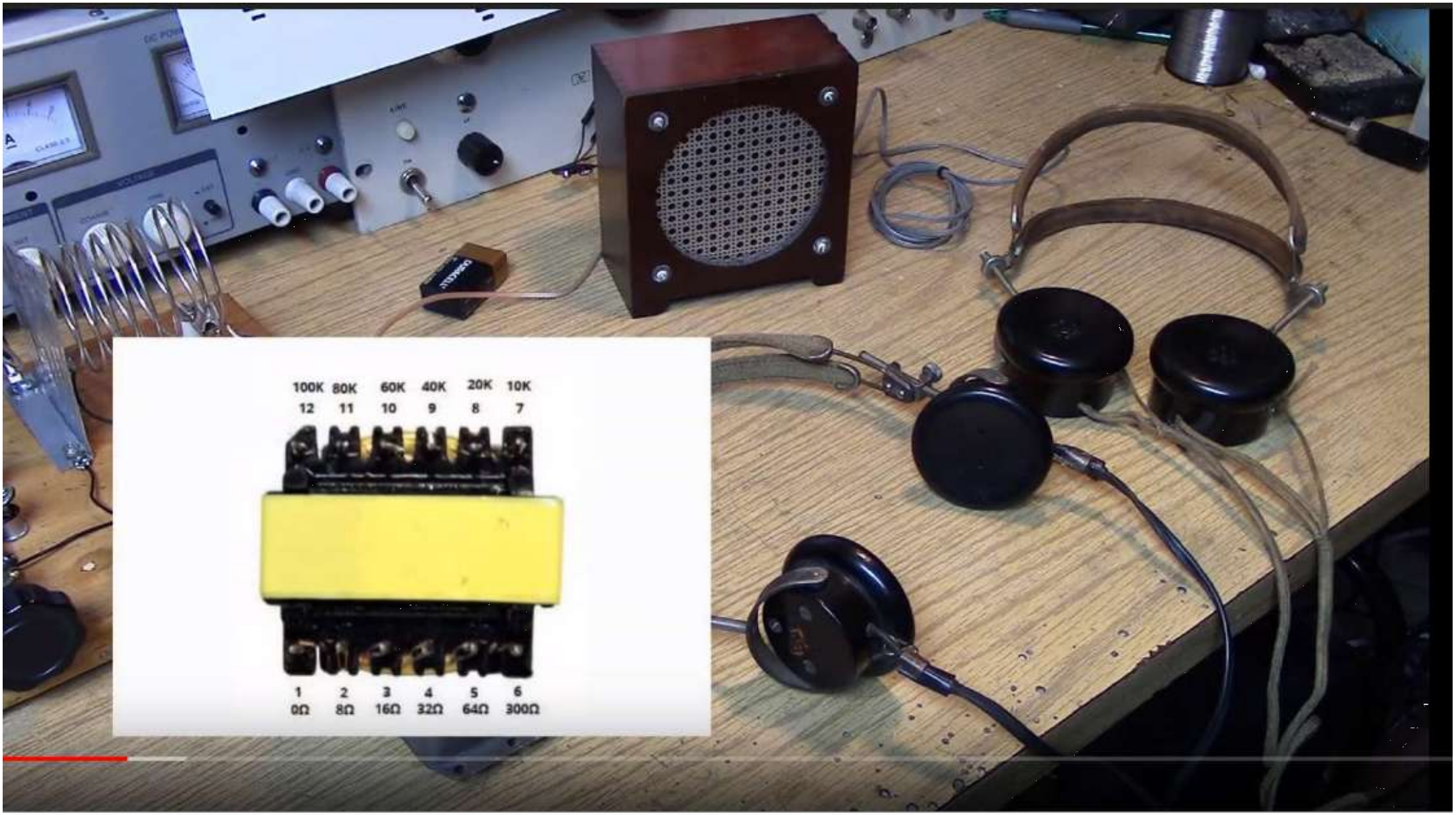

Spreading the wires
in a fan shape
is less important than

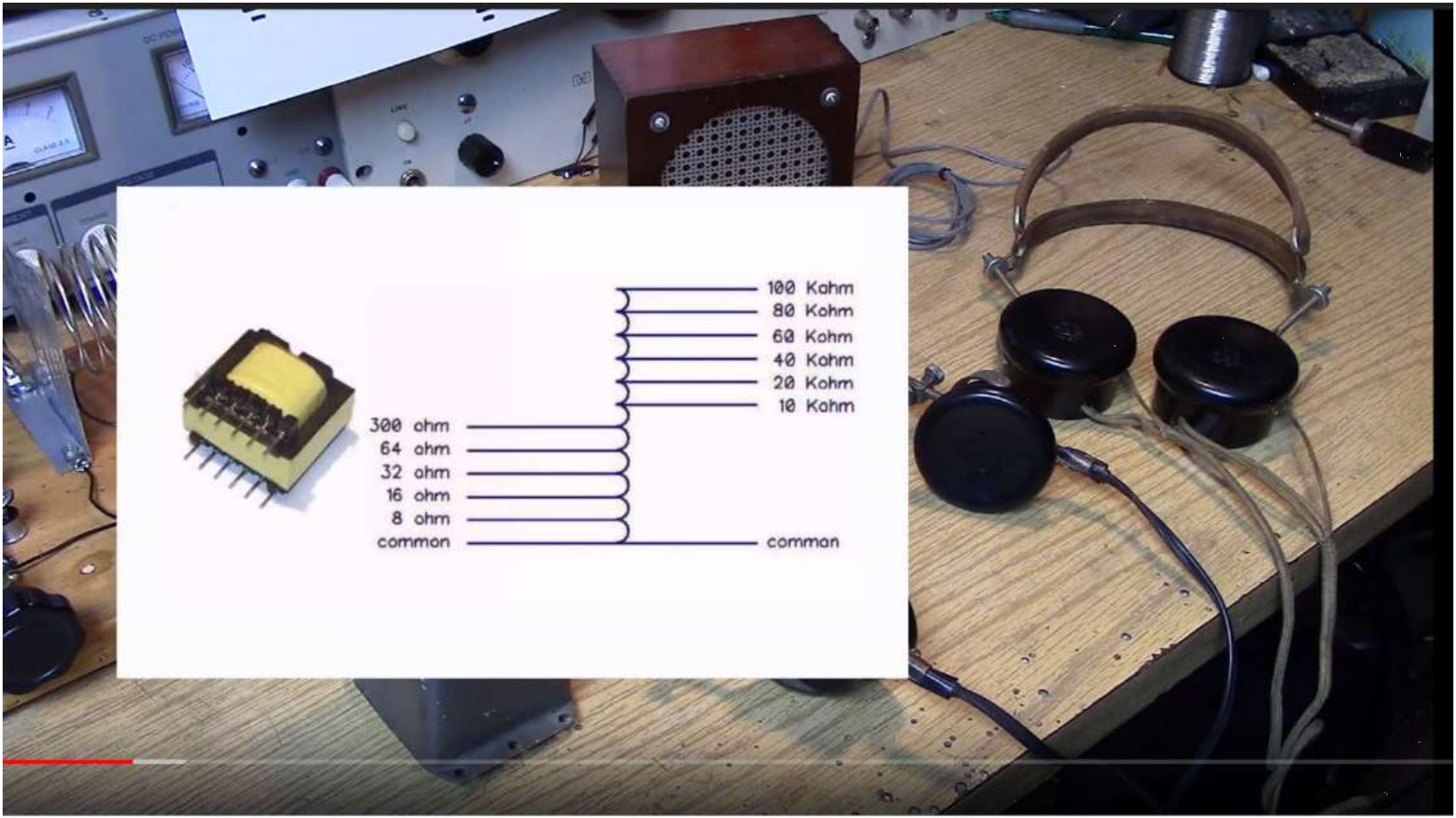

FAN DIPOLE
Getting it as High and Clear
as Possible!

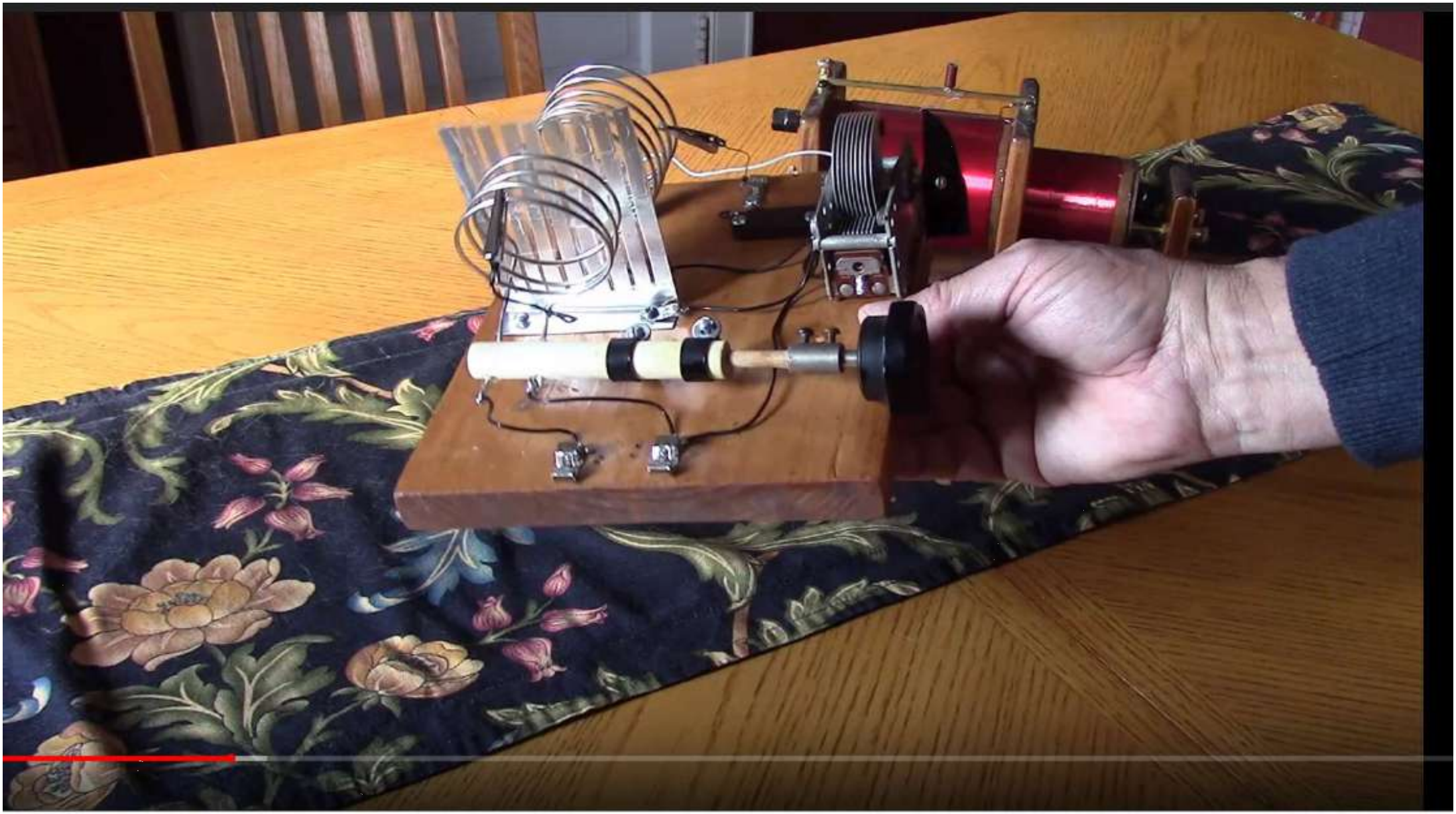

DIRECTION OF BEST RECEPTION

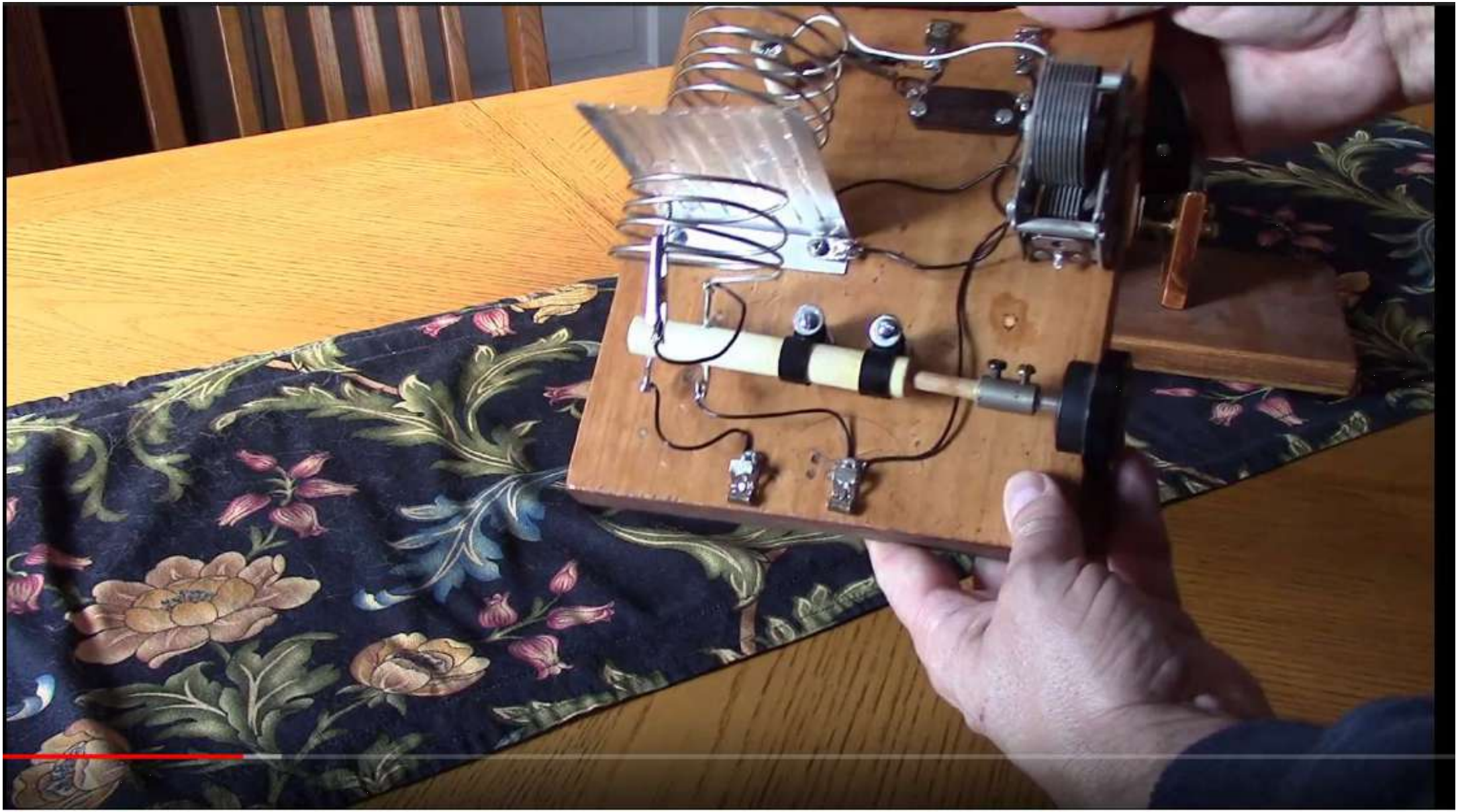


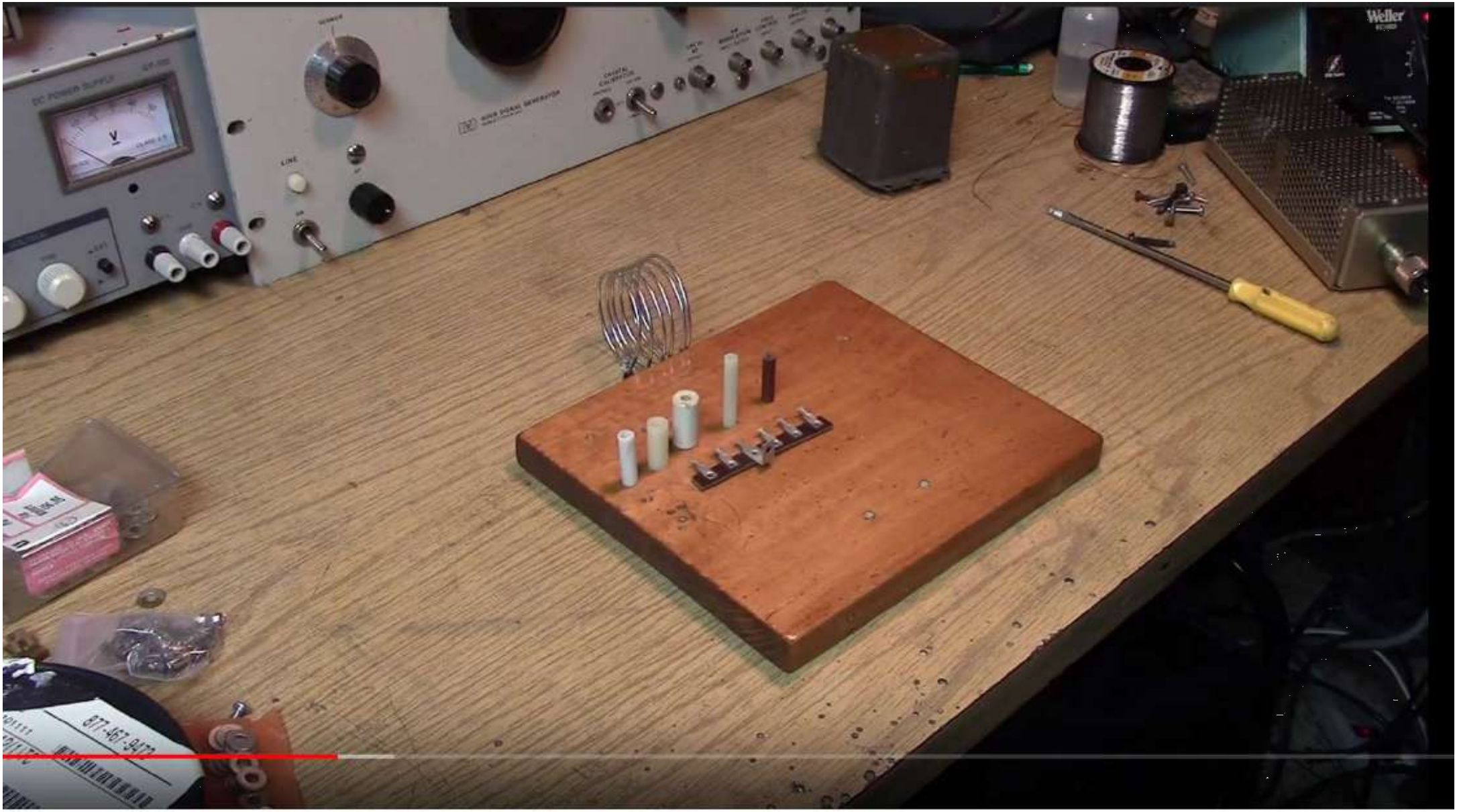


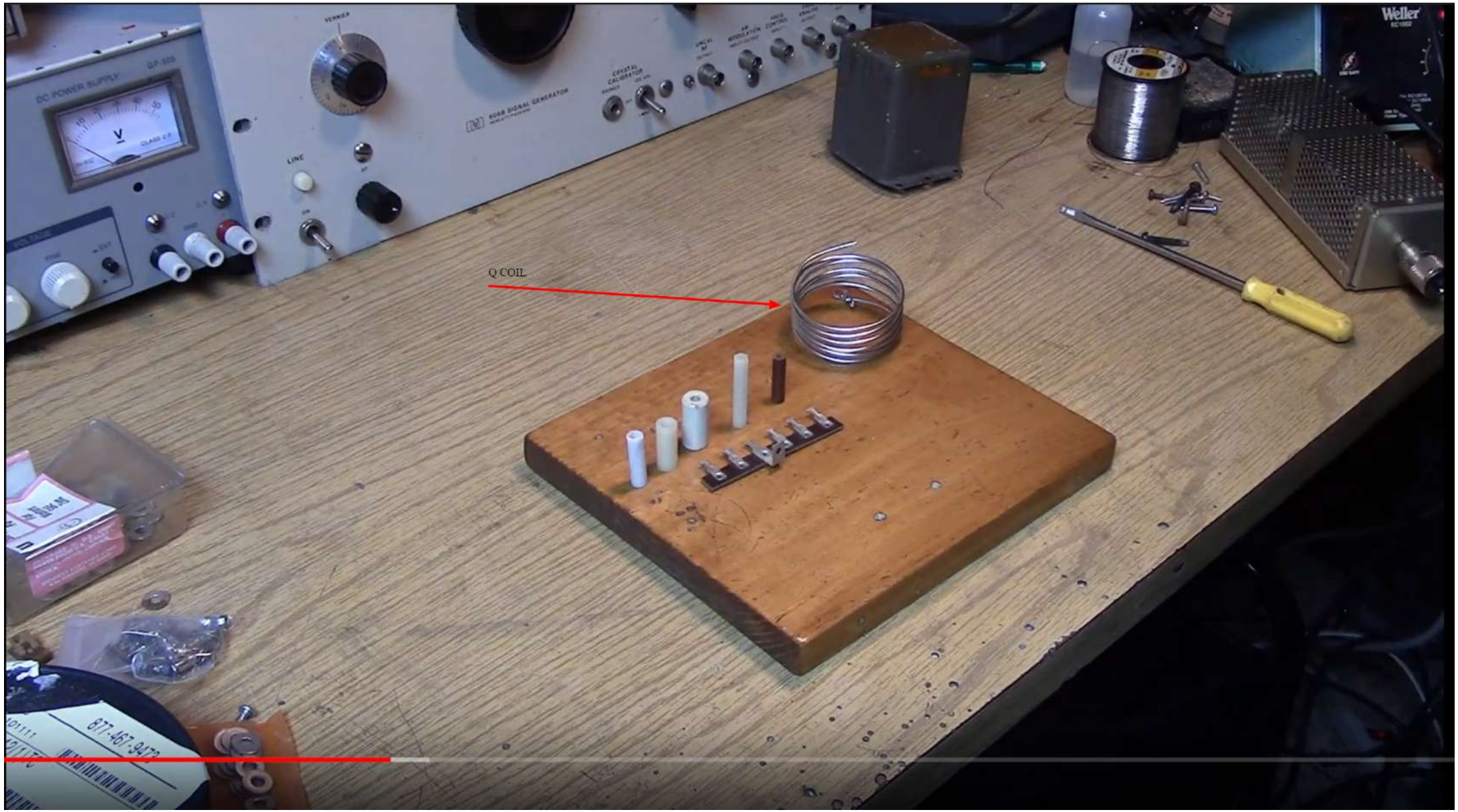

100K 80K 60K 40K 20K 10K
12 11 10 9 8 7
1 2 3 4 5 6
0Ω 8Ω 16Ω 32Ω 64Ω 300Ω


100 Kohm
80 Kohm
60 Kohm
40 Kohm
20 Kohm
10 Kohm
300 ohm
64 ohm
32 ohm
16 ohm
8 ohm
common
common

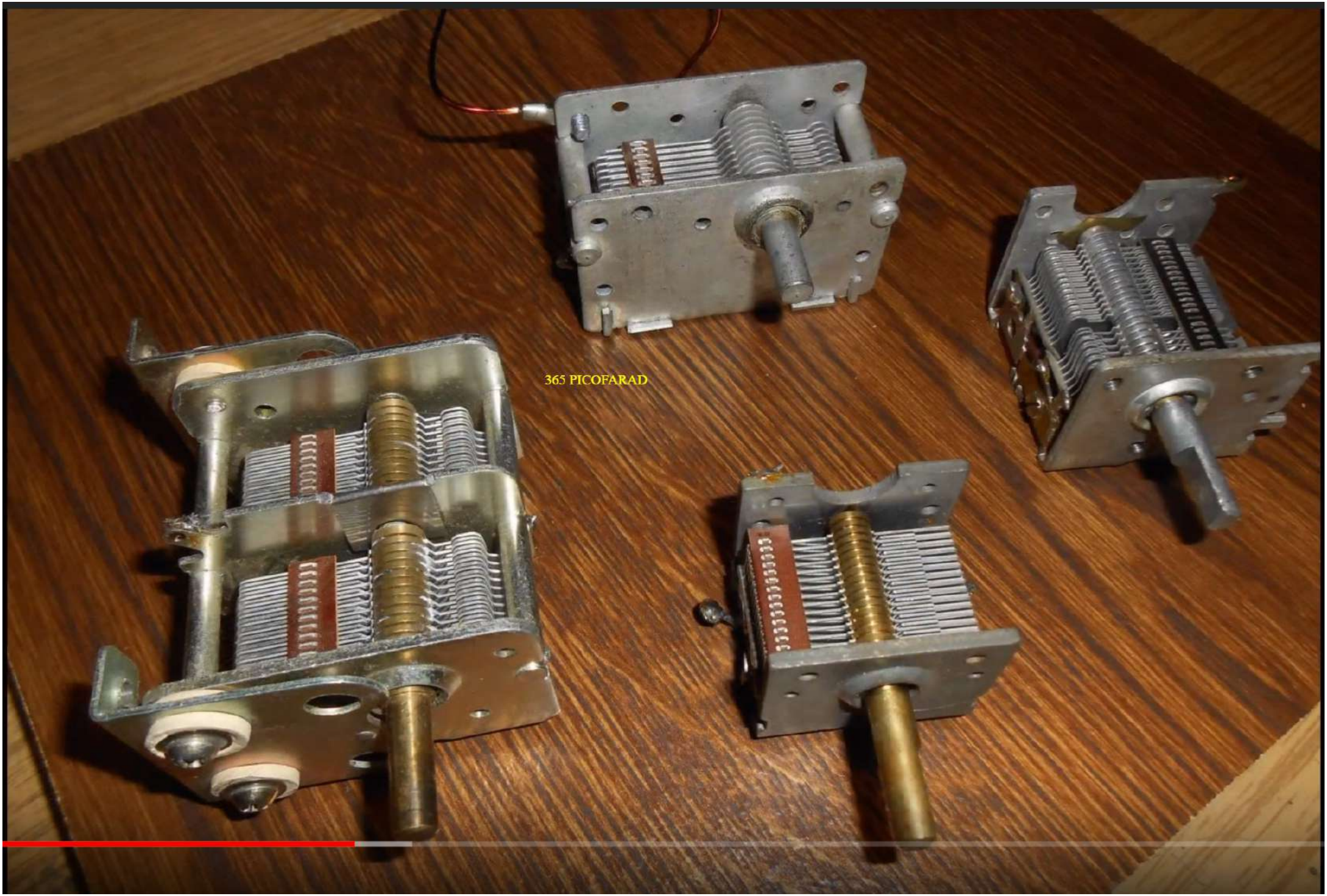


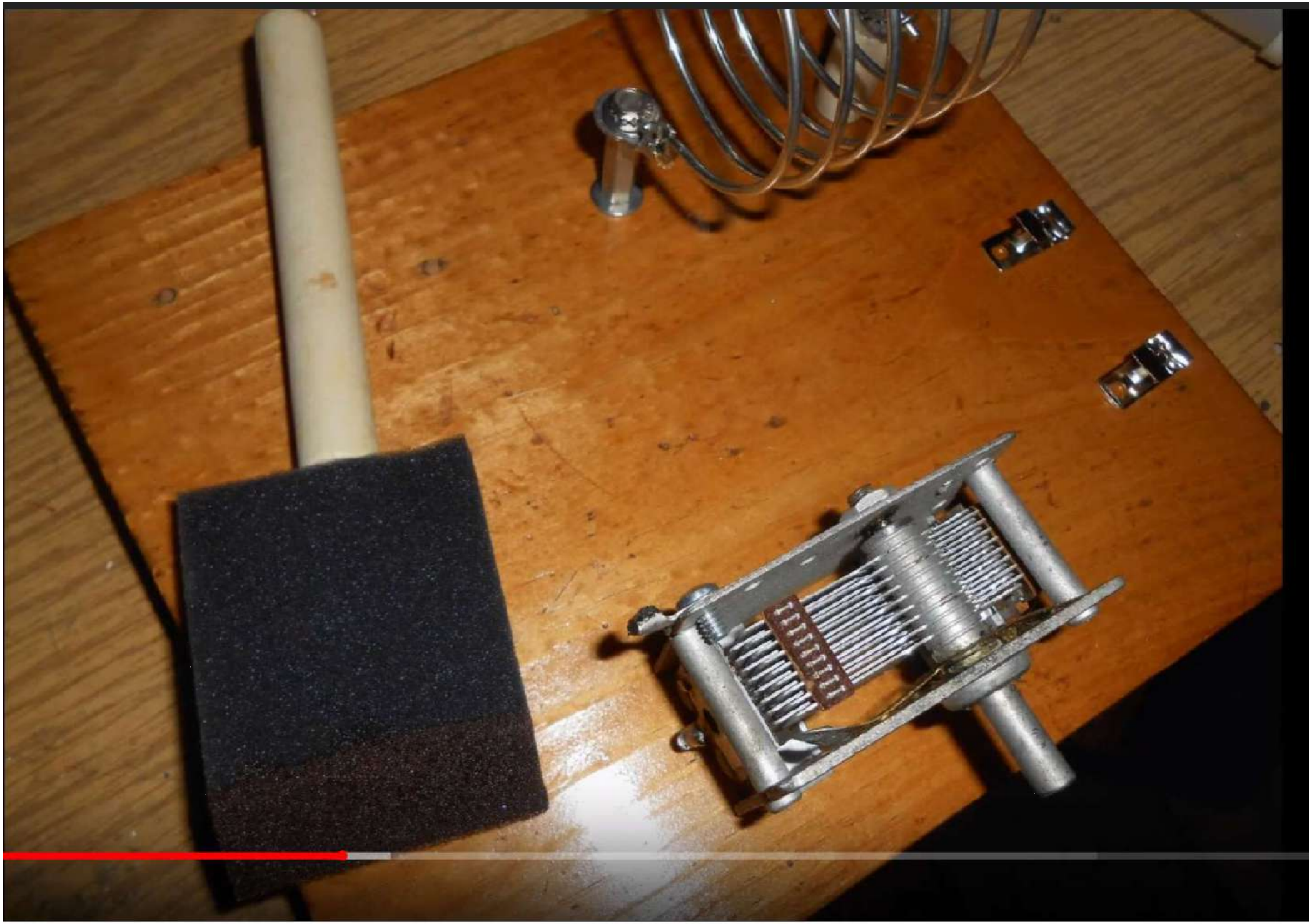


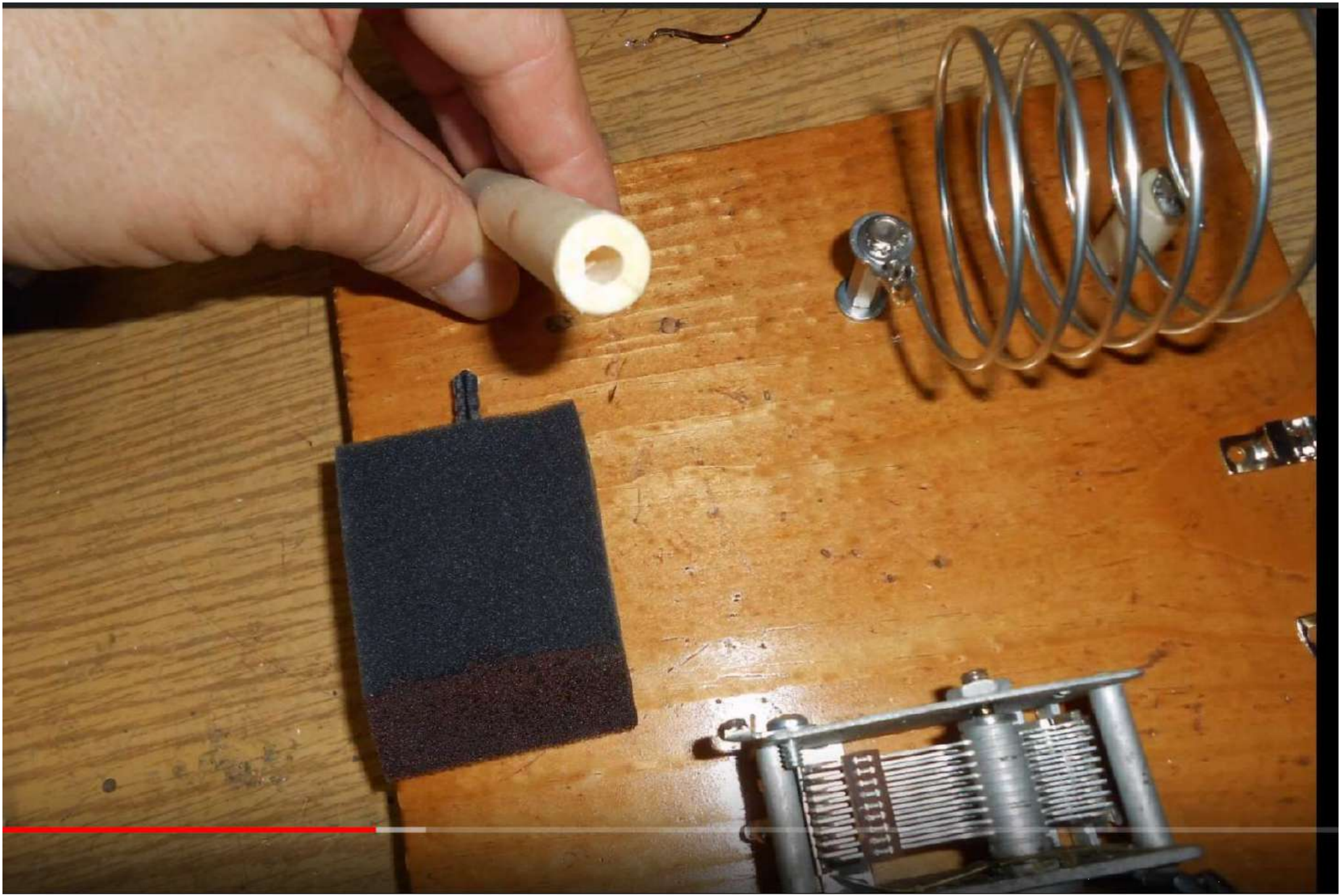

DC POWER SUPPLY
LINE
Weller
877-467-9472

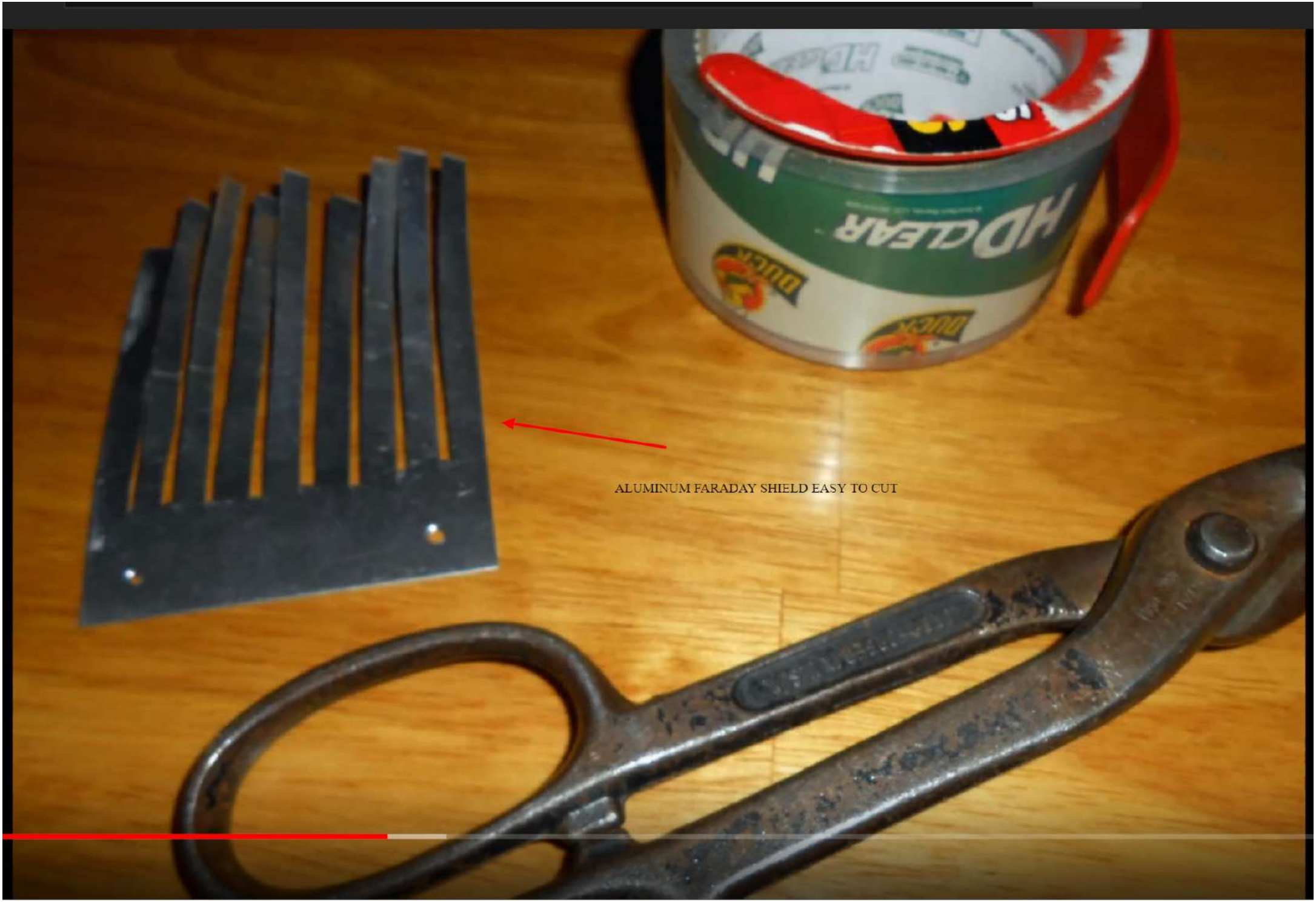

Q COIL
DC POWER SUPPLY
LINE
Weller


Some Are Junk

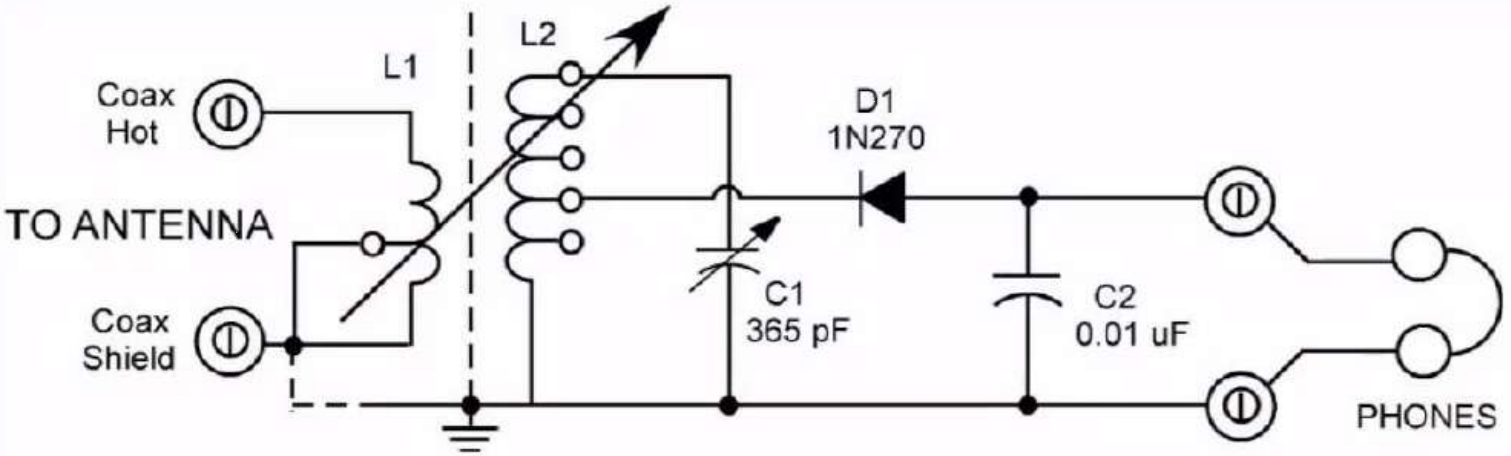

365 PICOFARAD



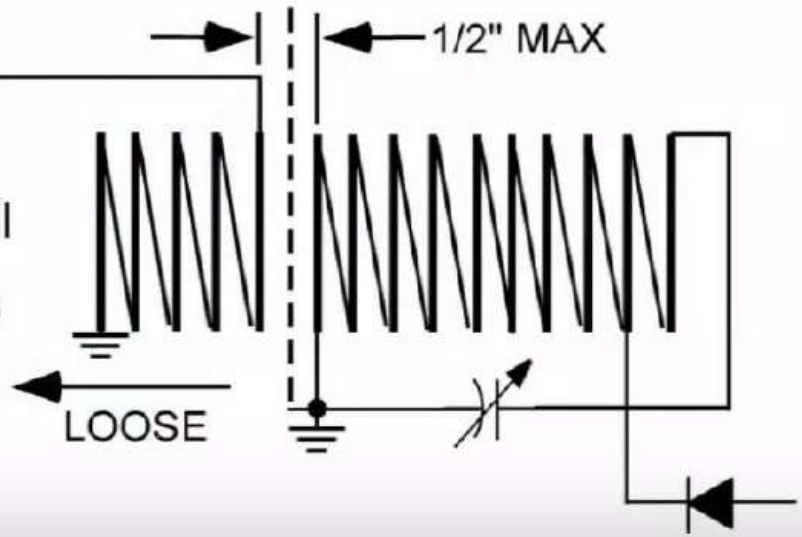



HD CLEAR
ALUMINUM FARADAY SHIELD EASY TO CUT


CAPACITORS



WU2D 2009



L1
Primary Coil

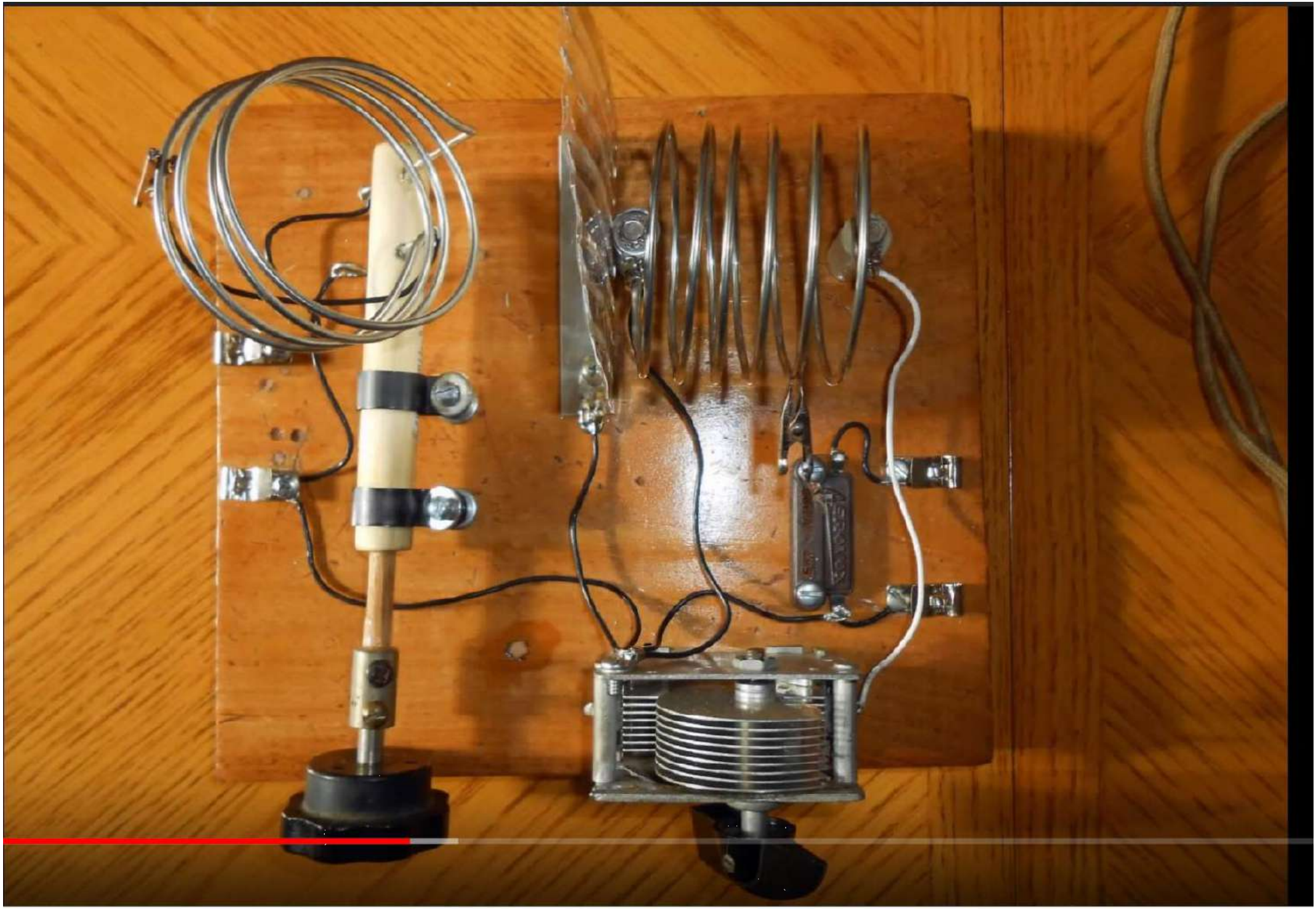
5T of Bare
#14 or #12 AWG

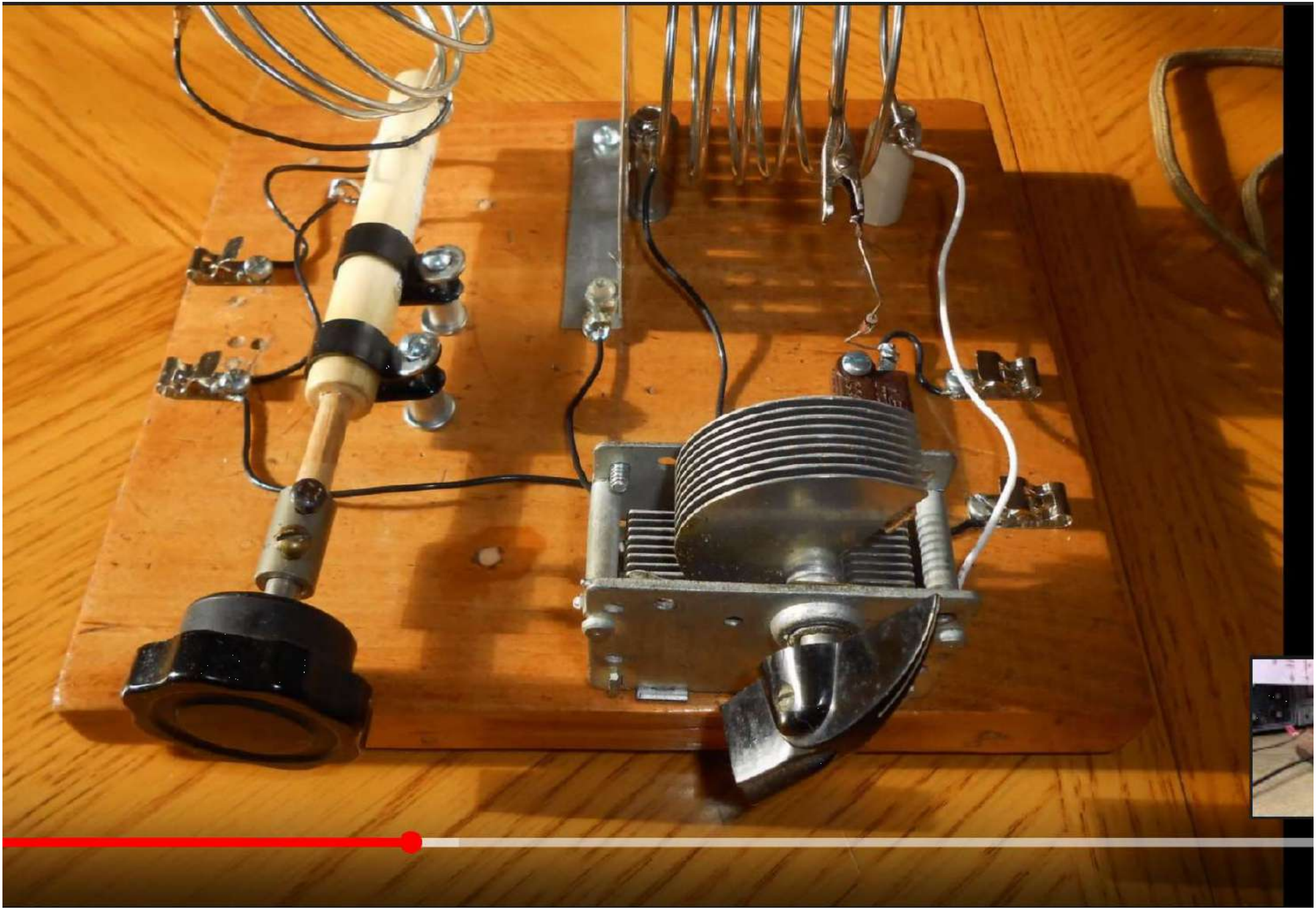
L2
Secondary Coil

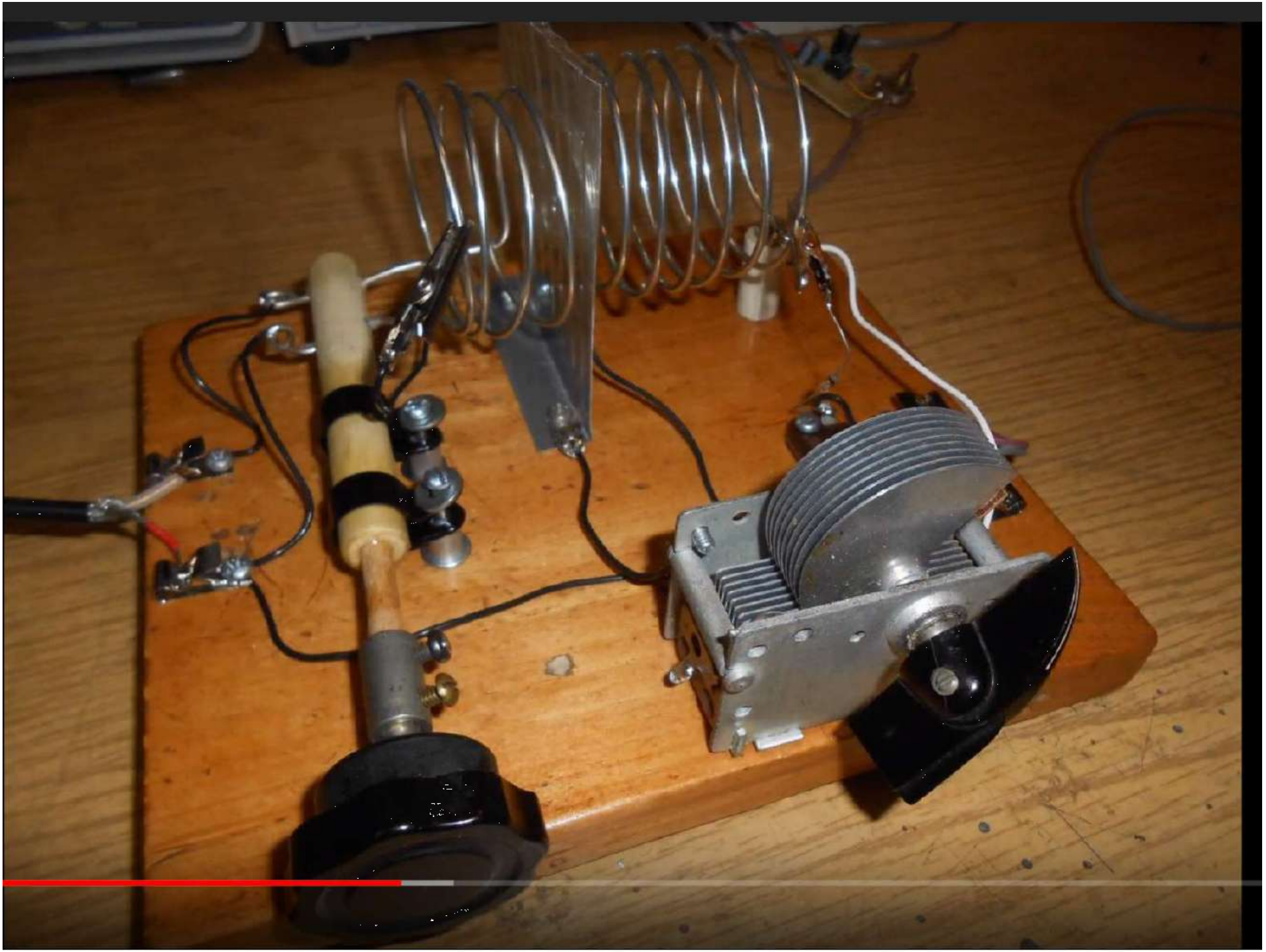
5.5-20 MHz
9 to 10T of Bare #14 or #12 AWG
Formed on 2" Diameter
Spaced evenly over 3 Inches

OR

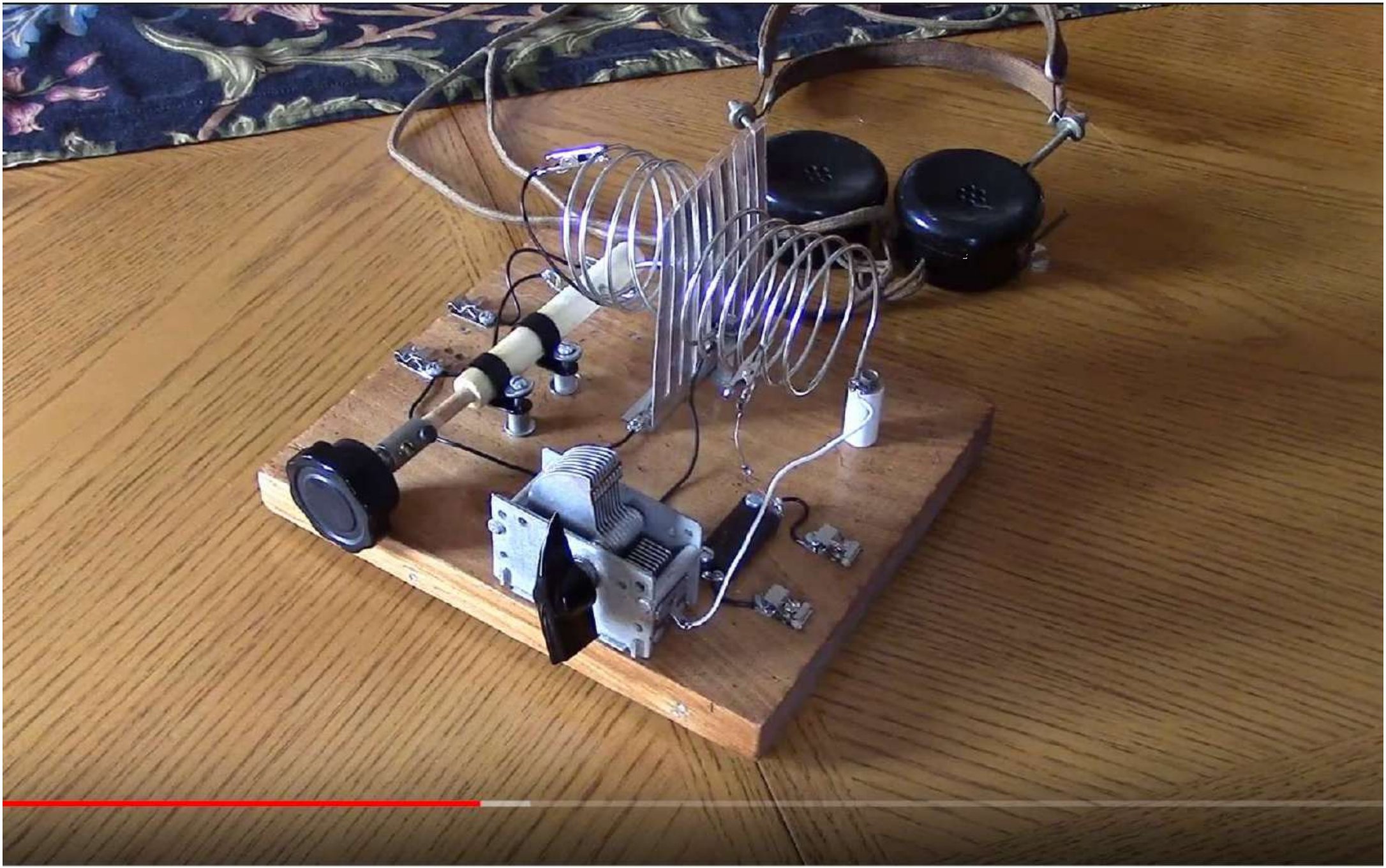
3-8 MHz
15 to 20T of Bare #18 or #14 AWG
Formed on 2" Diameter
Spaced evenly over 4 Inches



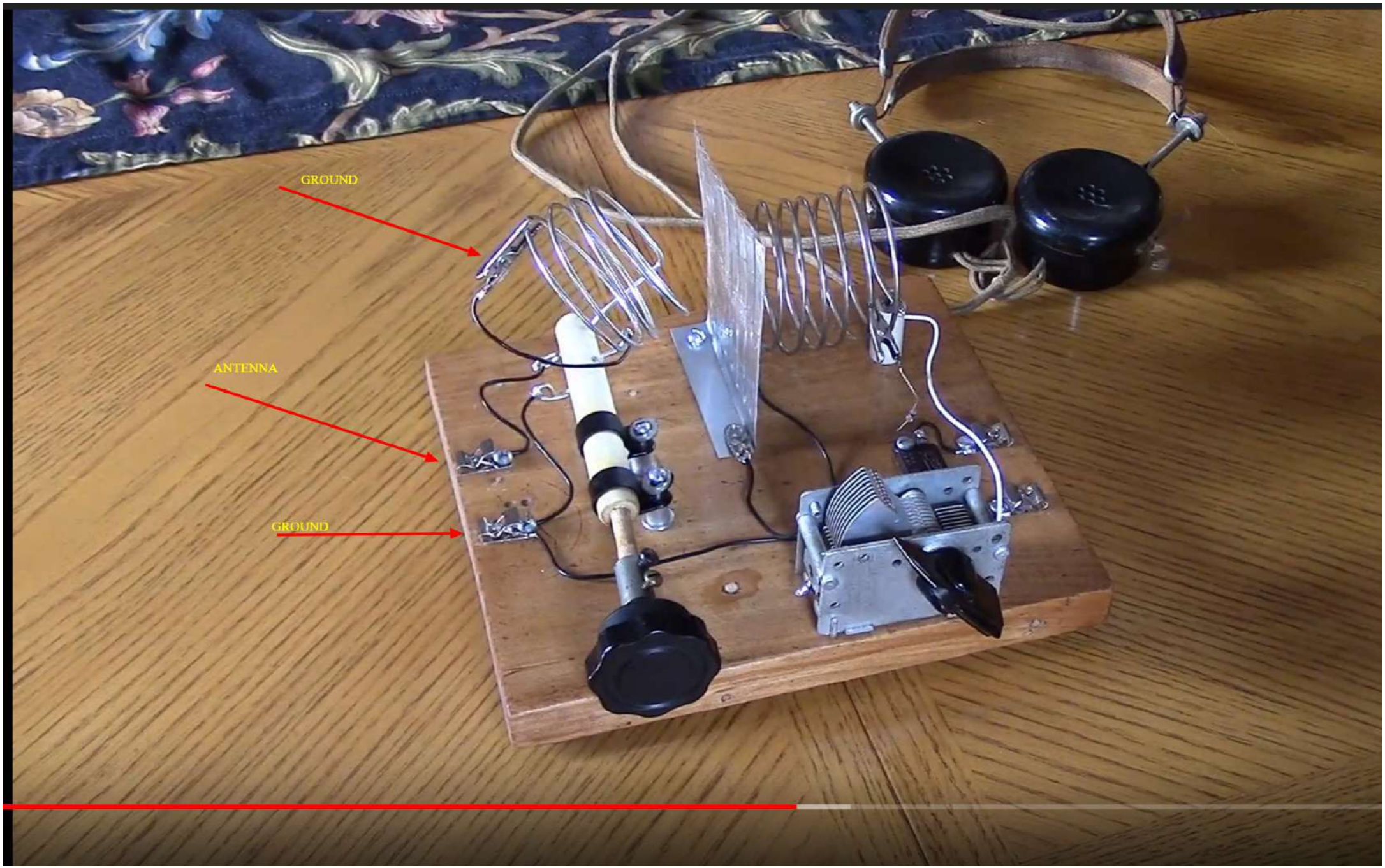


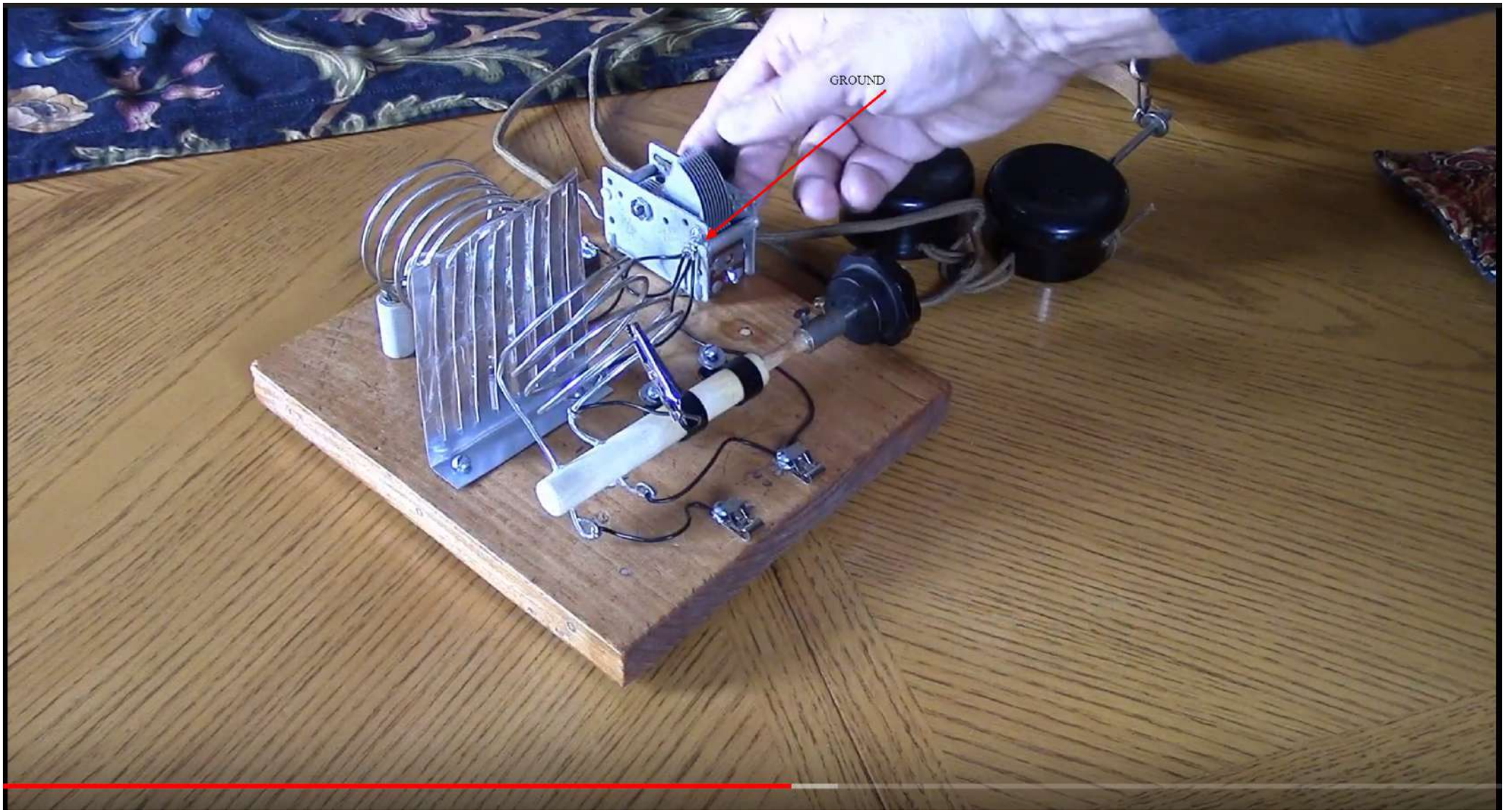



MORE TURNS LOWER FREQUENCY MORE TURNS ON THE PRIMARY EQUALS
MORE COUPLING

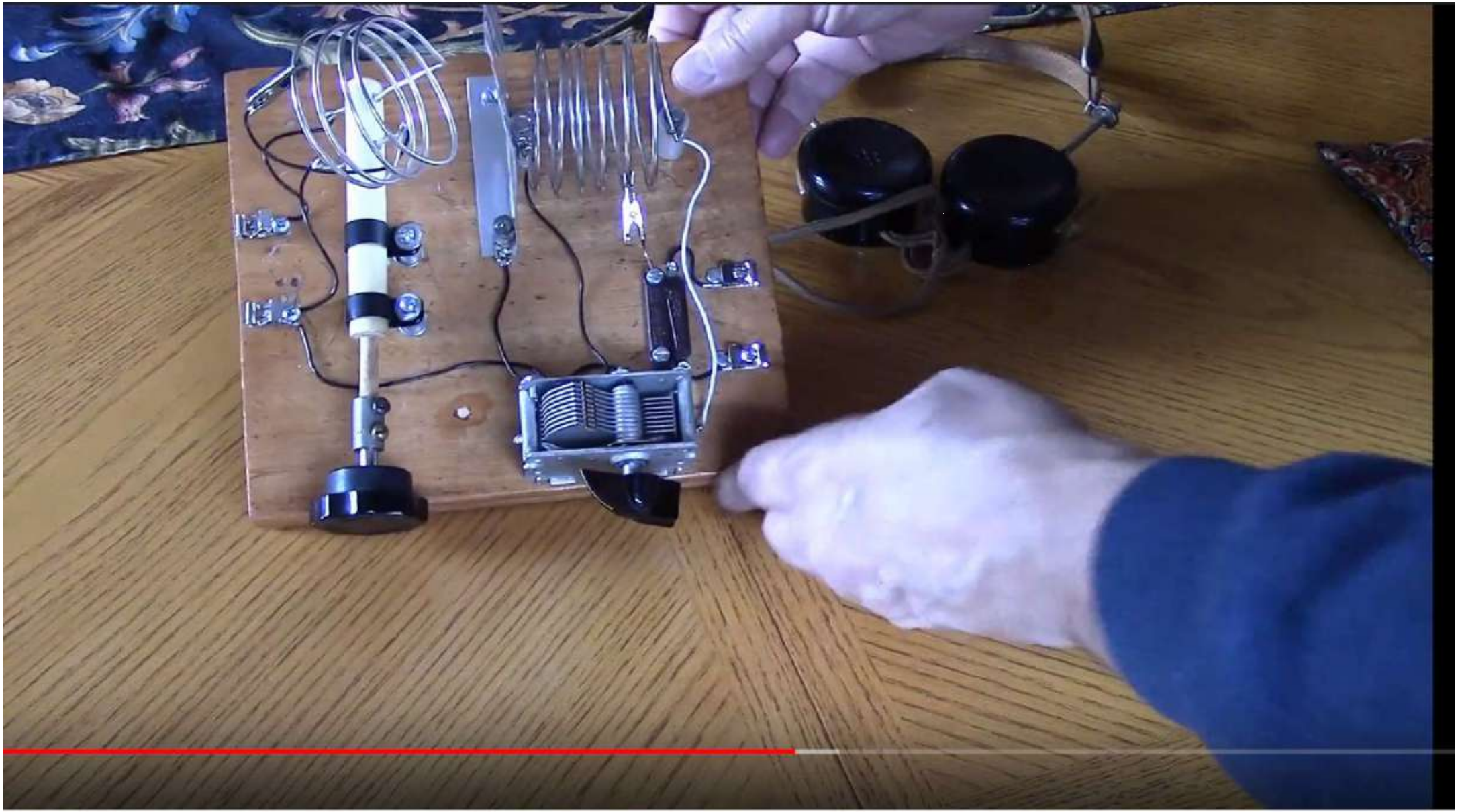



Looser Coupling
= More Selectivity


GROUND
ANTENNA
GROUND


GROUND


X
X
Add your Ground Wire
Here or Here





Illini .006uf (6000pf) 1500v dc Mica Capacitor (Lot of 2)

Pre-Owned

$14.00
or Best Offer
+$4.19 shipping

Guaranteed by **Tue, Feb. 5**

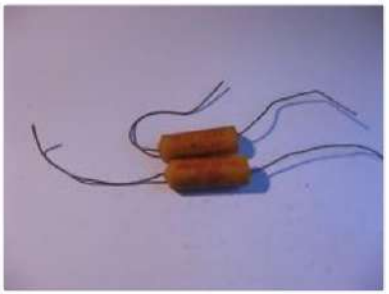


Cornell Dubilier Brown Drop Capacitor 6000pF 600v DPMS6D6 .006uF AMP Audio 2pc

Brand New

$9.95
or Best Offer
Free Shipping

FAST 'N FREE
Guaranteed by **Wed, Feb. 6**



Mallory Plascap Capacitor .006uF 600VDC PT-626 Axial - NOS Qty 2

New (Other)

$4.99
or Best Offer
+$7.50 shipping
2 new & refurbished from $4.99

From Canada



T.C.C. Capacitor .006uF 600VDC A03T16 - NOS Qty 2

New (Other)

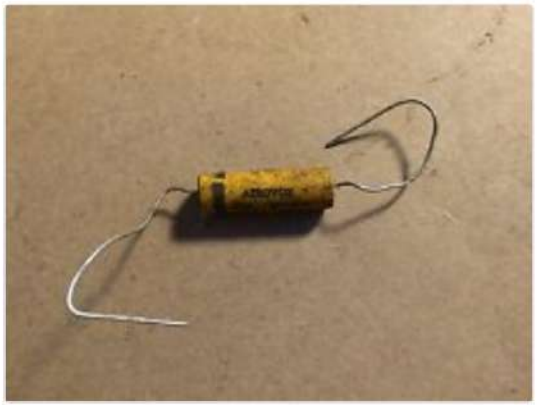
$8.99
or Best Offer
+$6.50 shipping

From Canada



6 nF 2500 V Vintage Mica Capacitor Sangamo .006 microfarad 2.5 kilovolt

$3.25
or Best Offer
+$3.90 shipping



NOS Vintage Aerovox .006 uf 600v Capacitor Type 684 Wax Guitar Tone Cap

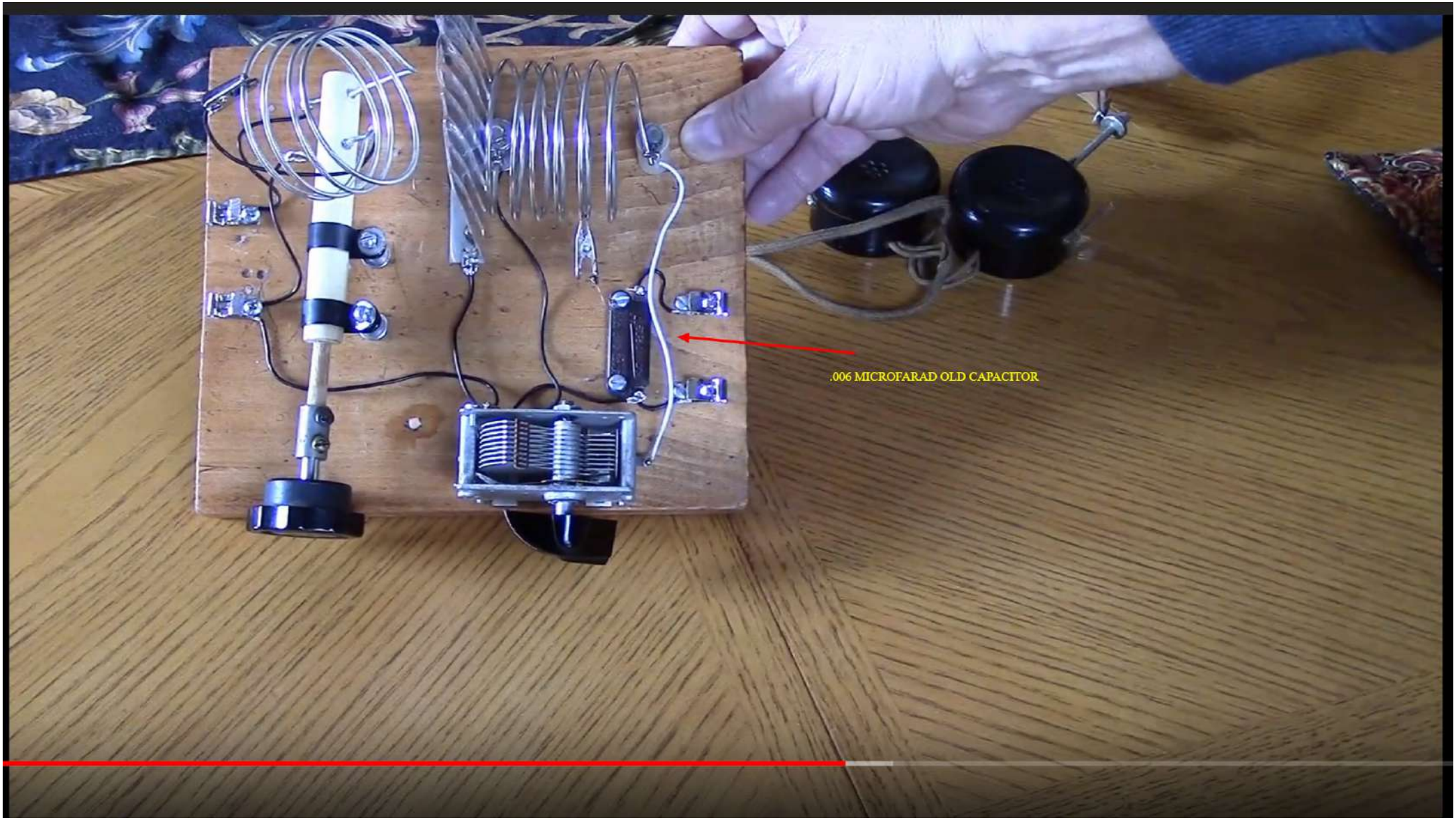
$7.99
Buy It Now
+$4.00 shipping

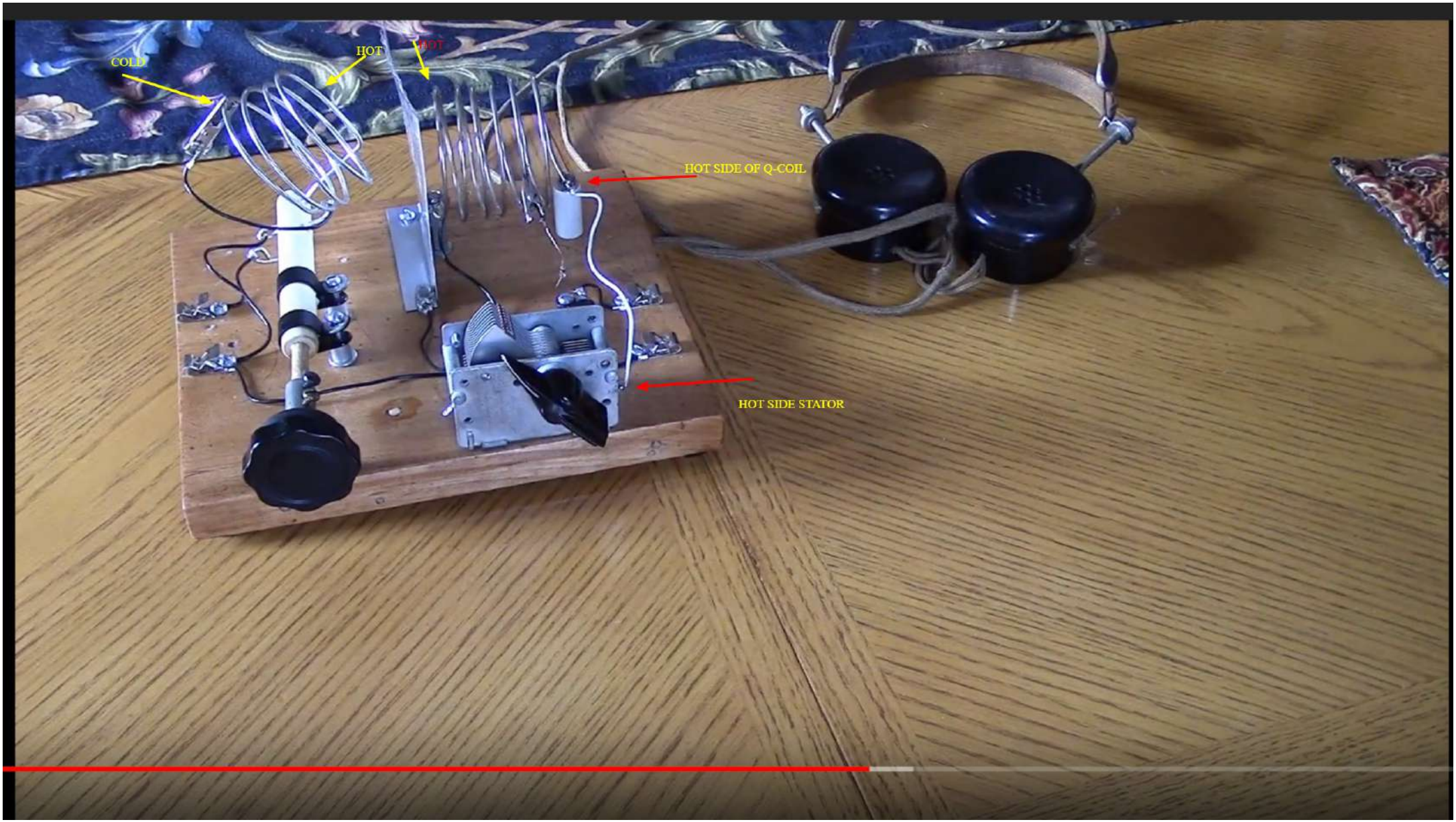


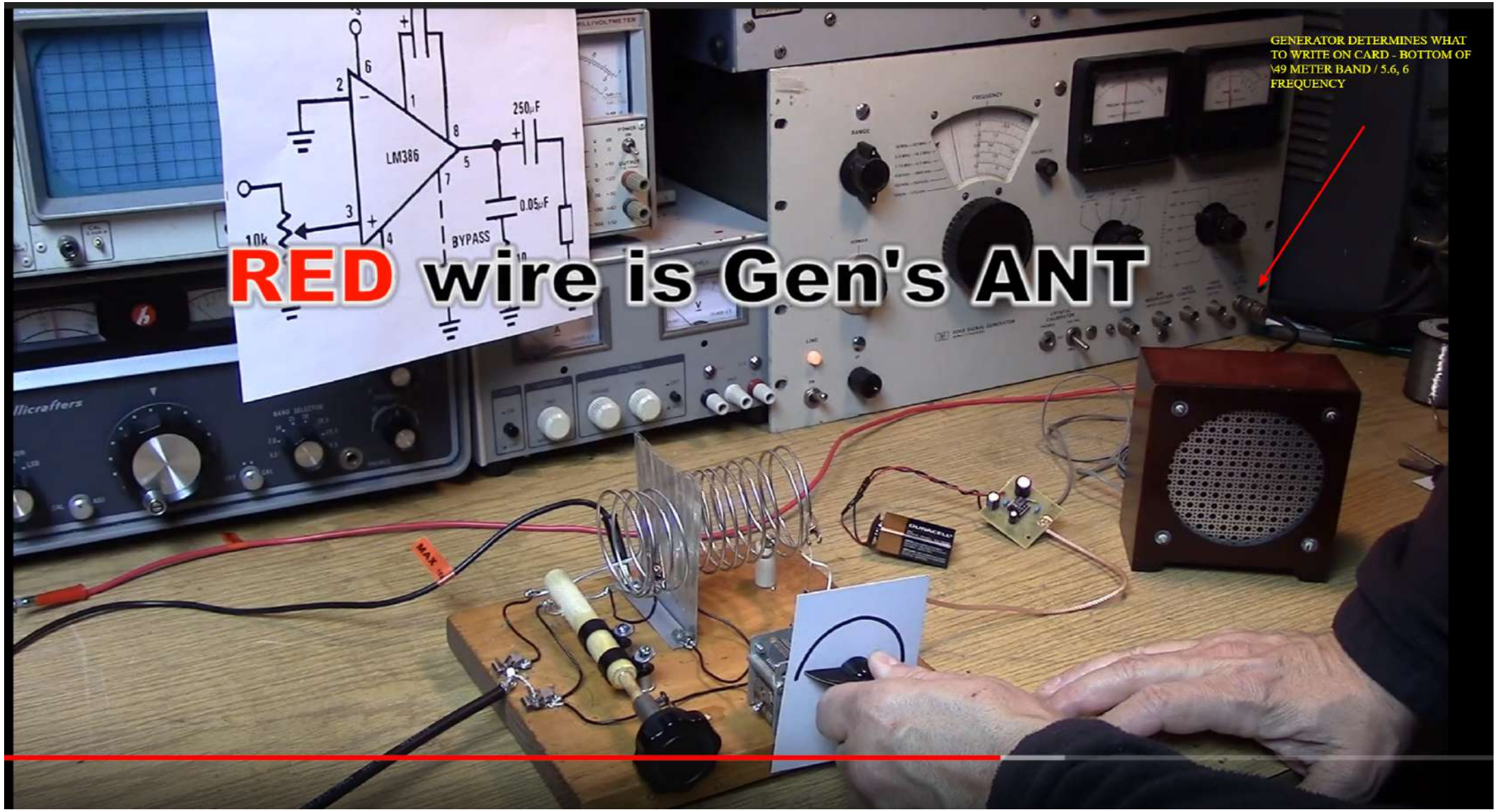
NOS Sprague Black Beauty .006 uf 600v Capacitor Vintage Guitar Tone Cap qty avai

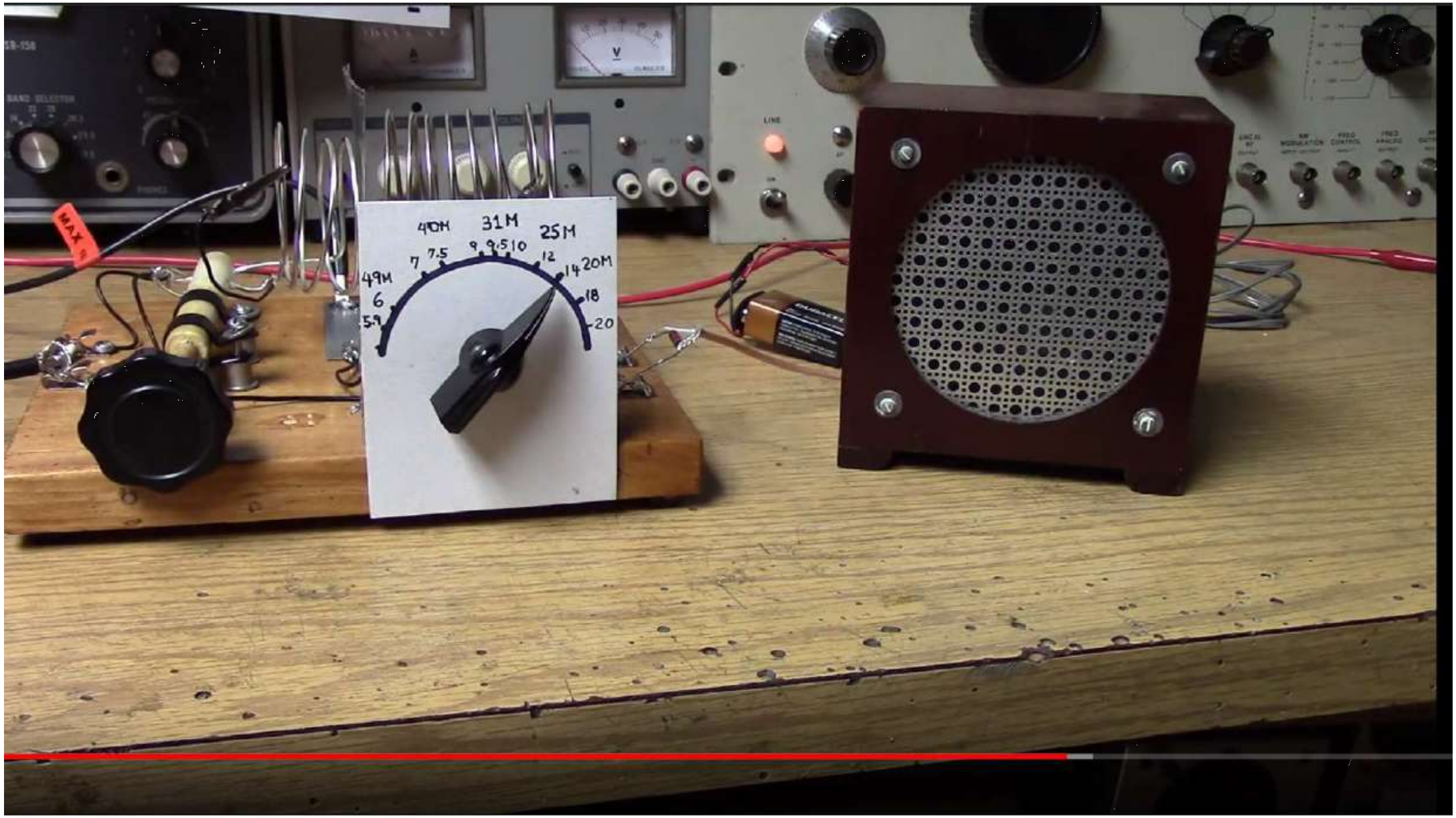
$4.99
Buy It Now
+$4.00 shipping




.006 MICROFARAD OLD CAPACITOR


COLD
HOT
HOT
HOT SIDE OF Q-COIL
HOT SIDE STATOR


GENERATOR DETERMINES WHAT TO WRITE ON CARD - BOTTOM OF \49 METER BAND / 5.6, 6 FREQUENCY
RED wire is Gen's ANT
LM386
250µF
0.05µF
10k
BYPASS

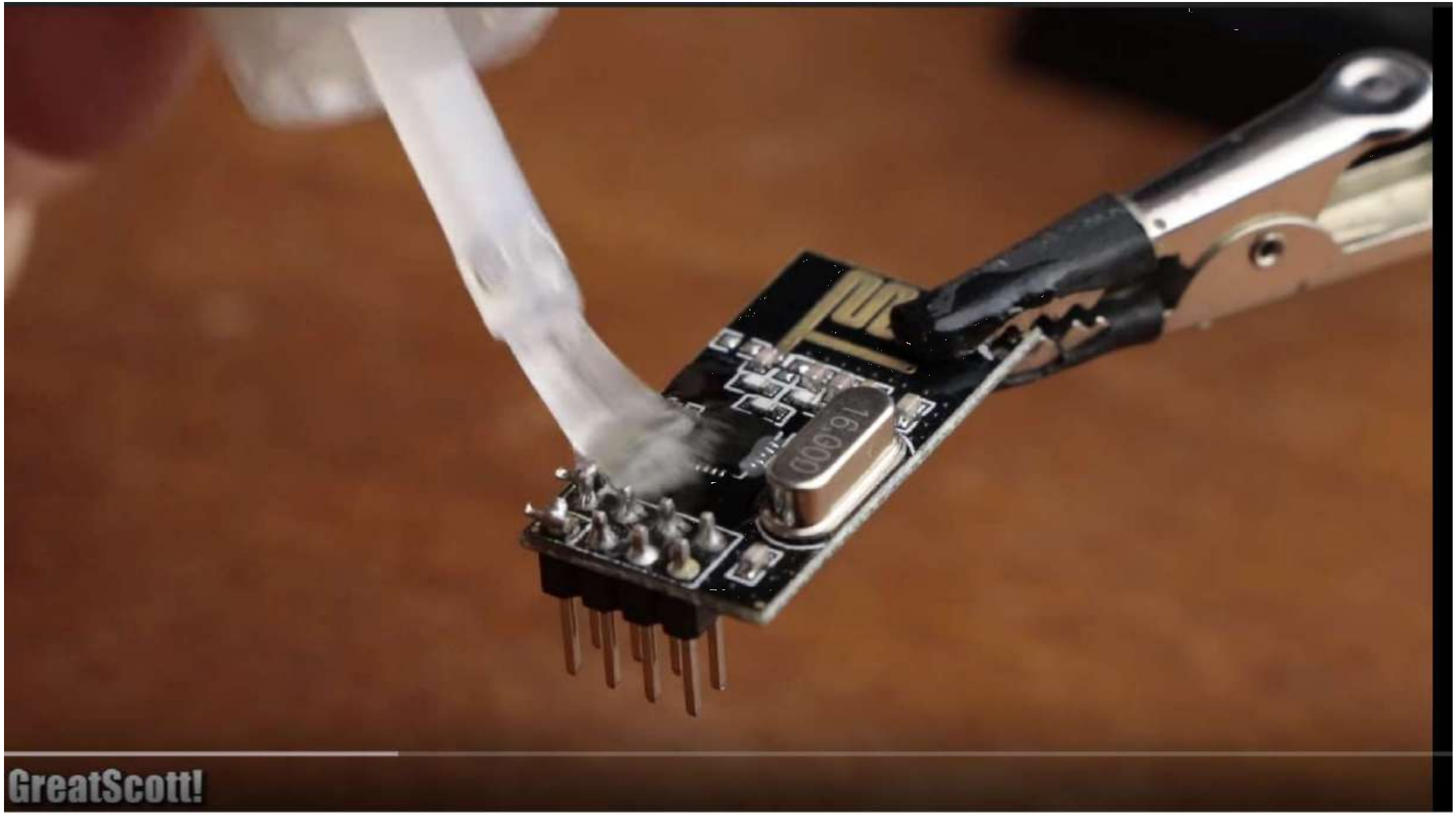

40M
31M
25M
49M
20M
7
7.5
9
9.5
10
12
14
6
18
5.9
20
MAX

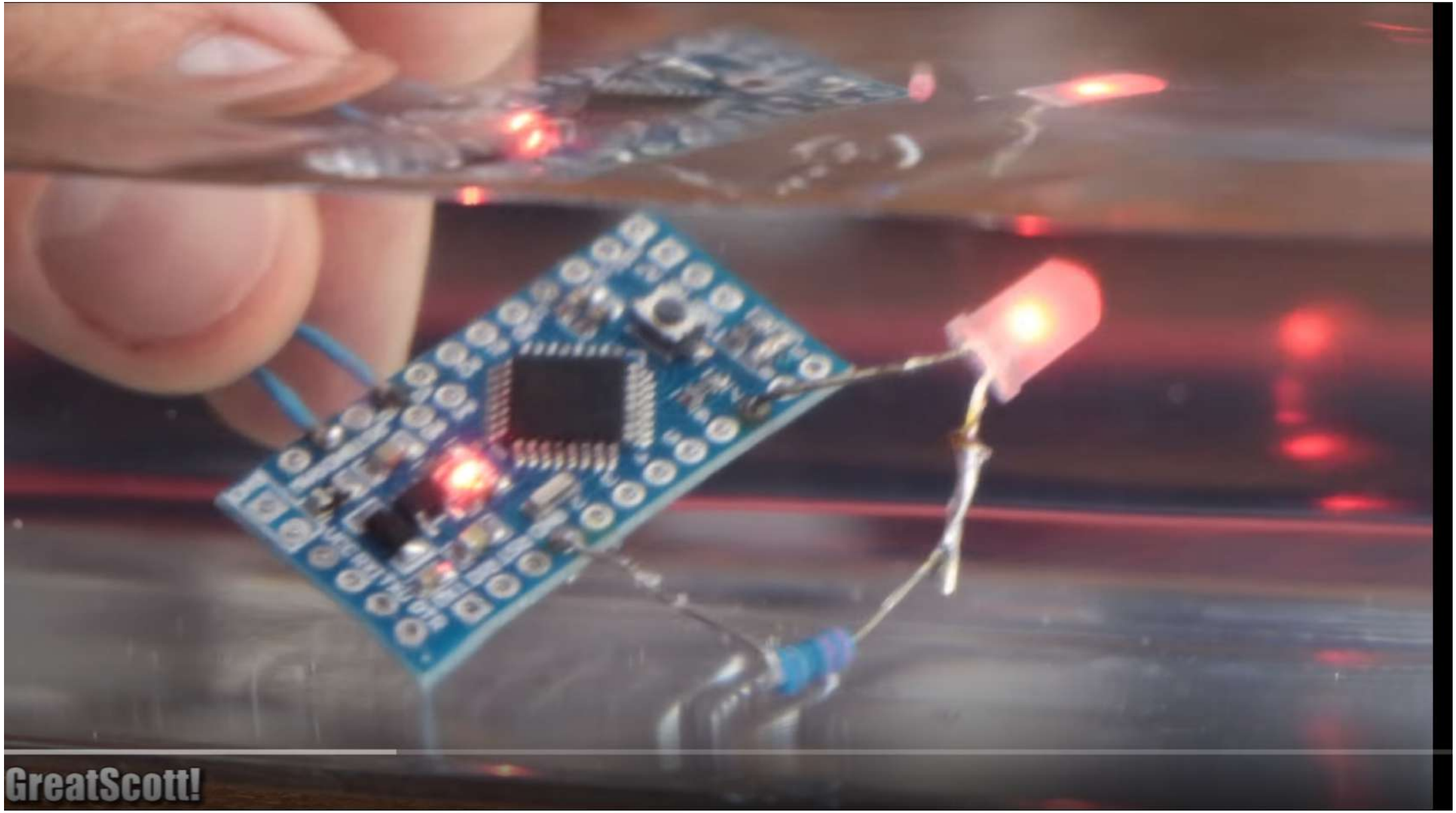


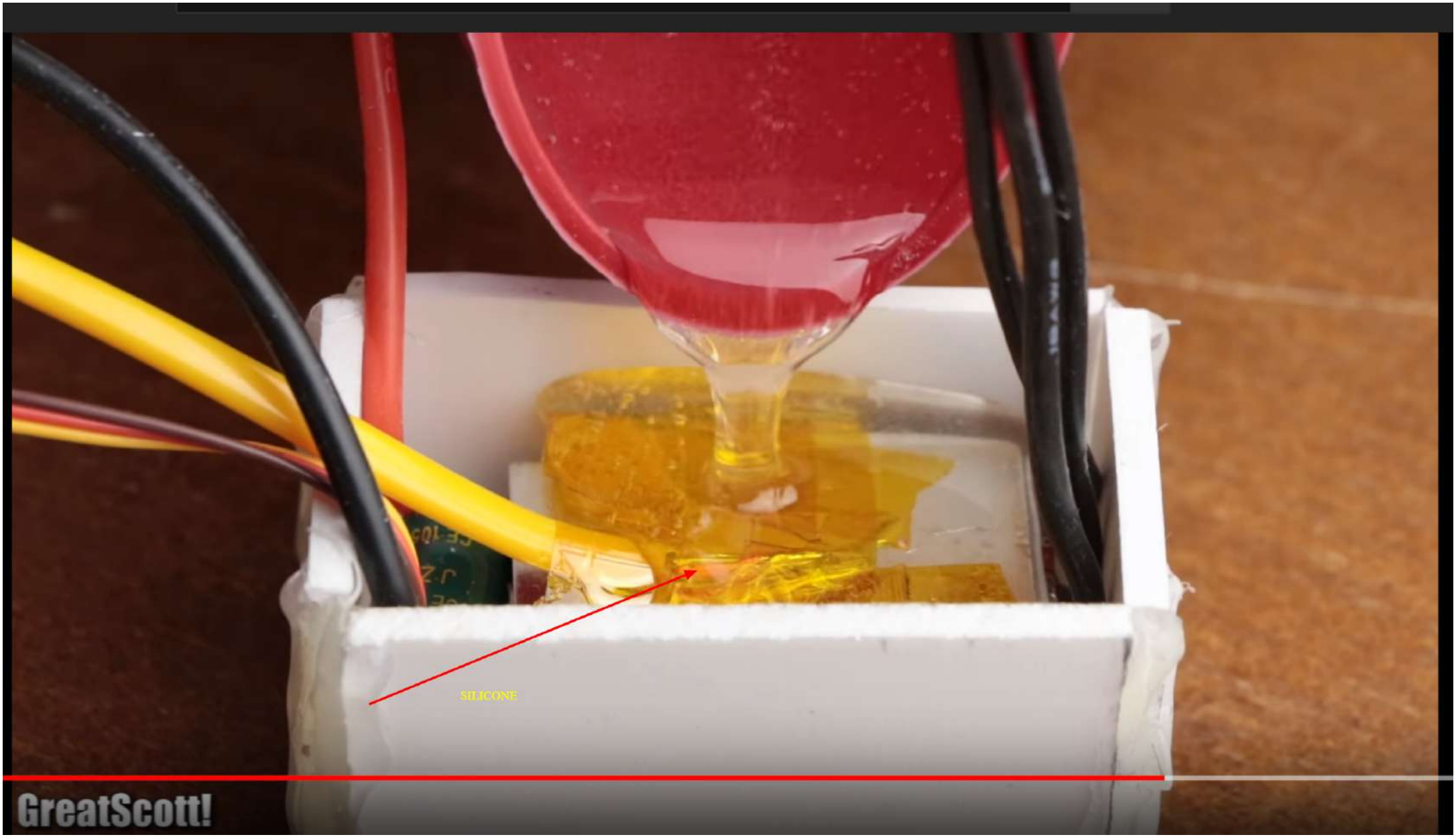


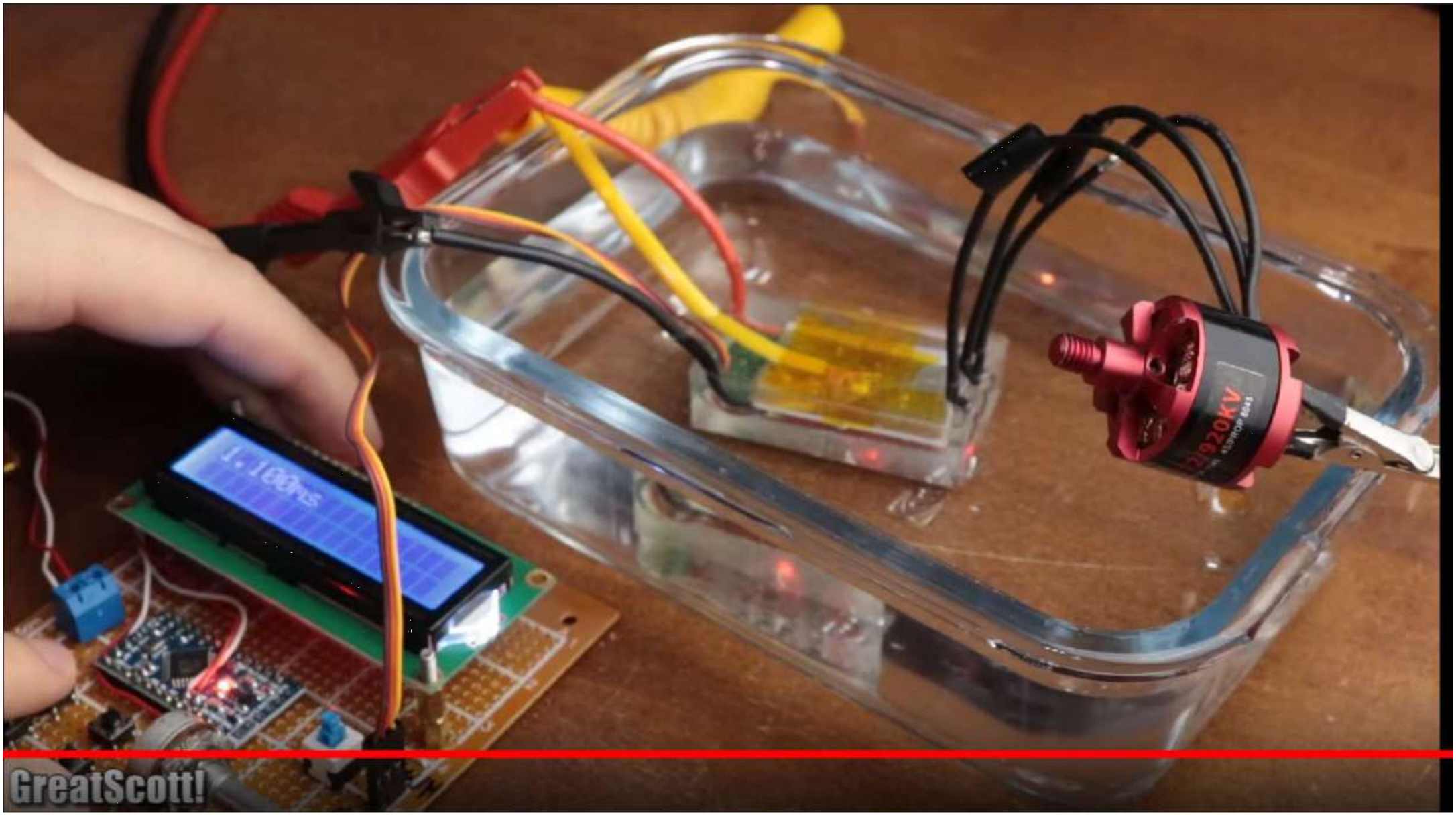
How to Waterproof Electronics || Nail Polish, Silicone, Potting Compound

Up next

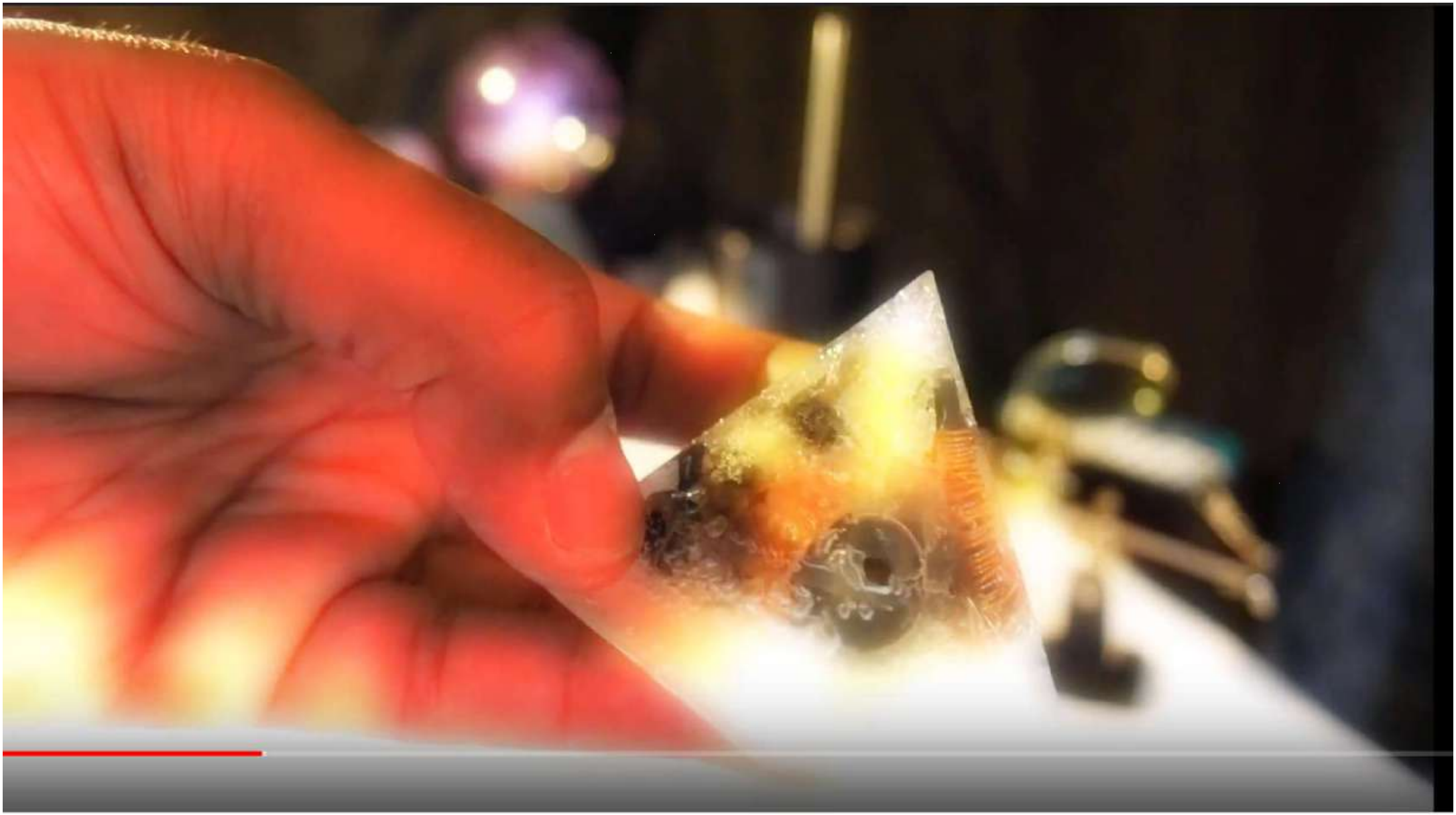

16.000
GreatScott!


GreatScott!

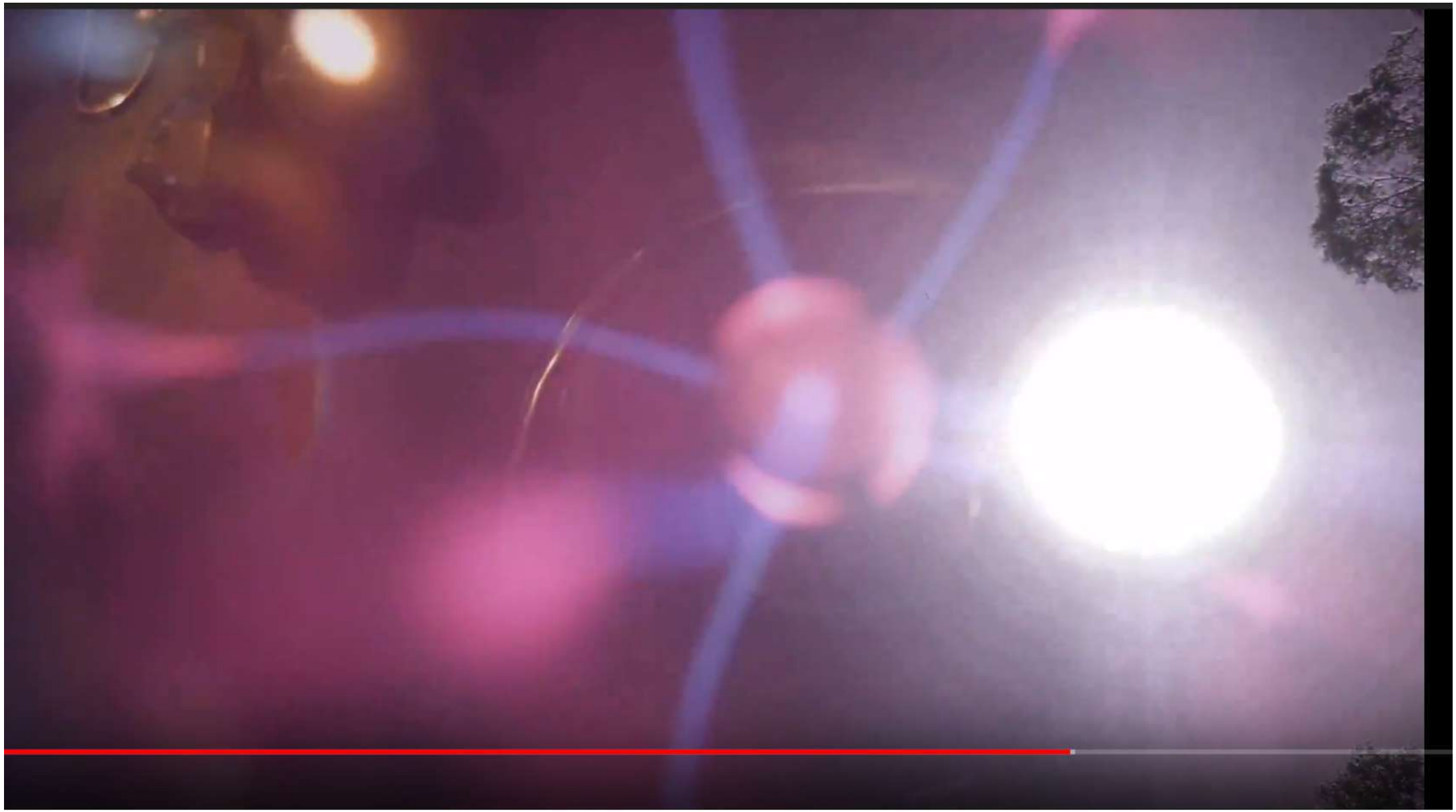

SILICONE
GreatScott!

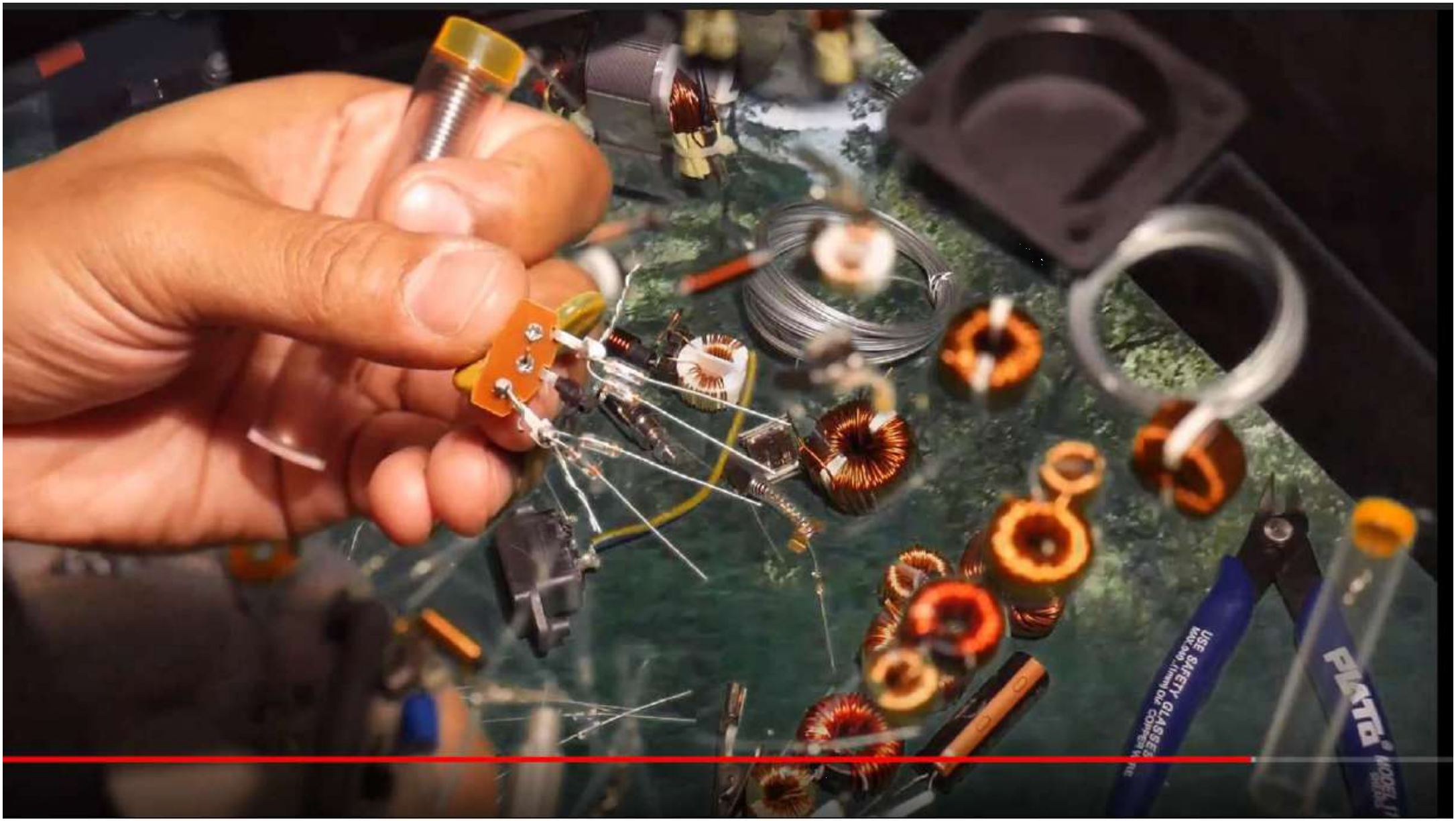

920KV
GreatScott!



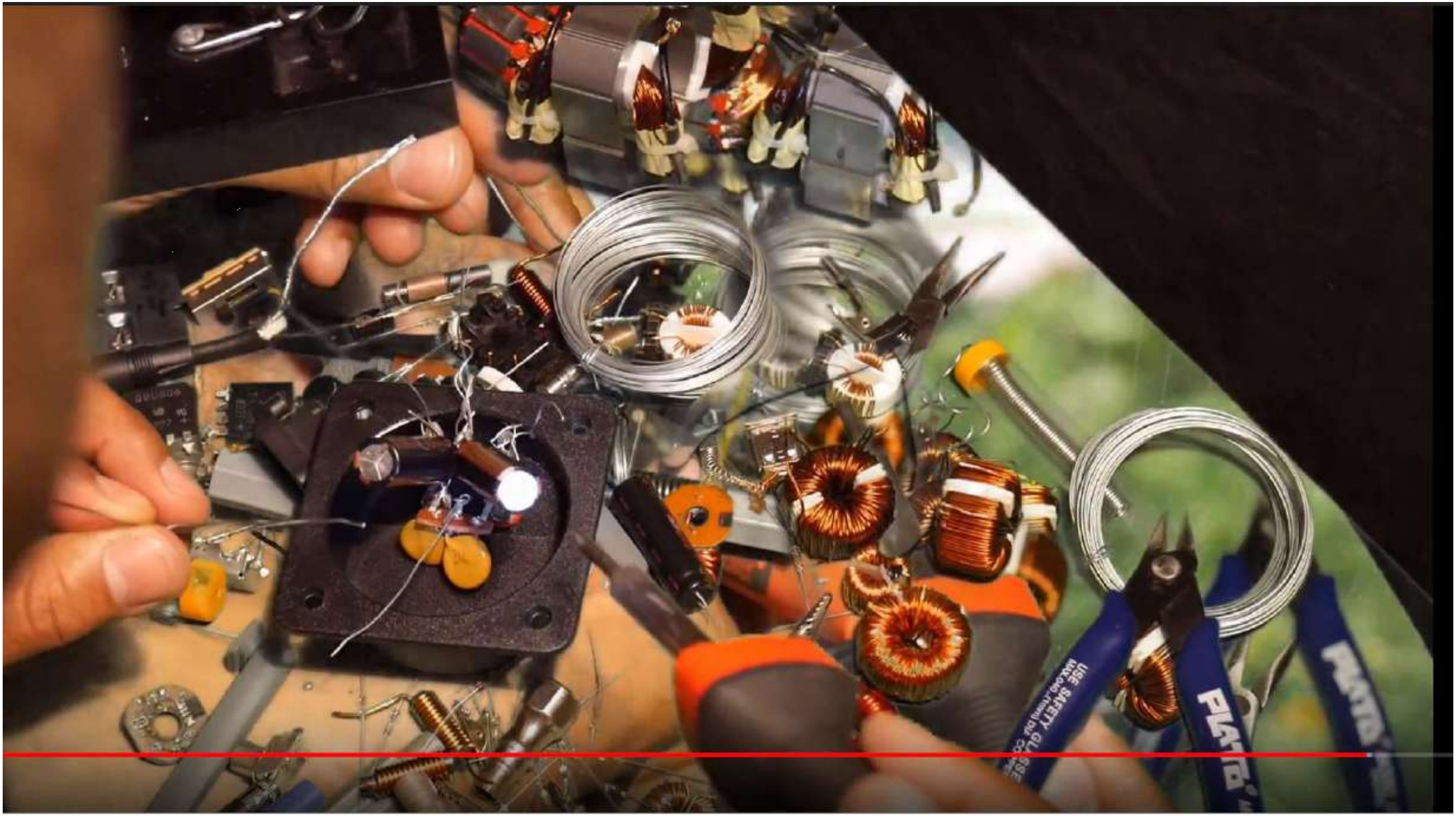




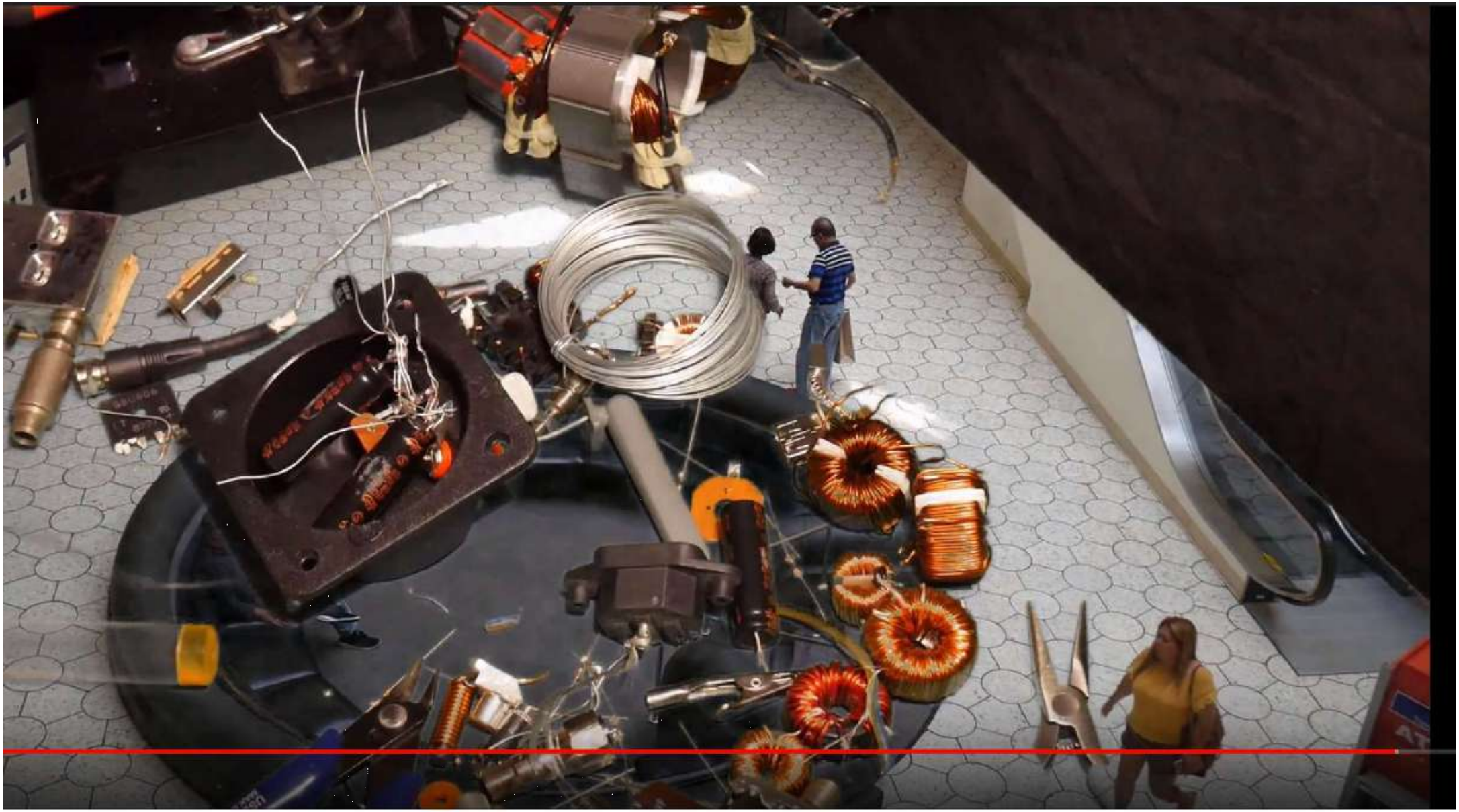


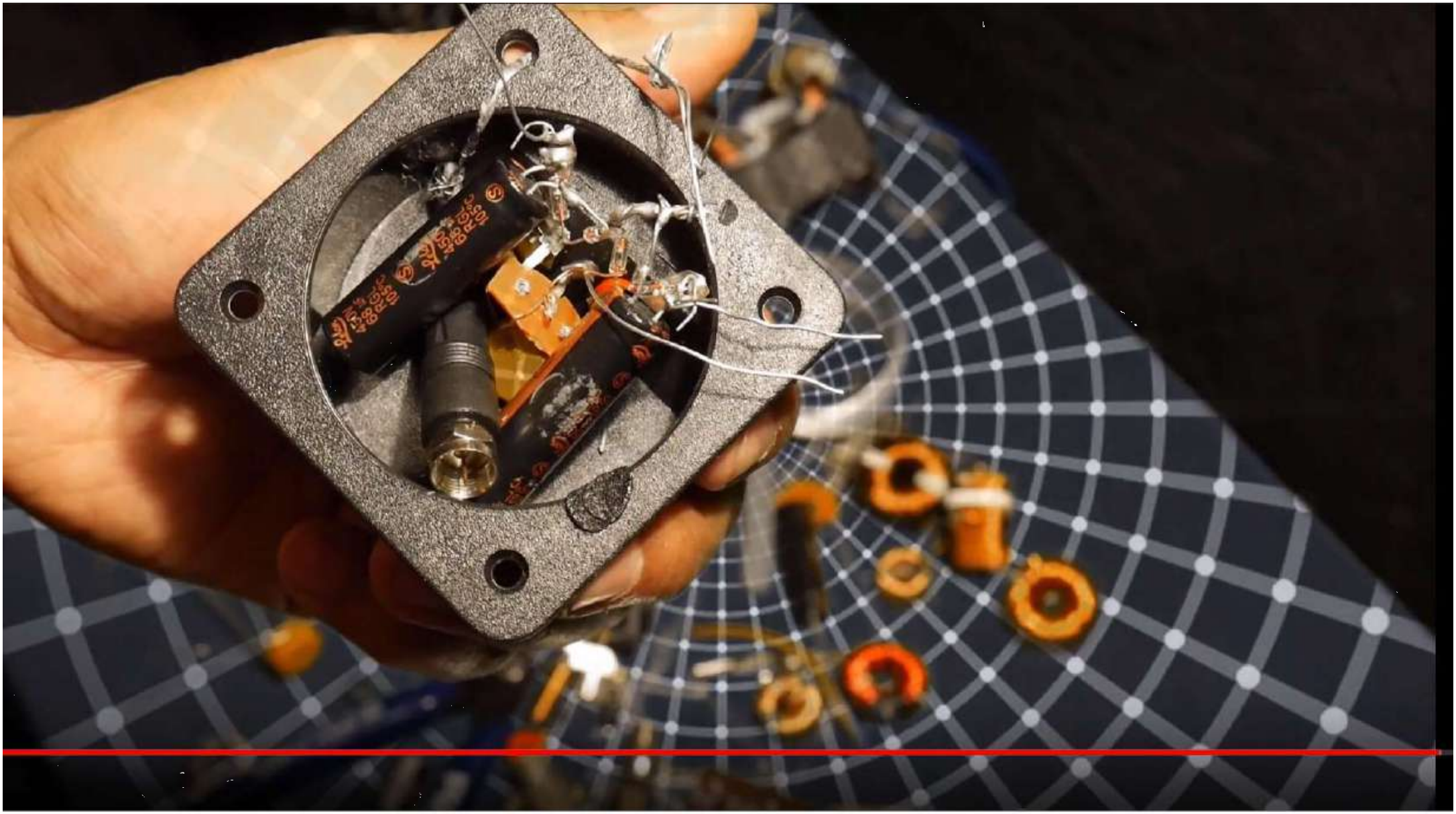

USE SAFETY GLASSES
MAX 240 J IMPACT
PLATO

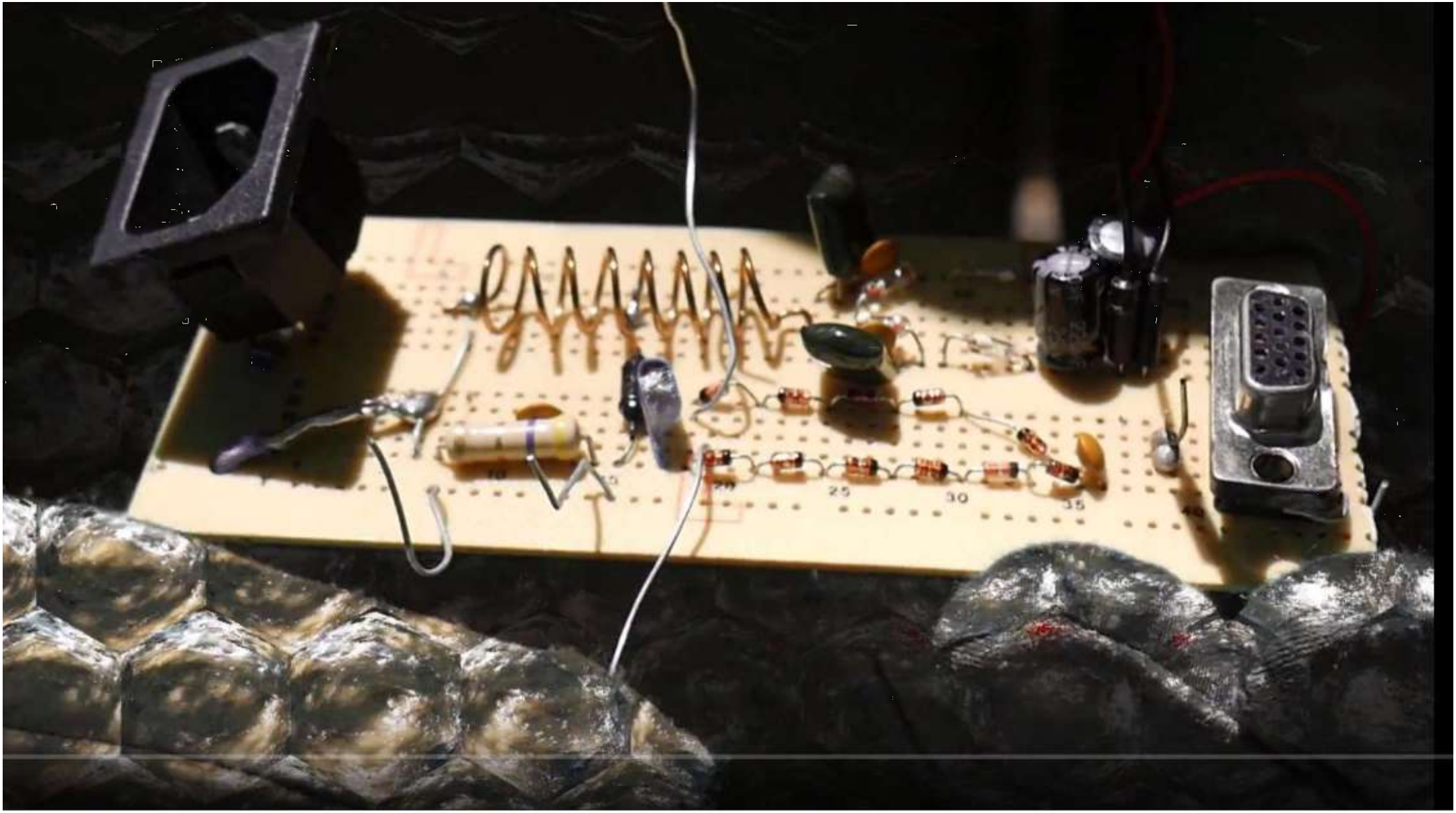
MODEL 170
SAFETY GLASSES

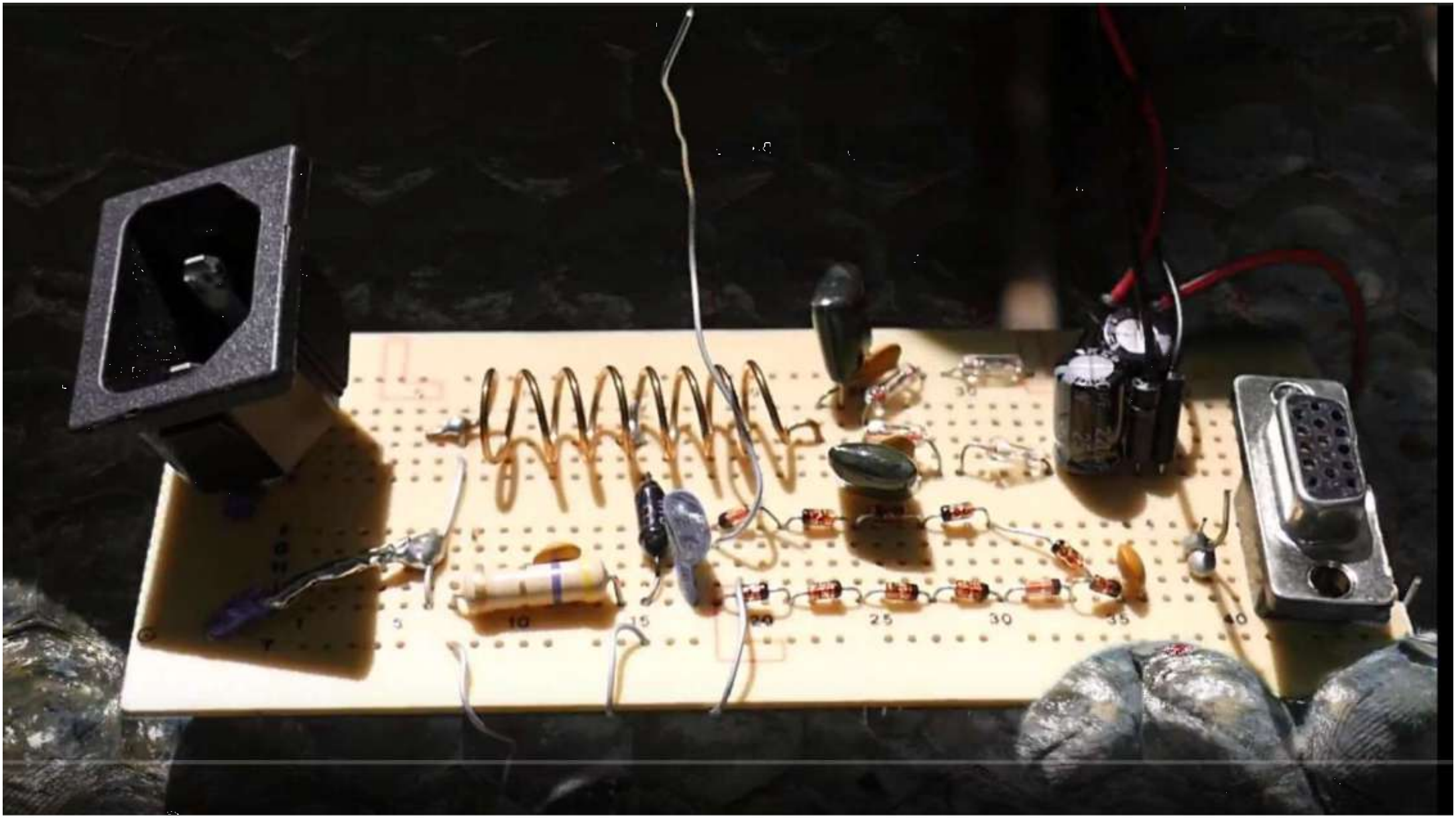

USE SAFETY GLASSES

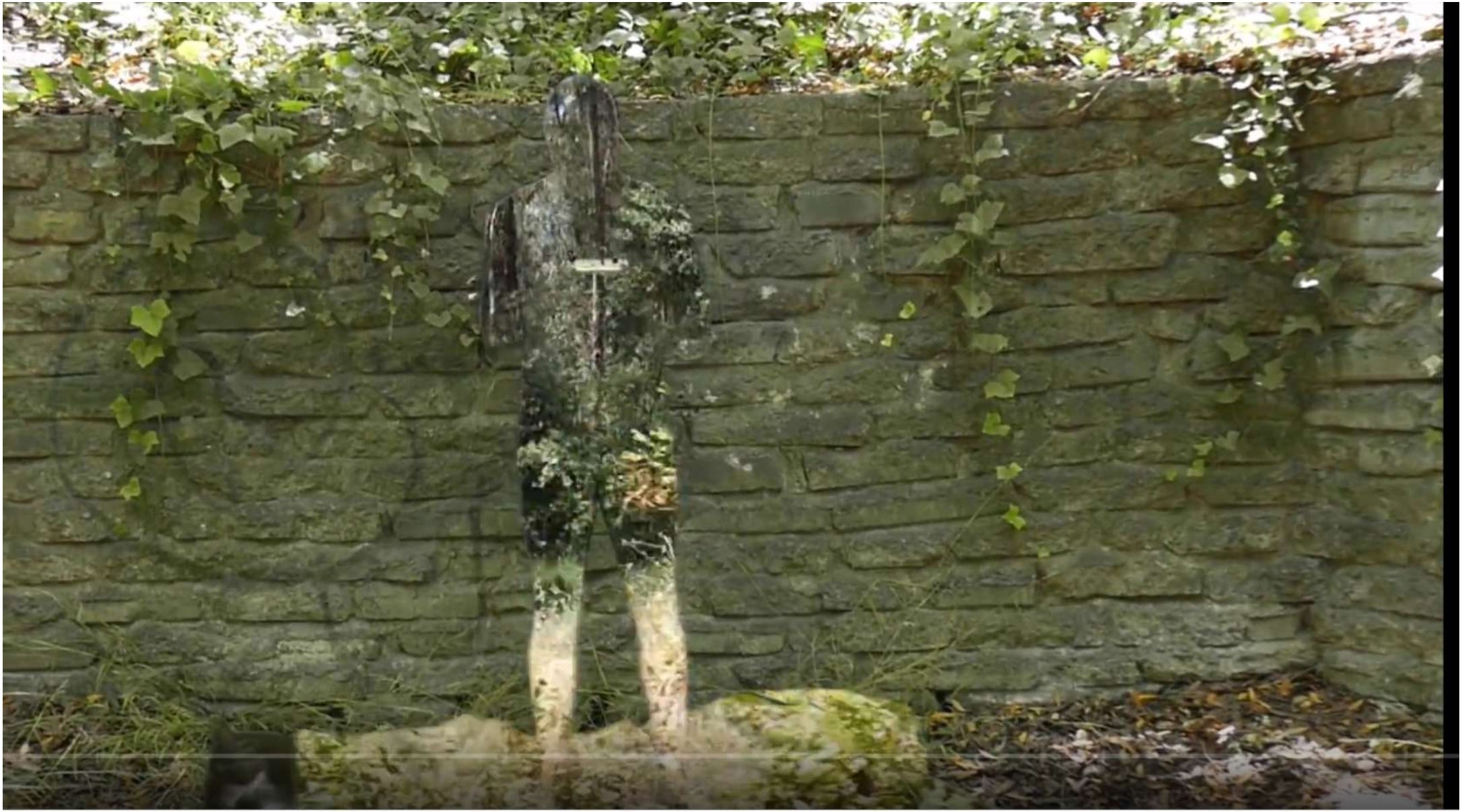




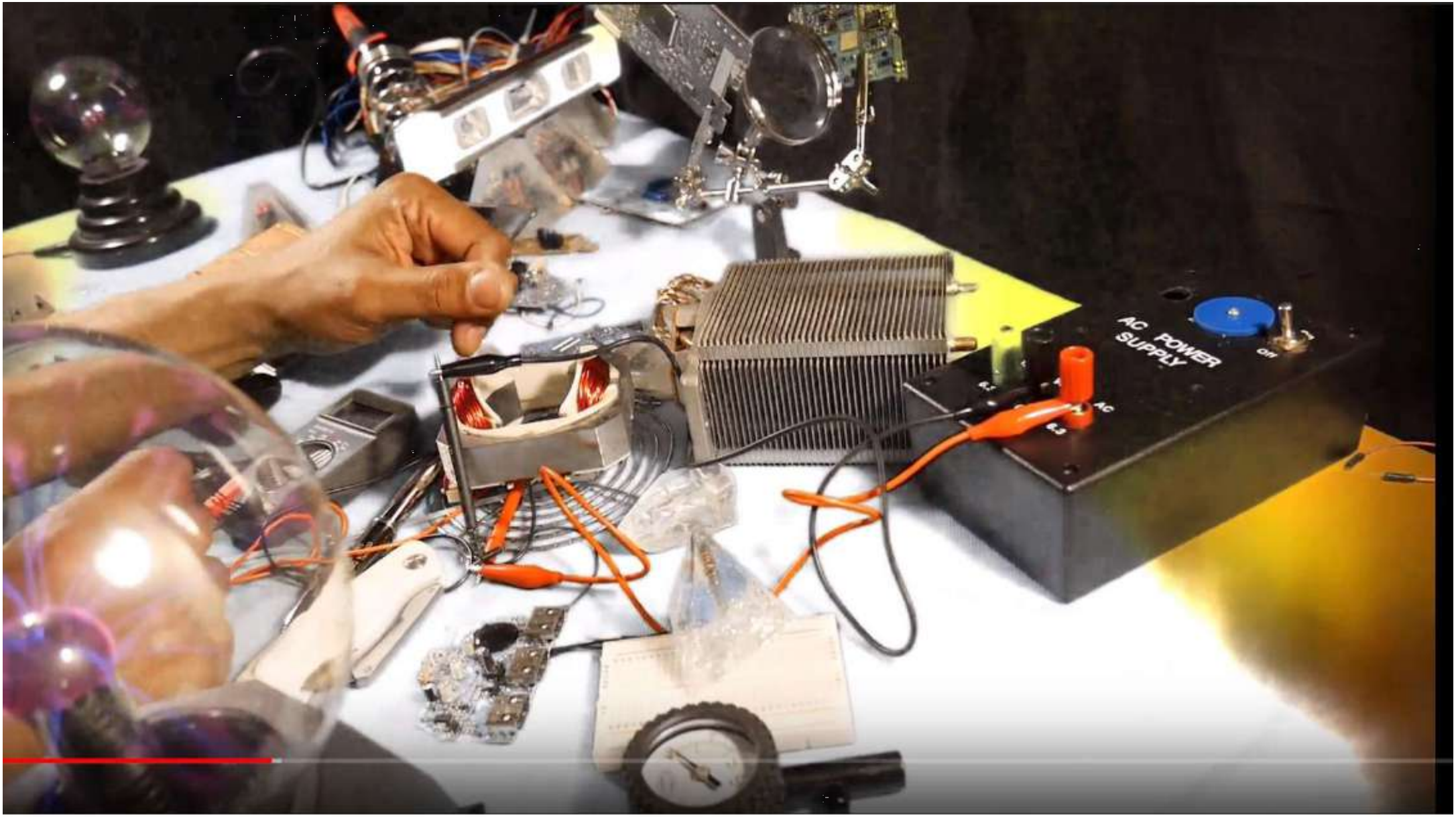





10
15
20
25
30
35
40



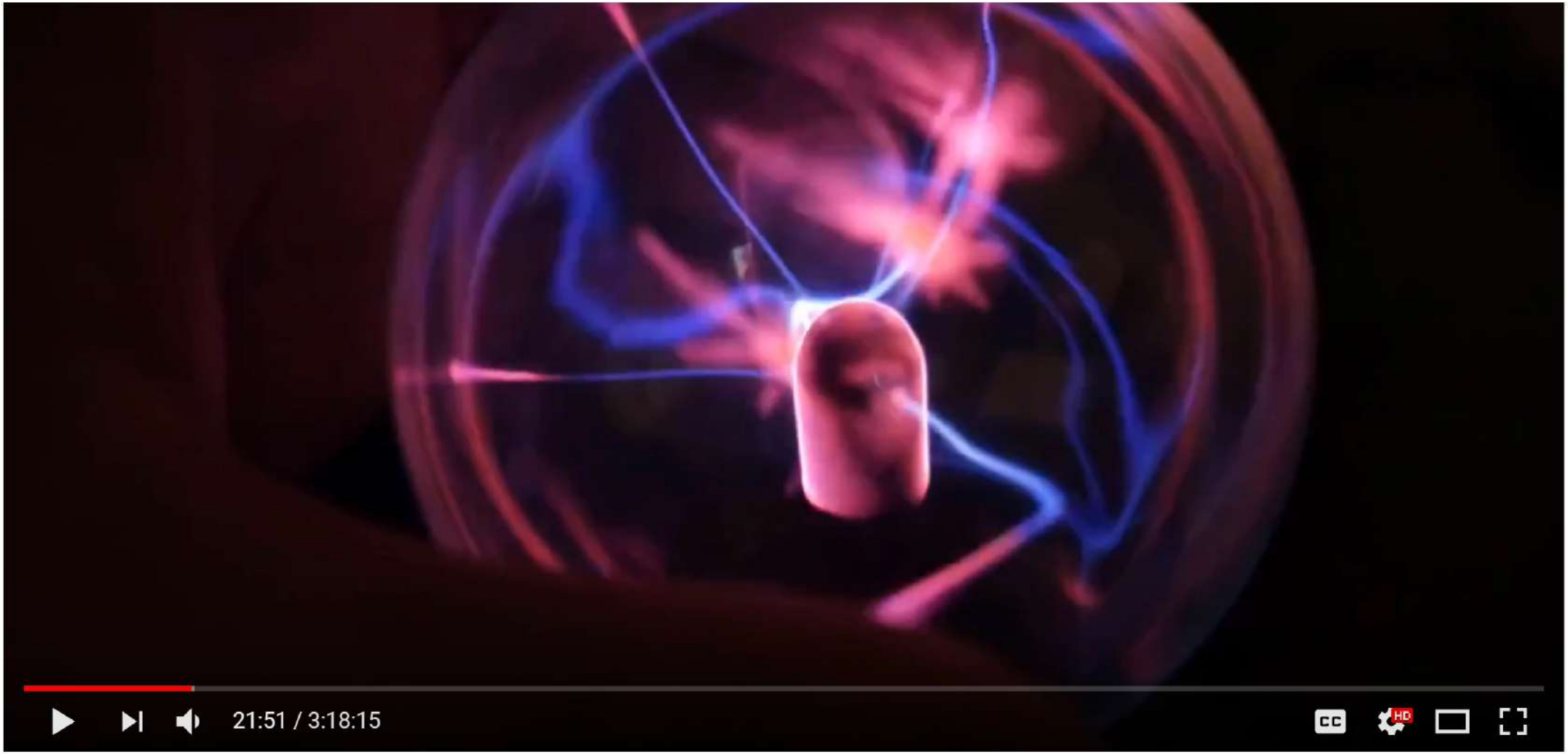

AC POWER
SUPPLY
AC


AC POWER
SUPPLY
OFF
AC

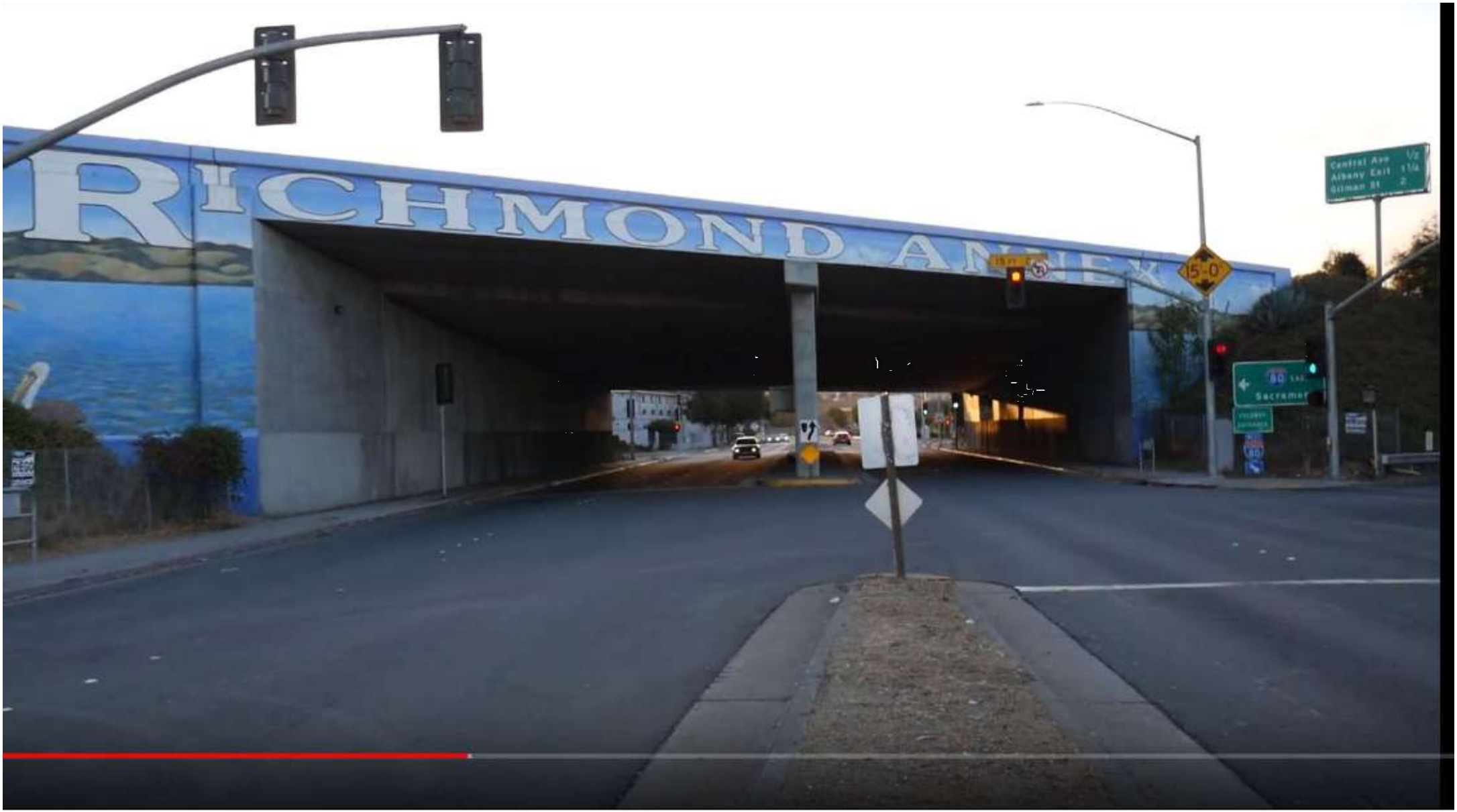

AC POWER
SUPPLY
Off
6.3
0
6.3

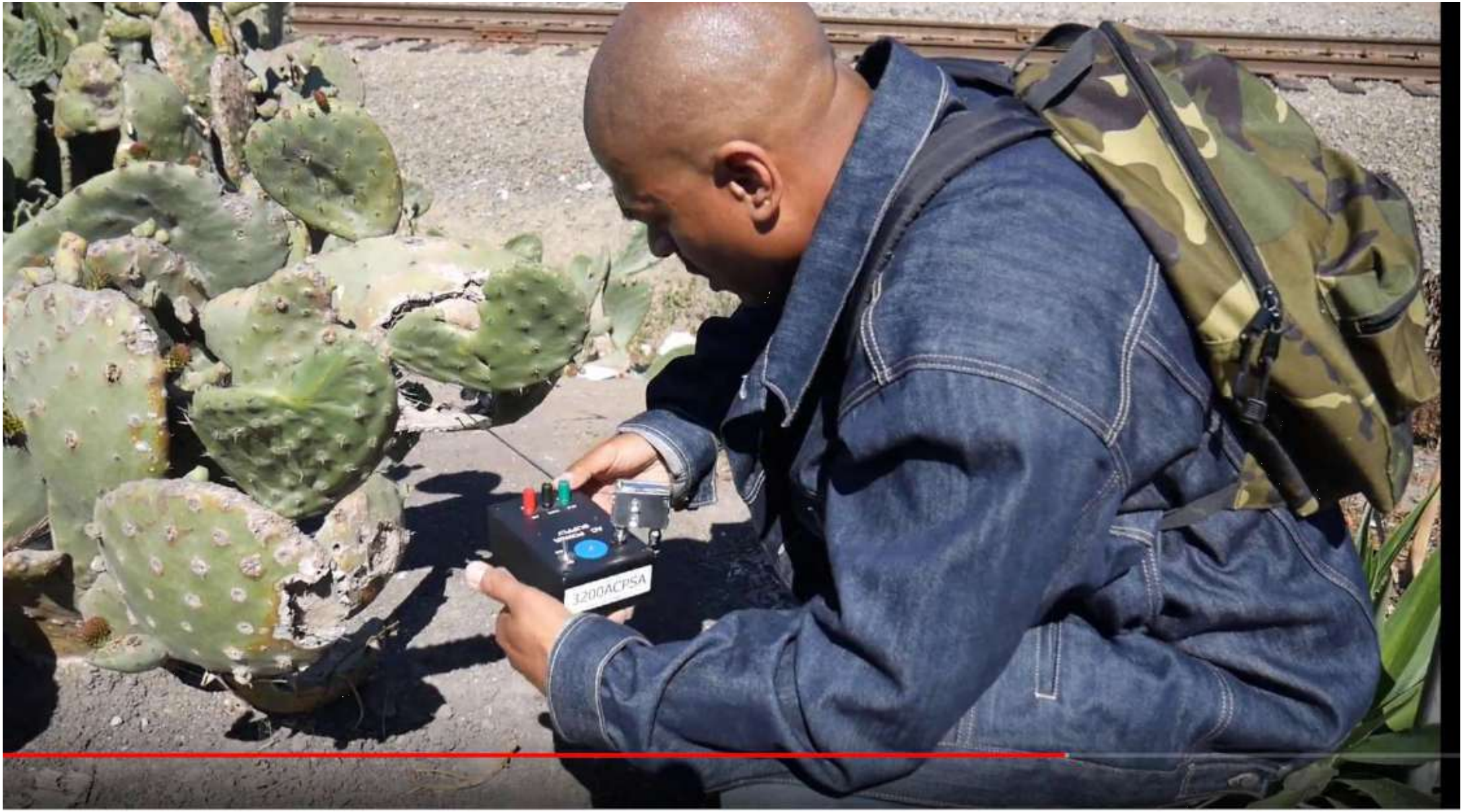



On
Off
AC POWER
SUPPLY
12.6
Volts
AC
6.3
0
6.3

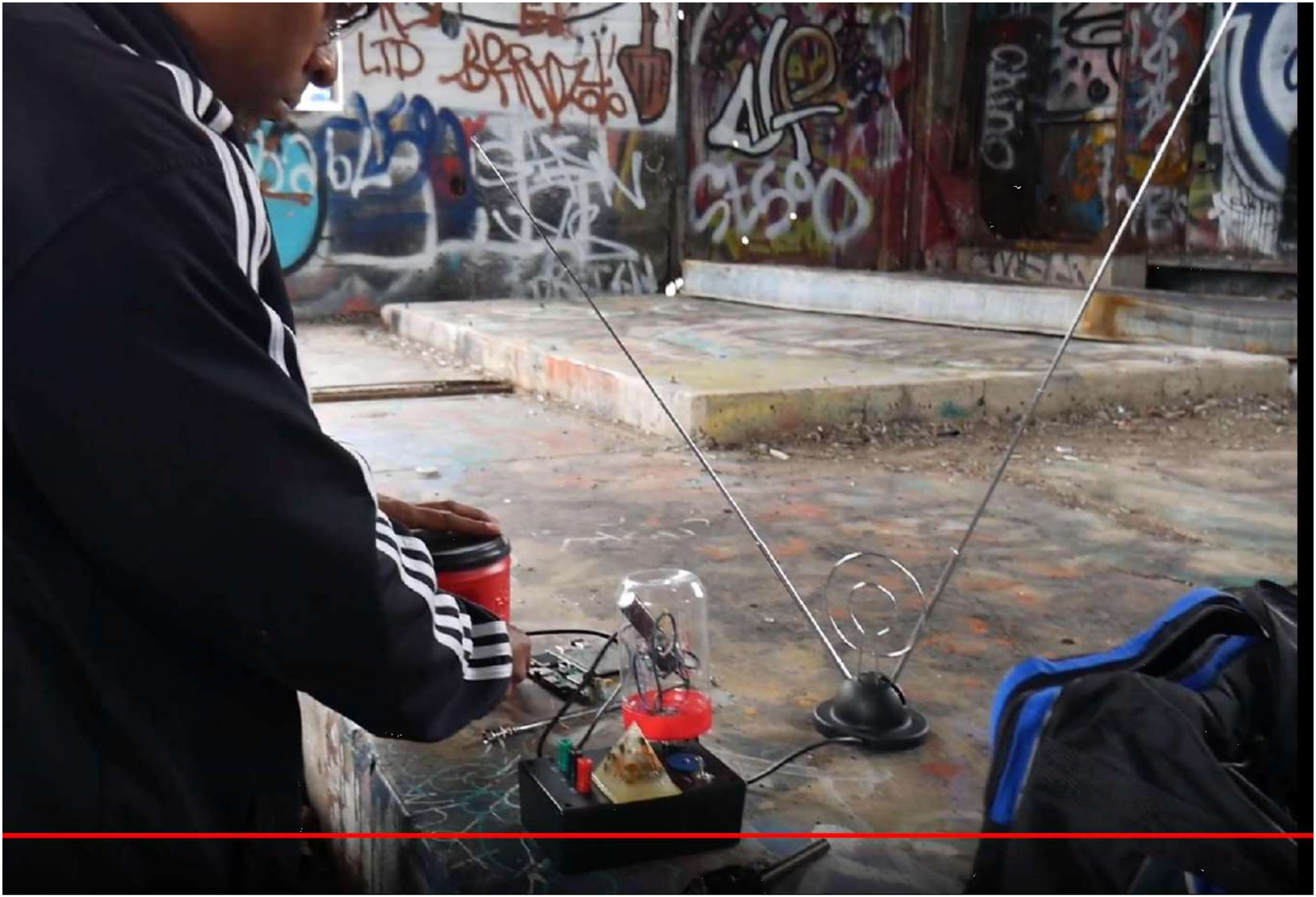

21:51 / 3:18:15




RICHMOND ANNEX
15-0
Albany Exit 1 1/4
Gilman St 2
80
Sacramen


3200ACPSA


RICH, PURE TASTE
Folgers
CLASSIC ROAST
AC POWER SUPPLY
AC
OFF


LTD











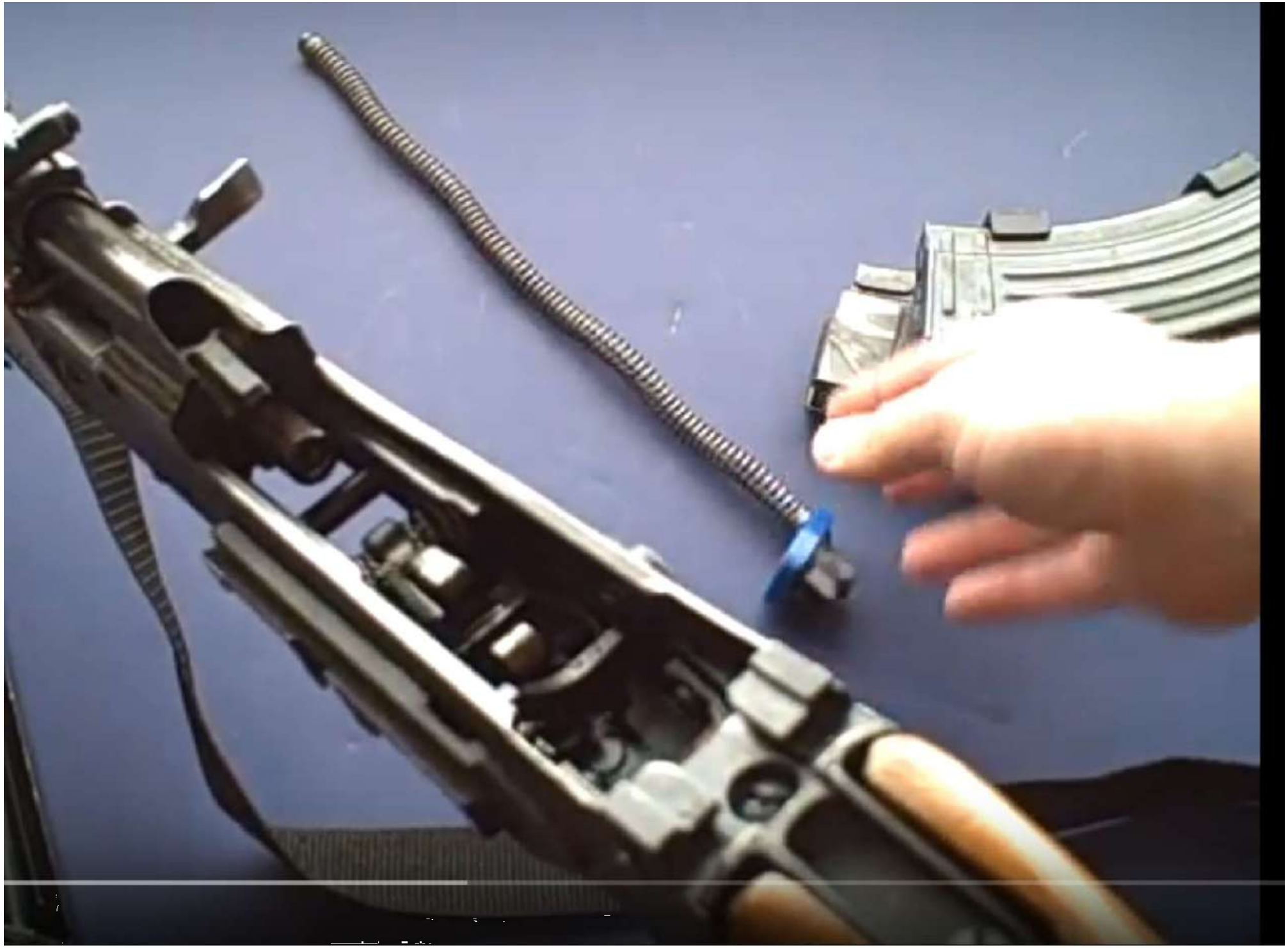






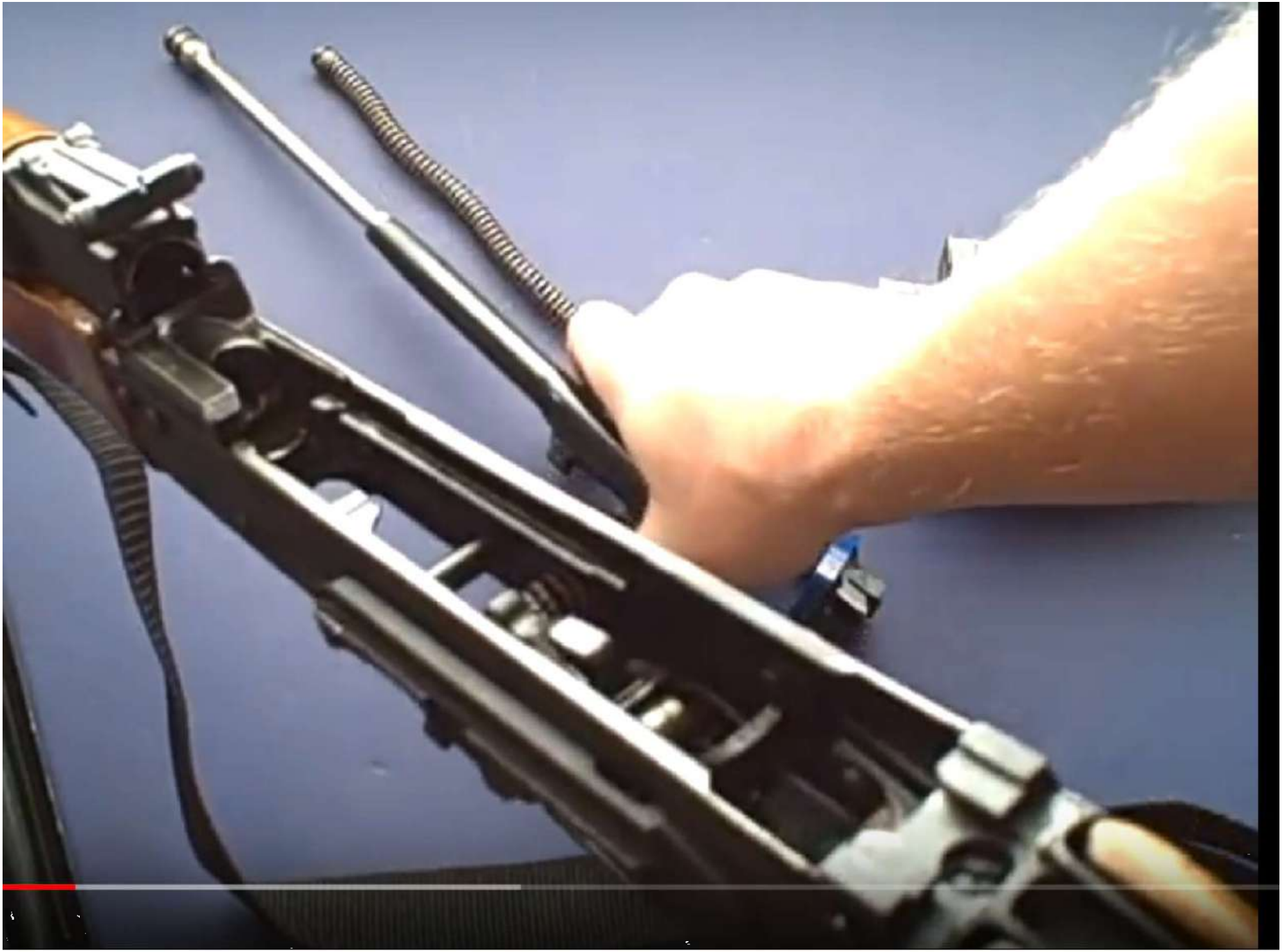

























































HOLOSUN




HOLOSUN


M4 CARBINE
CAL. 5.56mm
COLT DEFENSE
HARTFORD, CONN.
U.S.A.
SAFE
FIRE




HOLOSUN
FIRE
SAFE



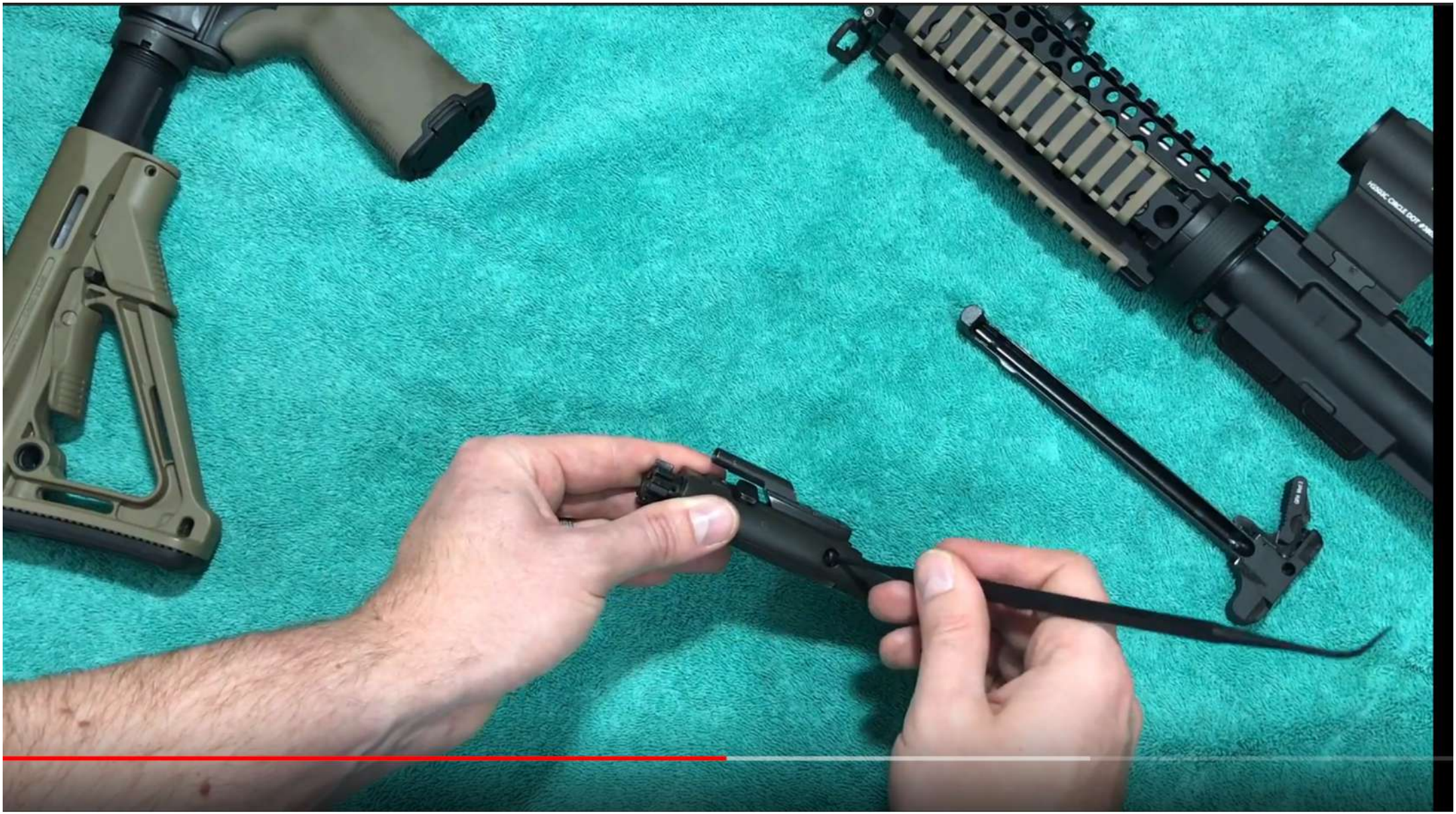





HOLOSUN
HS503C CIRCLE DOT







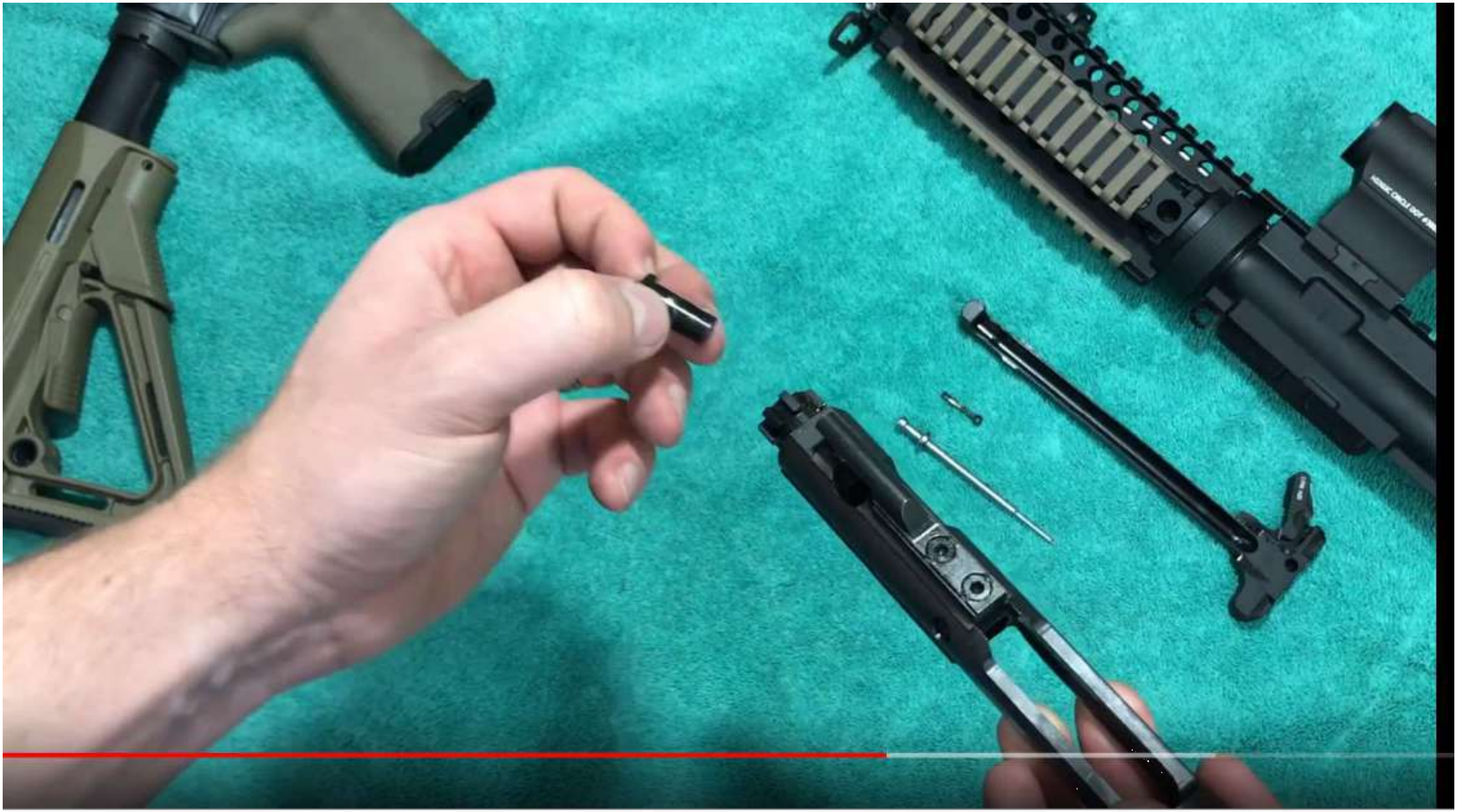


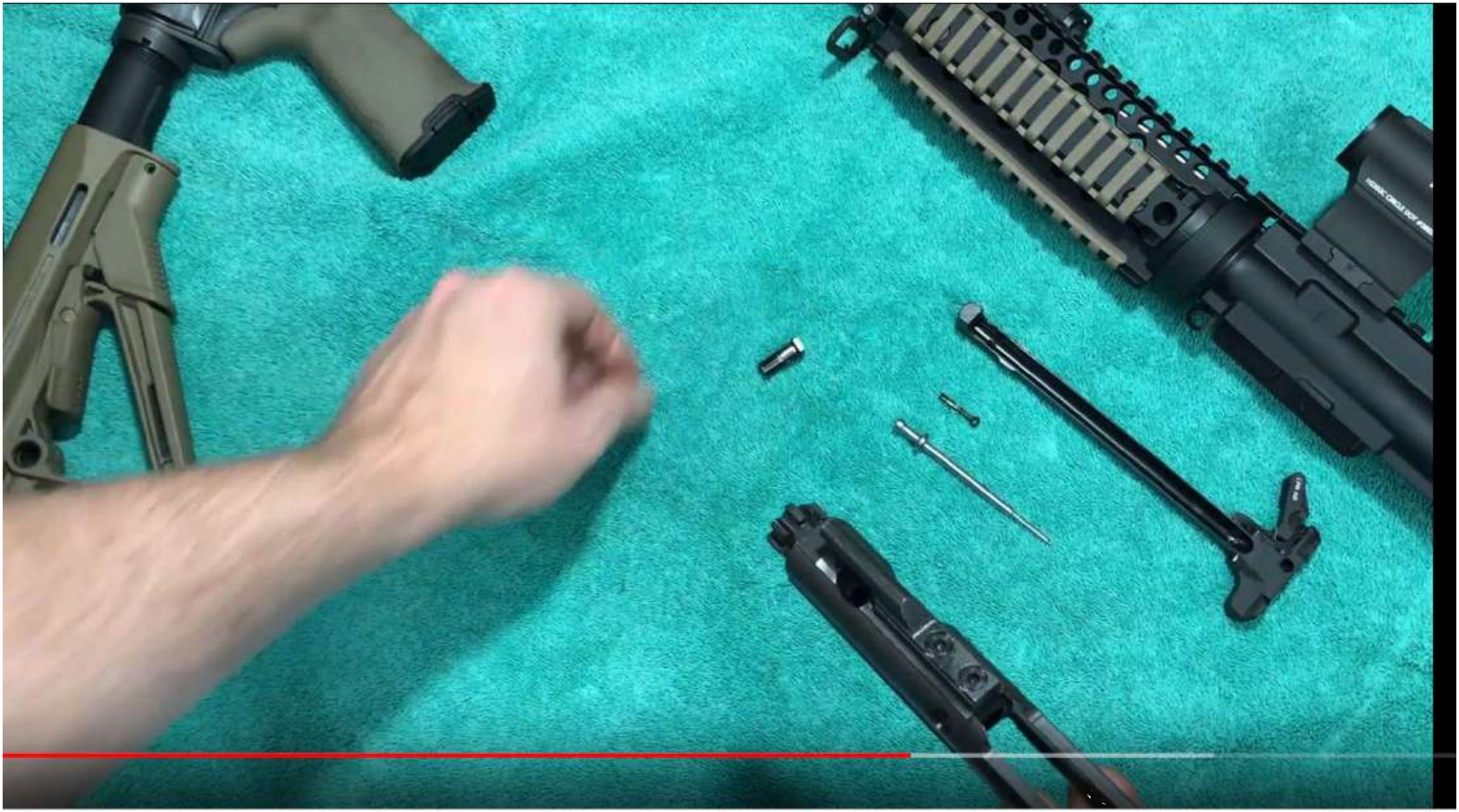






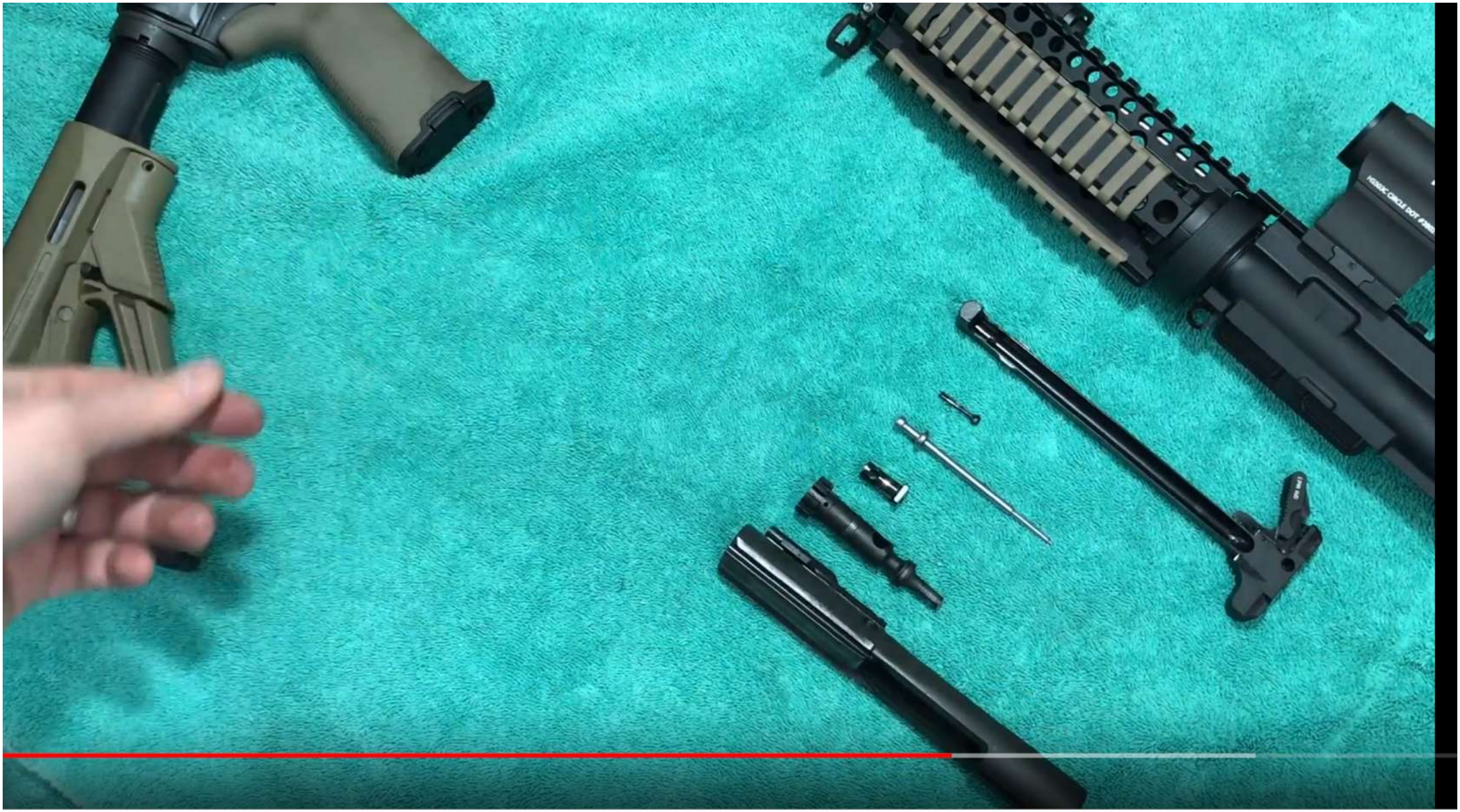













HOLOSUN


















HOLOSUN






FIRE
SAFE




HOLOSUN
COLT DEFENSE
HARTFORD, CONN.
U.S.A.
FIRE
SAFE
M4 CARBINE


Glock 19


9x19mm
30oz (loaded)
21oz (unloaded)


15 round
capacity


Slide Stop
Lever
Slide Lock
Magazine
Release
Trigger


- Remove the
magazine


- Retract the slide
- Inspect weapon
for ammunition


GLOCK 19 AUSTRIA 9x19
- Press the trigger
to the rear.


- Retract the slide 3/16"
- Move the slide lock down on both sides
GLOCK
19
AUSTRIA
9x19


- Move the slide forward
off the frame.


- Remove the recoil
spring assembly.

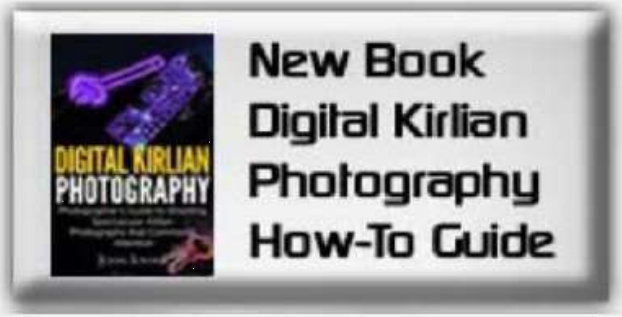

- Remove the barrel.



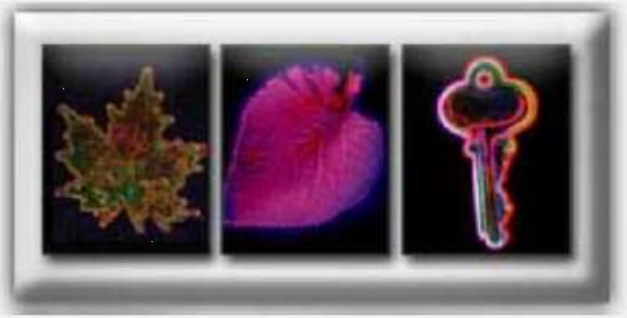

Glock 19



Kirlian Photography Device



New Kirlian Photography Book



Limited Edition Kirlian Prints

Building a Simple Kirlian Photography Device

The Kirlian device we are building uses a HV transformer. It is battery powered, but don't let that lull you into a false sense of safety. The Kirlian device generates pulses of high voltage that can provide a nasty shock. Still an advantage of being battery powered is portability.

In addition we will build a transparent electrode that allows one to use a standard camera (with bulb setting) to capture Kirlian images.

The schematic is shown in **Figure 2**. A completed circuit can be seen below the schematic. This is a simple manual device. It uses very few components. You would be hard pressed to find a simpler device that works as well. The prototype is built on a single piece of wood measuring *" x 10" x ¾" thick (see photo). The batteries B1 and B2 are 67.5-volt photo (instrument) batteries wired in series to produce 135 volts.

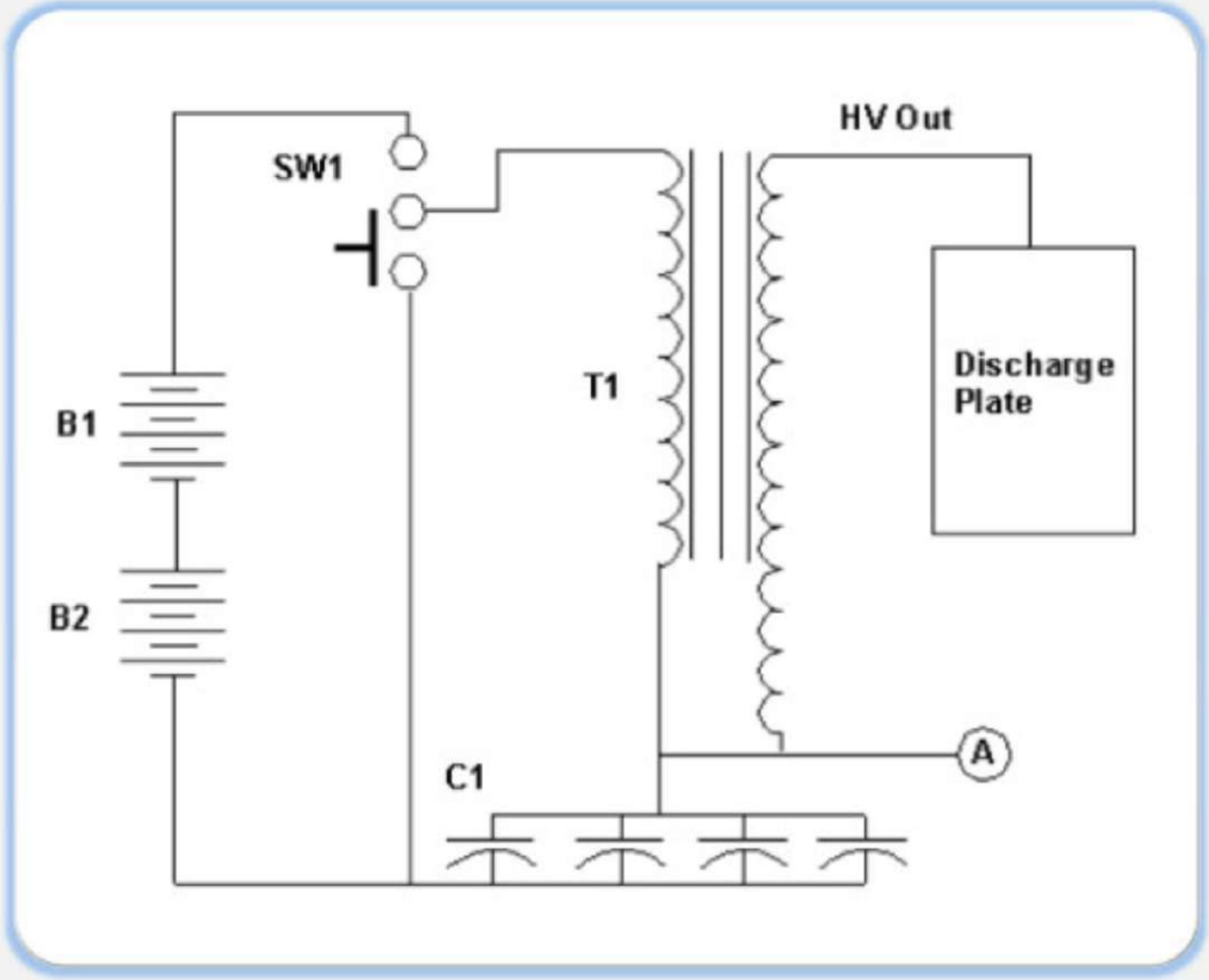

HV Out
SW1
T1
Discharge
Plate
B1
B2
A
C1

Figure 2



If the photo batteries are not available you may want to try wiring 10 or more 9-volt batteries in series. The discharge will not be as intense, but it will work. Another option is to take the output from a 120V/24V step down transformer connected to a voltage quadrupler. With the 24V (AC) output wired to a voltage multiplier (4x), the unit should produce about 100 volts that can be used for the power supply for this Kirlian device.

The capacitors C1-C4 are wired in parallel as shown in **Figure 2.**

The transformer T1 is a high voltage auto-transformer. Auto as in self-inductive, not auto, like automobile. The T1 transformer has three wires coming out of it: two enamel wires and one green insulated wire from the center. The green insulated wire is the high voltage wire that connects to the discharge plate. The two enamel wires are the primary wires that are connected to switch SW1. There is no polarity with the enamel wires. So it doesn't matter which enamel wire is connected to the switch, and which is connected to the capacitors. Either way the circuit will function properly.

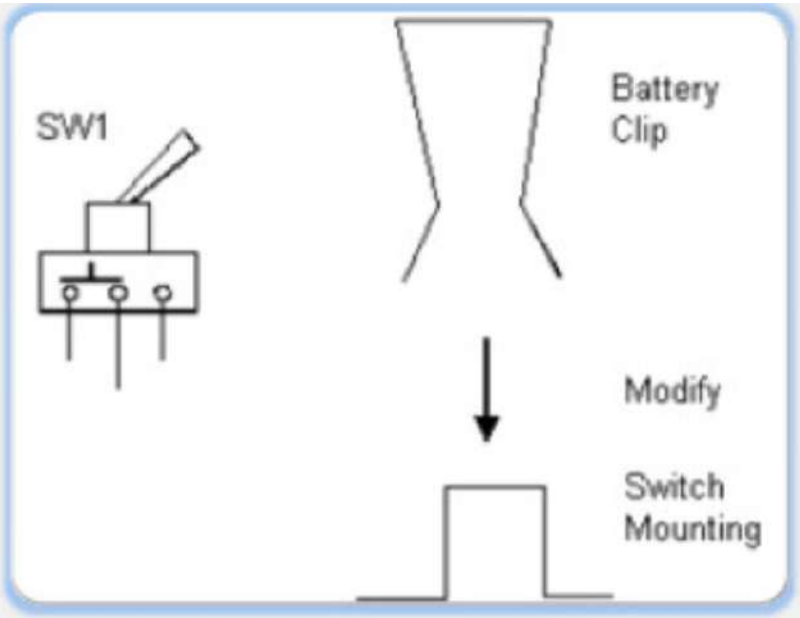


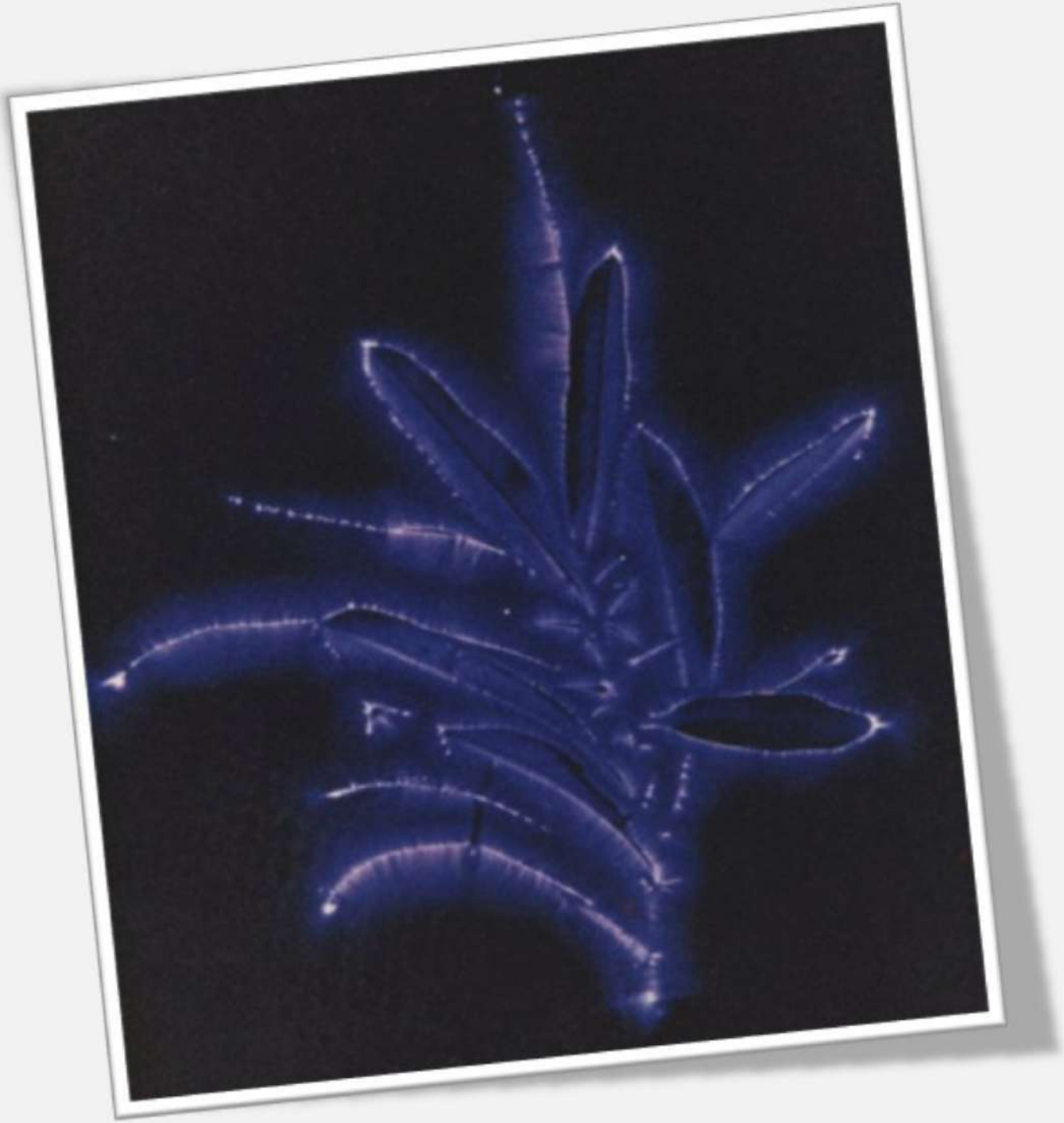
Figure 3

The toggle switch SW1 is a single pole double throw "momentary" contact. The switch has solder wires on the bottom, see **Figure 3.** This particular switch doesn't lock or stay in the opposite position. A built in spring immediately brings the switch back to its original position. To operate the device, toggle the switch on and off. When the switch is in the "on" position, it closes a current path to the HV transformer and capacitor bank.

The switch is important and must be wired correctly to obtain maximum benefit. Looking at the schematic shows how the switch appears in its resting state. In the resting state the batteries are disconnected from the circuit. This preserves the life of the batteries. Also the discharge path from the capacitors is closed. This prevents a potential shock hazard from being stored in the capacitors, to be unleashed on an unsuspecting experimenter.

To mount the switch to the board a metal battery clip (9-volt) is used, see parts list. The clip is bent to make a U shape as shown in **Figure 3.** The center hole in the clip is enlarged to fit the switch SW1. A hole is drilled in each ear of the clip to secure it to the board with two wood screws. The switch is secured to the clip, and then the assembly is secured to the board.

Below is an example of a photograph taken with the Kirlian device.



Quantum EMF Radiation Protectors
Biomeredian Aura Field Tests - Actual Bodys Bio Energic Shield

Wikipedia: *Aura -...an aura is a field of subtle, luminous radiation surrounding a person or object like the halo or aureola in religious art. The depiction of such an aura often connotes a person of particular power or holiness.[citation needed] It is said[by whom?] that all objects and all l iving things manifest such an aura.*



Kirlian Camera



Taking Aura Picture

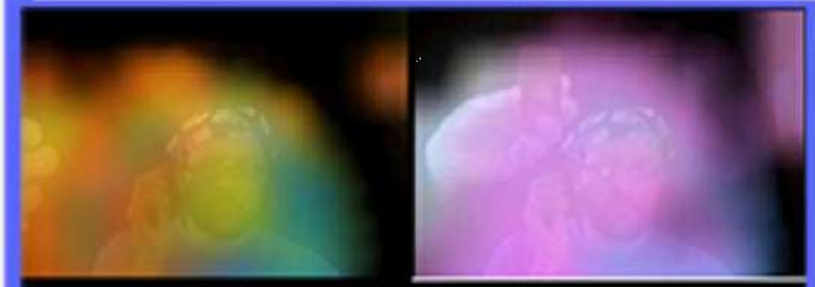
Vortex Bio Shield
RADIATION PROTECTOR SHIELD

Large Aura Means Stronger Energy Field Balance to Fight EMF Interference Before and After



Vortex BioShield
Quantum EMF Radiation Harmonizer Shield
Amazingly Increases Bio Energy
Providing Energy Shield

Above: Aura Before and After Using VortexBioShield



Before and After pictures showing change in Bio Energetic field when VortexBioShield is in use





The Human Aura in a healthy woman after a diagram by Walter John Kilner (1847–1920). The picture depicts Kilner's "inner and outer auras." Colours have been added for illustrative purposes and have no other significance.




AURA CAMERA







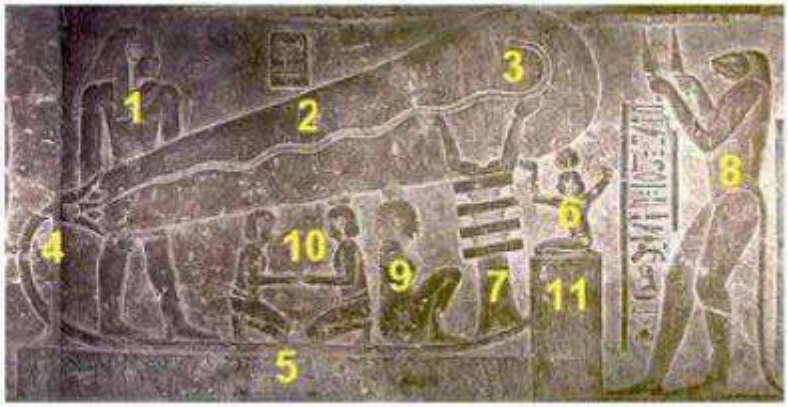








1. *Priest*
2. *ionized fumes*
3. *electric discharge (snake)*
4. *Lamp socket (Lotos)*
5. *Cable (Lotos stem)*
6. *Air god*
7. *Isolator (Djed-Pillar)*
8. *Light bringer Thot with knifes*
9. *Symbol for "current"*
10. *Inverse polarity (Haarpolarität +)*
11. *Energy storage (electrostatic Generator?)*

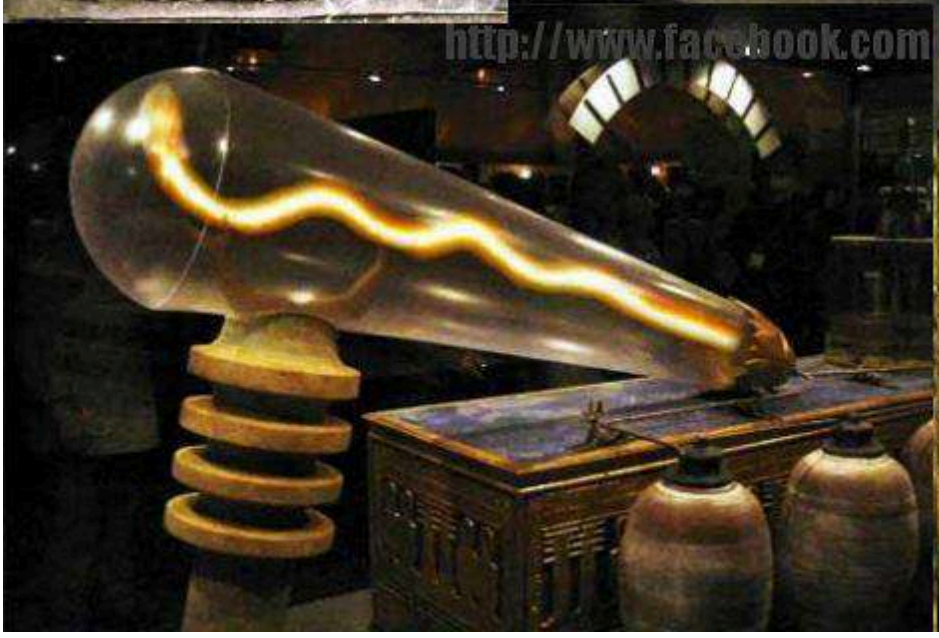








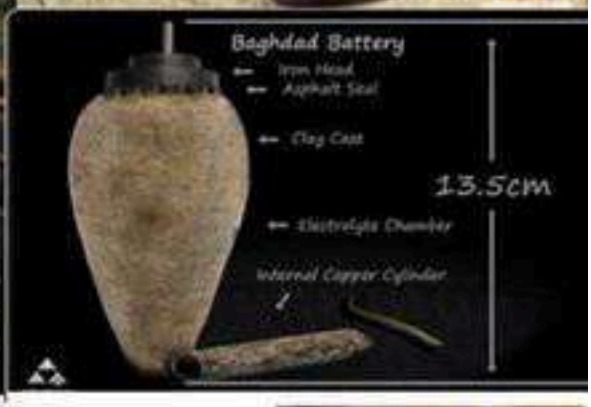
http://www.facebook.com/InfoKrabi70bili

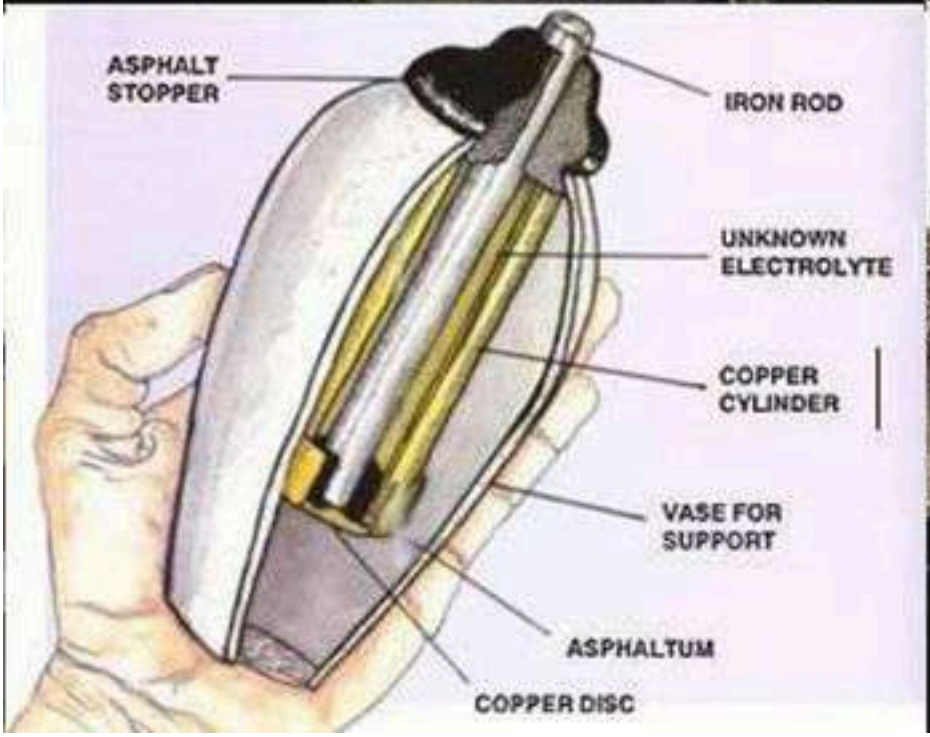





http://www.facebook.com/UfoKruhyVobili

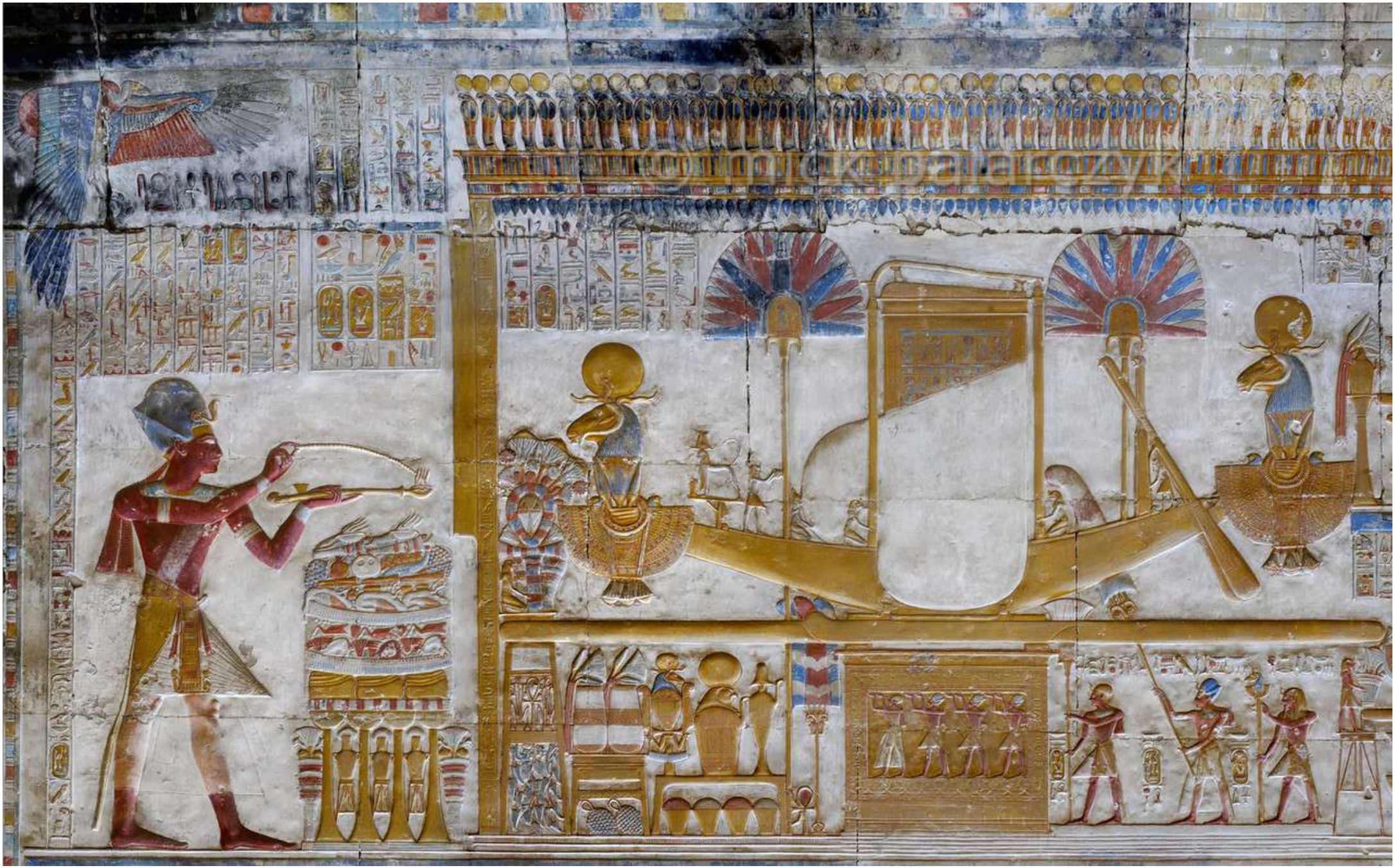



Baghdad Battery
Iron Head
Asphalt Seal
Clay Cast
13.5cm
Electrolyte Chamber
Internal Copper Cylinder

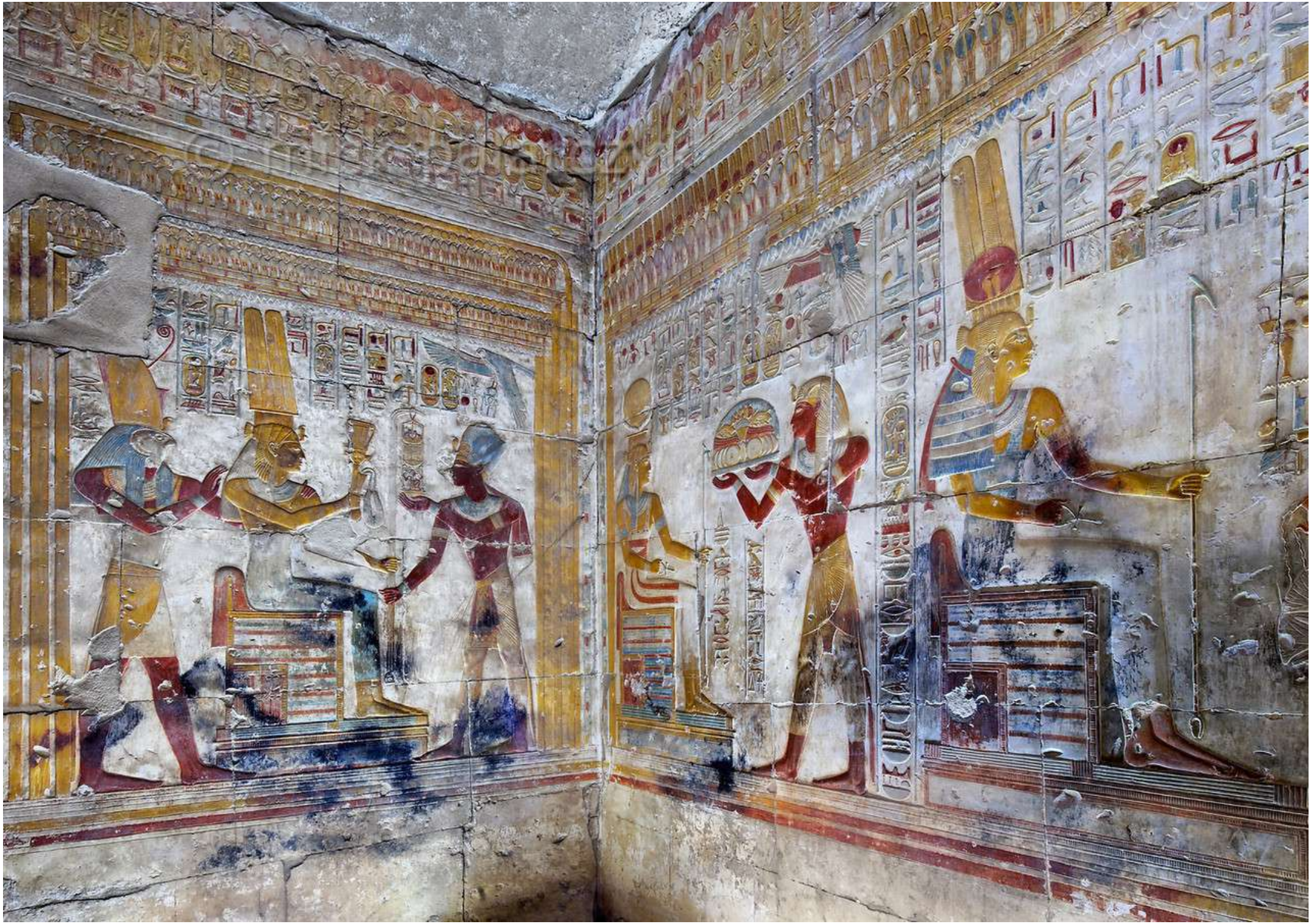

ASPHALT STOPPER
IRON ROD
UNKNOWN ELECTROLYTE
COPPER CYLINDER
VASE FOR SUPPORT
ASPHALTUM
COPPER DISC














PETRIFIED FOREST
NATIONAL PARK
NATIONAL PARK SERVICE

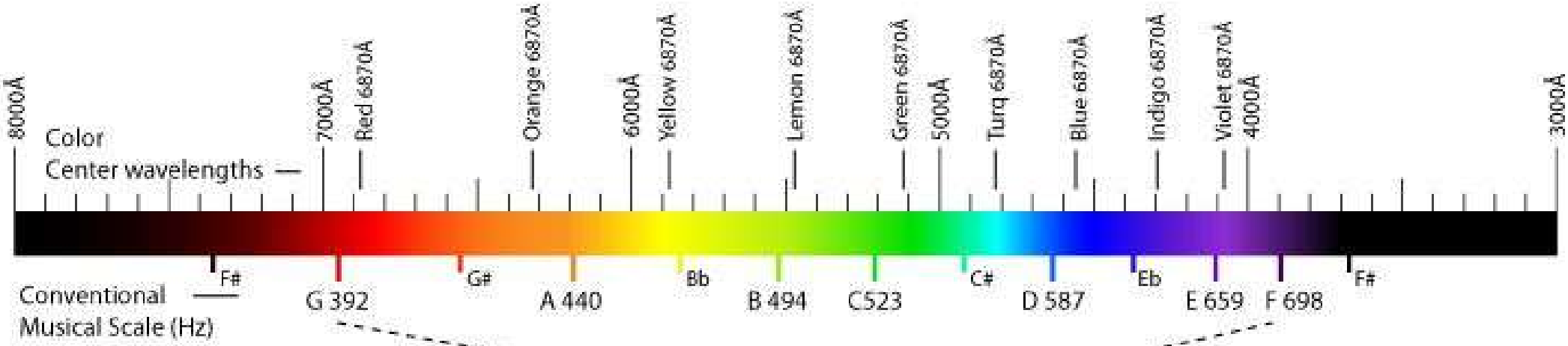




Note	Hertz Lucy Tuned	Equivalent Wavelength*	Color
A	440	619.69	Orange-Yellow
A#	457.75	595.66	Yellow-Orange
Bb	472.27	577.34	Yellow
B	491.32	554.95	Yellow-Green
Cb	506.91	537.89	Green-Yellow
B#	511.13	533.44	Green
C	527.35	517.03	Green
C#	548.62	496.99	Green-Blue
Db	566.03	481.70	Blue-Green
D	588.86	463.03	Blue
D#	612.61	445.08	Blue-Violet
Eb	632.05	431.39	Violet-Blue
E	657.54	414.67	Violet
Fb	678.41	401.91	Ultra Violet
E#	684.06	398.59	Invisible Violet
F	705.77	772.66	Invisible Red
F#	734.23	742.71	Infra Red
Gb	757.53	719.86	Red
G	788.08	691.96	Red-Orange
G#	819.87	665.13	Orange-Red
Ab	845.89	644.67	Orange

* Equivalent Wavelength = Angstroms / 10 Nanometers

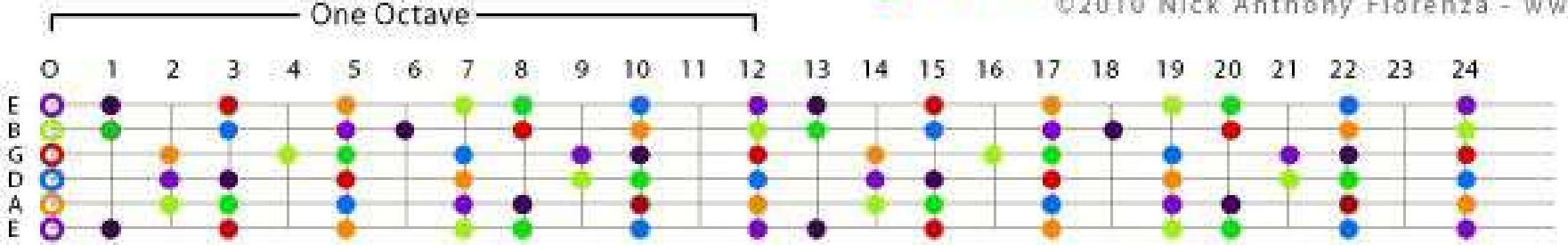
Musical Notes-Color Correspondences in the Visible Spectrum of Light



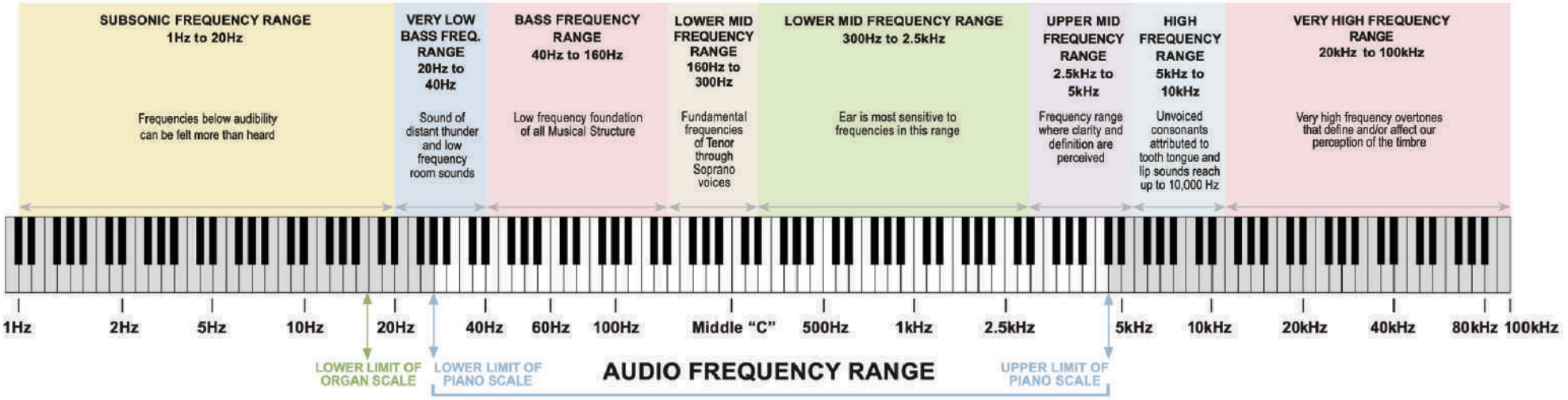




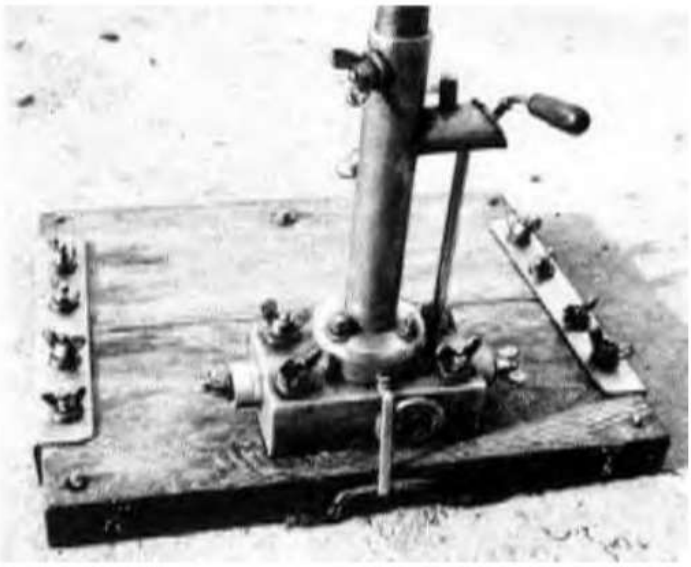
Guitar Fret Board (Standard Tuning)



©2010 Nick Anthony Fiorenza - www.lunarplanner.com


SUBSONIC FREQUENCY RANGE
1Hz to 20Hz
Frequencies below audibility can be felt more than heard
VERY LOW BASS FREQ. RANGE
20Hz to 40Hz
Sound of distant thunder and low frequency room sounds
BASS FREQUENCY RANGE
40Hz to 160Hz
Low frequency foundation of all Musical Structure
LOWER MID FREQUENCY RANGE
160Hz to 300Hz
Fundamental frequencies of Tenor through Soprano voices
LOWER MID FREQUENCY RANGE
300Hz to 2.5kHz
Ear is most sensitive to frequencies in this range
UPPER MID FREQUENCY RANGE
2.5kHz to 5kHz
Frequency range where clarity and definition are perceived
HIGH FREQUENCY RANGE
5kHz to 10kHz
Unvoiced consonants attributed to tooth tongue and lip sounds reach up to 10,000 Hz
VERY HIGH FREQUENCY RANGE
20kHz to 100kHz
Very high frequency overtones that define and/or affect our perception of the timbre
1Hz
2Hz
5Hz
10Hz
20Hz
40Hz
60Hz
100Hz
Middle "C"
500Hz
1kHz
2.5kHz
5kHz
10kHz
20kHz
40kHz
80kHz
100kHz
LOWER LIMIT OF ORGAN SCALE
LOWER LIMIT OF PIANO SCALE
AUDIO FREQUENCY RANGE
UPPER LIMIT OF PIANO SCALE













Hovering Elytra - Grebennikov Video Replication Series

Non possiamo garantire che i filmati siano reali e non contraffatti. La qualità dei file mpg pervenuti è piuttosto [illegible] sono stati ripresi con un cellulare.



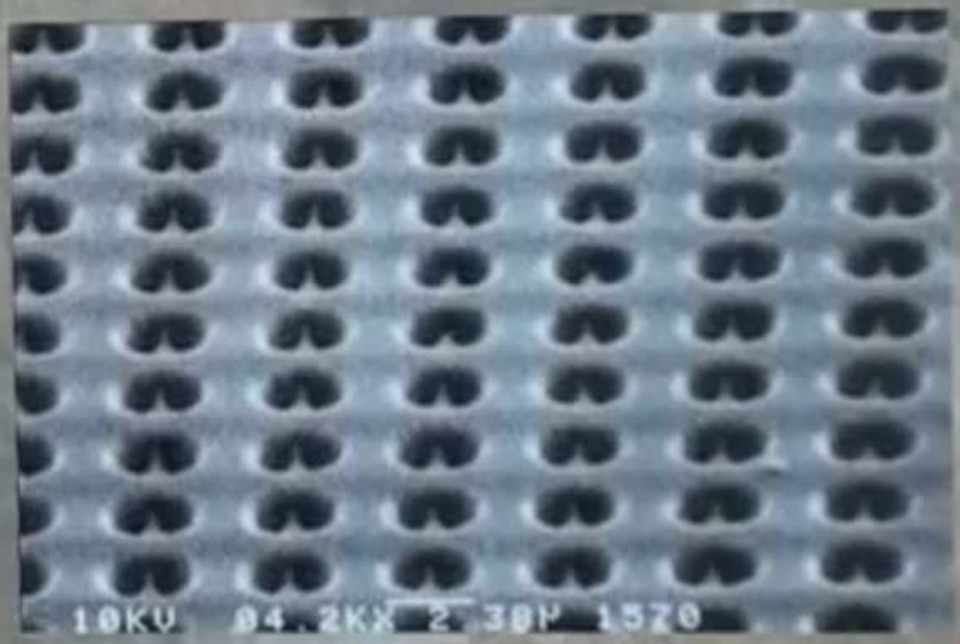
Sembra sia stato identificato un insetto le cui elitre manifestano gli stessi fenomeni riscontrati da Grebennikov.

Nelle foto è possibile vedere degli ingrandimenti della superficie delle elitre.

In un futuro report prenderemo in esame quanto affermato da un presunto testimone (aveva 7 anni quando assistette ad una dimostrazione dello stesso VSG), riportando lo schema costruttivo descritto da questa persona.

L'insetto sarebbe uno scarabeo d'acqua, forse un esemplare adulto di Ditisco.

Chi ha realizzato i video descrive il comportamento di questi insetti, che balzano fuori dall'acqua e prima di ricadere dentro prendono il volo.



Video Elitre 1





Non possiamo garantire che i filmati siano reali e non contraffatti. La qualità dei file mp4 pervenuti è pessima, probabilmente sono stati ripresi con un cellulare.



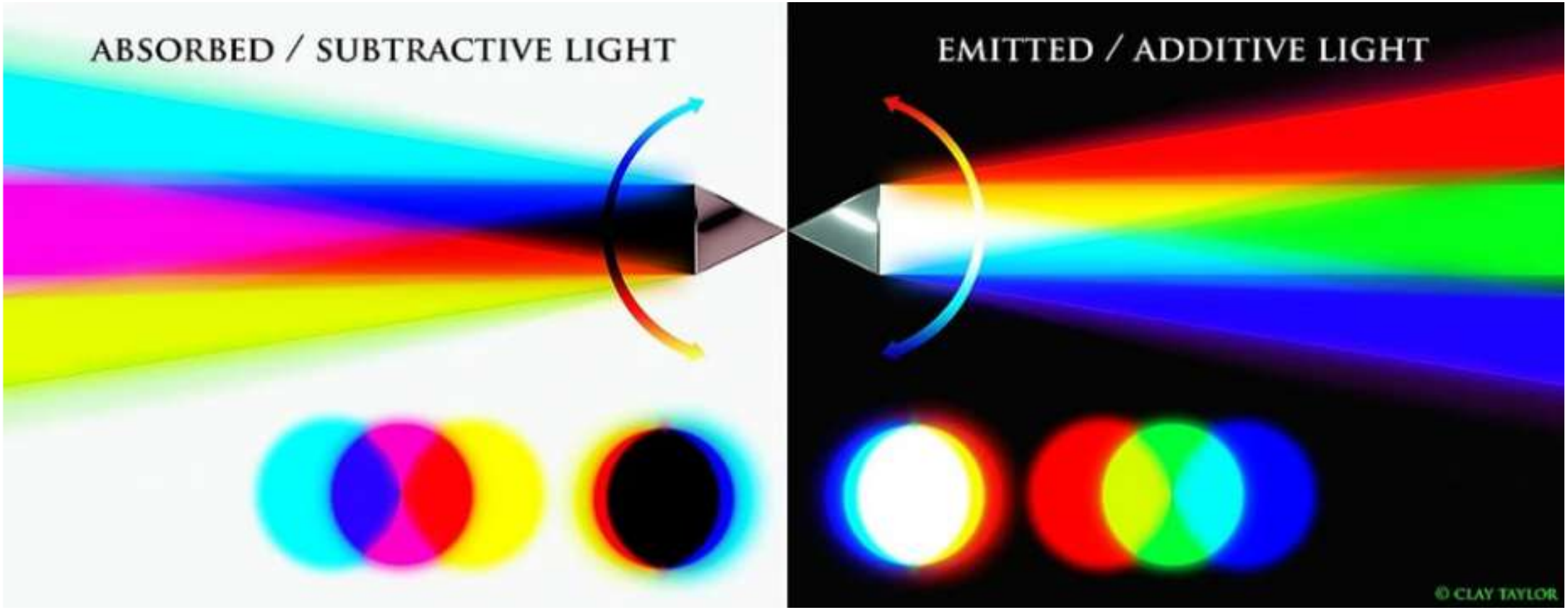
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ABSORBED / SUBTRACTIVE LIGHT
EMITTED / ADDITIVE LIGHT
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